

GRADE 5 BUSINESS & FINANCE

First edition

8 units

32 lessons + bonus business unit

A video for every lesson

FIRST EDITION

COURSE GUIDE

This course follows eight strands of business and finance through one school year: work and trade, the story of money, markets, great businesses, workers and owners, entrepreneurship and sales, bookkeeping, and saving, investing and giving. Each unit is built around real moments from history: Adam Smith counting pins in a small factory, Croesus of Lydia striking the first pure gold and silver coins, Mansa Musa crossing the Sahara with his caravan of gold, the Medici bankers writing letters of credit, Luca Pacioli publishing double-entry bookkeeping in Venice in 1494, Henry Ford starting the moving assembly line, Milton Hershey building a town and a school, John Wanamaker putting price tags on his goods, and President Nixon closing the gold window on August 15, 1971.

Every lesson follows the same path. First comes **the story**. Then **how they figured it out**: what problem stood in the way, what they tried, what failed, what they counted and what they changed. Then **the big idea** underneath, explained for a fifth grader: scarcity and opportunity cost, division of labor, supply and demand, money's three jobs, profit, the balance sheet, compound interest. Then **in business today**: how families, shops, companies and banks use the idea now, and what a wise and honest person does with it. Last, the student does it in miniature with coins, a kitchen scale, price tags, receipts and a ledger notebook.

Great businesses are weighed by what they meant for **six stakeholders**: the financiers who lent or invested the money, the risk-takers who started them, the builders who designed and made the product, the workers, the customers and the community. A business is great when it creates real value and serves all six over a long time. The year ends with a family market day, and an optional bonus unit, **Run a Real Business**, walks the student through starting, running and closing the books on a small business of his or her own, with a parent.

Most videos come from the Federal Reserve banks and Federal Reserve History, museums and trusted teaching channels such as Biz

Kid\$ (PBS), Homeschool Pop, Learn Bright, The Henry Ford and a few others chosen lesson by lesson. Every video was checked for content and accuracy before it was chosen, and none comes from a channel that takes sides in present-day public debates. Some channels end with a short invitation to subscribe or a sponsor message; you can stop the video when the teaching ends. Watch together when you can, and pause when the lesson tells you to predict what comes next.

Start with Lesson 1.1 →

WHO IT IS FOR

Written for students in grade 5 (about ages 10–11) who read independently, can add, subtract, multiply and divide with money, and can work with simple decimals and percents. A parent or teacher reads along, plays shopkeeper or customer in the projects, and supervises all real selling and money handling. Nothing needs to be bought beyond ordinary household items: coins, play money, a calculator, a kitchen scale, index cards, receipts and a graph-paper notebook.

HOW TO USE THIS COURSE

1. **The weekly rhythm.** The year has 32 lessons, one a week. Session 1 (about 45 minutes) is the warm-up, the video, the teaching and the picture study. Session 2 (about 45 minutes) is the project and the ledger notebook. In the last week of each unit, add a third session for the unit review and the portfolio project.
2. **Story, then the big idea.** The core ideas are written to be read aloud or read by the student. The paragraphs marked *The story* and *How they figured it out* tell what happened; *The big idea* explains the economic or money principle underneath; *In business today* shows how people use it now. After each paragraph, ask the student to tell it back in his or her own words.
3. **Picture study.** Each lesson has one public-domain painting, print, map or historic photograph. Look at it quietly for two minutes. Then put it away and have the student tell everything he or she remembers. Bring it back and work through the “look for” items and questions, which point to the work, trade or money in the picture.
4. **The ledger notebook.** Use one graph-paper composition book for the whole year. Every project ends with something counted and written down: a log of trades, a price table, a tally, a ledger page, a budget or a stakeholder scorecard. Date every

page and write one sentence about what you would change. Honest records matter more than big numbers: “a just weight is his delight” (Proverbs 11:1).

5. **The six stakeholders.** Whenever the course looks at a business, ask what it meant for the financiers, the risk-takers, the builders, the workers, the customers and the community. Unit 4 teaches a simple stakeholder scorecard; use it all year, for businesses in history and for shops in your own town.
6. **Optional books and games.** Some units list free classics such as Benjamin Franklin’s *The Way to Wealth*, free teaching sites and family games. They are extras. Every lesson can be completed without them.
7. **Unit review and portfolio.** Each unit ends with a short review (50 points) and a portfolio project that pulls the unit together, such as a coin timeline, a price survey of three stores, a stakeholder report, a business plan, a month of ledger pages or a real budget. Keep the portfolio pages in one folder for the year.
8. **Money and selling safety.** A parent supervises all selling and all handling of real money. Never sell door to door or meet strangers alone, never give out personal information, passwords or card numbers, and do not sell online without a parent. Check your town’s rules before selling food or setting up a stand. The student never borrows or lends money without a parent, and any investing in this course is practice with pretend money.
9. **The family market day.** In the last week of Unit 8, the student sets up a table with the best project from each unit and its ledger pages, sells or shows something he or she has made, and explains to family and guests how it was priced and what it earned.
10. **Run a Real Business (optional bonus unit).** Unit 9 walks the student through choosing, planning, making, pricing, selling and closing the books on a small real business with a parent: baked goods for neighbors you know, greeting cards, seedlings or a simple service. Use it after market day, over the summer, or alongside the year.

SCOPE AND SEQUENCE

UNIT 1 • WEEKS 1–4

Work, Trade and Value

Work as a calling; scarcity, choice and opportunity cost; Adam Smith’s pin factory and the division of labor; and the Phoenician, Silk Road and Hanseatic traders who showed why both sides gain from trade.

- 1.1 Made to Work: Vocation and the Dignity of Labor
- 1.2 Scarcity, Choice and Opportunity Cost
- 1.3 Specialization: Adam Smith’s Pin Factory
- 1.4 Trade Routes: The Phoenicians, the Silk Road and the Hanseatic League

UNIT 3 • WEEKS 9–12

Markets

Supply and demand and prices as signals; how competition serves customers; the limits of monopolies, guilds and cartels; and what markets do well, what planners tried, and the things markets do poorly.

- 3.1 Supply and Demand: Prices Are Signals
- 3.2 Competition: Why Many Sellers Serve Customers Well
- 3.3 Monopolies, Guilds and Cartels: The Limits of One or a Few Sellers
- 3.4 Who Decides? Markets, Planners and the Mixed Economy

UNIT 2 • WEEKS 5–8

The Story of Money

Barter and commodity money; Lydia’s first coins and the gold trade from Rome to Mansa Musa; China’s paper money, the goldsmiths and the Bank of England; and the road from the gold standard to today’s fiat dollar and the lessons of inflation.

- 2.1 Barter and Commodity Money
- 2.2 The First Coins and the Gold Trade: Lydia, Croesus, Rome and Mansa Musa
- 2.3 Banks and Paper Money: China’s Jiaozi, the Goldsmiths and the Bank of England
- 2.4 From the Gold Standard to Fiat Money

UNIT 4 • WEEKS 13–16

Great Businesses and Their Stakeholders

The six stakeholders and the stakeholder scorecard, tested on Josiah Wedgwood’s pottery, the Medici Bank, Henry Ford’s Model T and \$5 day, and Milton Hershey’s chocolate, town and school.

- 4.1 What Makes a Business Great? The Six Stakeholders and Josiah Wedgwood
- 4.2 The Medici Bank: Financiers, Risk and Trust
- 4.3 Ford’s Model T and the \$5 Day: Builders, Workers and Customers
- 4.4 Milton Hershey: A Chocolate Bar, a Town and a School

UNIT 5 • WEEKS 17–20

Workers, Owners and Fair Rules

How capital and labor need each other; Lord Shaftesbury, Lewis Hine and the end of most child labor; safe work and safe food; and keeping markets honest with just weights and antitrust law, along with rules that went wrong.

- 5.1 Capital and Labor Need Each Other
- 5.2 Children Belong in School: Lord Shaftesbury, Lewis Hine and Child-Labor Laws
- 5.3 Safe Work and Safe Food: Fire Codes, Workers' Compensation and the Pure Food and Drug Act
- 5.4 Keeping Markets Honest: Just Weights, Standard Oil and When Rules Go Wrong

UNIT 7 • WEEKS 25–28

Bookkeeping and Accounting

Luca Pacioli and double-entry bookkeeping; the income statement; the balance sheet; and honest books, audits and the Drapers' Guild.

- 7.1 Pacioli and Double-Entry Bookkeeping
- 7.2 The Income Statement: Revenue, Expenses and Profit
- 7.3 The Balance Sheet: Assets, Liabilities and Owner's Equity
- 7.4 Honest Books: The Drapers' Guild Syndics, Audits and Tally Sticks

UNIT 6 • WEEKS 21–24

Entrepreneurship and Sales

J. C. Penney and the entrepreneur's risk; testing an idea with prototypes and customer feedback; Wanamaker's price tags and honest selling; and pricing, value and break-even.

- 6.1 The Entrepreneur: Seeing a Need and Taking a Risk
- 6.2 Testing an Idea: Prototypes and Customer Feedback
- 6.3 Honest Selling: Wanamaker's Price Tags and Money-Back Guarantee
- 6.4 Pricing and the Pitch: Cost, Value and Break-Even

UNIT 8 • WEEKS 29–32

Saving, Investing and Giving

Budgets and Joseph's seven years; interest, compound growth and Franklin's 200-year gift; stocks, bonds and the Buttonwood tree; and debt, giving and the family market day.

- 8.1 Budgets and the Three Jars: Joseph's Seven Years
- 8.2 Interest and Compound Growth: The Talents and Franklin's 200-Year Gift
- 8.3 Stocks, Bonds and the Buttonwood Tree
- 8.4 Debt, Giving and the Family Market Day

UNIT 9 • WEEKS 33–36

Bonus: Run a Real Business

Optional bonus unit: choose and plan a real small business, make it and cost it, sell it honestly, and close the books with a profit report and a gift.

9.1 Choose and Plan: The One-Page Plan

9.2 Make It and Cost It

9.3 Sell It Honestly

9.4 Close the Books: Profit, Lessons and Giving

WEEKLY PACING CALENDAR

WEEK	PLAN
1	• Session 1: Lesson 1.1 Made to Work: Vocation and the Dignity of Labor: warm-up, video, teaching and picture study • Session 2: Lesson 1.1 project and ledger notebook <i>Two sessions a week is the usual rhythm. Younger children can split a long session in two; older students can do both sessions in one sitting.</i>
2	• Session 1: Lesson 1.2 Scarcity, Choice and Opportunity Cost: warm-up, video, teaching and picture study • Session 2: Lesson 1.2 project and ledger notebook
3	• Session 1: Lesson 1.3 Specialization: Adam Smith’s Pin Factory: warm-up, video, teaching and picture study • Session 2: Lesson 1.3 project and ledger notebook
4	• Session 1: Lesson 1.4 Trade Routes: The Phoenicians, the Silk Road and the Hanseatic League: warm-up, video, teaching and picture study • Session 2: Lesson 1.4 project and ledger notebook • Session 3: Unit 1 review and portfolio project
5	• Session 1: Lesson 2.1 Barter and Commodity Money: warm-up, video, teaching and picture study • Session 2: Lesson 2.1 project and ledger notebook

WEEK	PLAN
6	• Session 1: Lesson 2.2 The First Coins and the Gold Trade: Lydia, Croesus, Rome and Mansa Musa: warm-up, video, teaching and picture study • Session 2: Lesson 2.2 project and ledger notebook
7	• Session 1: Lesson 2.3 Banks and Paper Money: China's Jiaozi, the Goldsmiths and the Bank of England: warm-up, video, teaching and picture study • Session 2: Lesson 2.3 project and ledger notebook
8	• Session 1: Lesson 2.4 From the Gold Standard to Fiat Money: warm-up, video, teaching and picture study • Session 2: Lesson 2.4 project and ledger notebook • Session 3: Unit 2 review and portfolio project
9	• Session 1: Lesson 3.1 Supply and Demand: Prices Are Signals: warm-up, video, teaching and picture study • Session 2: Lesson 3.1 project and ledger notebook
10	• Session 1: Lesson 3.2 Competition: Why Many Sellers Serve Customers Well: warm-up, video, teaching and picture study • Session 2: Lesson 3.2 project and ledger notebook
11	• Session 1: Lesson 3.3 Monopolies, Guilds and Cartels: The Limits of One or a Few Sellers: warm-up, video, teaching and picture study • Session 2: Lesson 3.3 project and ledger notebook
12	• Session 1: Lesson 3.4 Who Decides? Markets, Planners and the Mixed Economy: warm-up, video, teaching and picture study • Session 2: Lesson 3.4 project and ledger notebook • Session 3: Unit 3 review and portfolio project
13	• Session 1: Lesson 4.1 What Makes a Business Great? The Six Stakeholders and Josiah Wedgwood: warm-up, video, teaching and picture study • Session 2: Lesson 4.1 project and ledger notebook
14	• Session 1: Lesson 4.2 The Medici Bank: Financiers, Risk and Trust: warm-up, video, teaching and picture study • Session 2: Lesson 4.2 project and ledger notebook

WEEK	PLAN
15	• Session 1: Lesson 4.3 Ford's Model T and the \$5 Day: Builders, Workers and Customers: warm-up, video, teaching and picture study • Session 2: Lesson 4.3 project and ledger notebook
16	• Session 1: Lesson 4.4 Milton Hershey: A Chocolate Bar, a Town and a School: warm-up, video, teaching and picture study • Session 2: Lesson 4.4 project and ledger notebook • Session 3: Unit 4 review and portfolio project
17	• Session 1: Lesson 5.1 Capital and Labor Need Each Other: warm-up, video, teaching and picture study • Session 2: Lesson 5.1 project and ledger notebook
18	• Session 1: Lesson 5.2 Children Belong in School: Lord Shaftesbury, Lewis Hine and Child-Labor Laws: warm-up, video, teaching and picture study • Session 2: Lesson 5.2 project and ledger notebook
19	• Session 1: Lesson 5.3 Safe Work and Safe Food: Fire Codes, Workers' Compensation and the Pure Food and Drug Act: warm-up, video, teaching and picture study • Session 2: Lesson 5.3 project and ledger notebook
20	• Session 1: Lesson 5.4 Keeping Markets Honest: Just Weights, Standard Oil and When Rules Go Wrong: warm-up, video, teaching and picture study • Session 2: Lesson 5.4 project and ledger notebook • Session 3: Unit 5 review and portfolio project
21	• Session 1: Lesson 6.1 The Entrepreneur: Seeing a Need and Taking a Risk: warm-up, video, teaching and picture study • Session 2: Lesson 6.1 project and ledger notebook
22	• Session 1: Lesson 6.2 Testing an Idea: Prototypes and Customer Feedback: warm-up, video, teaching and picture study • Session 2: Lesson 6.2 project and ledger notebook
23	• Session 1: Lesson 6.3 Honest Selling: Wanamaker's Price Tags and Money-Back Guarantee: warm-up, video, teaching and picture study • Session 2: Lesson 6.3 project and ledger notebook

WEEK	PLAN
24	• Session 1: Lesson 6.4 Pricing and the Pitch: Cost, Value and Break-Even: warm-up, video, teaching and picture study • Session 2: Lesson 6.4 project and ledger notebook • Session 3: Unit 6 review and portfolio project
25	• Session 1: Lesson 7.1 Pacioli and Double-Entry Bookkeeping: warm-up, video, teaching and picture study • Session 2: Lesson 7.1 project and ledger notebook
26	• Session 1: Lesson 7.2 The Income Statement: Revenue, Expenses and Profit: warm-up, video, teaching and picture study • Session 2: Lesson 7.2 project and ledger notebook
27	• Session 1: Lesson 7.3 The Balance Sheet: Assets, Liabilities and Owner's Equity: warm-up, video, teaching and picture study • Session 2: Lesson 7.3 project and ledger notebook
28	• Session 1: Lesson 7.4 Honest Books: The Drapers' Guild Syndics, Audits and Tally Sticks: warm-up, video, teaching and picture study • Session 2: Lesson 7.4 project and ledger notebook • Session 3: Unit 7 review and portfolio project
29	• Session 1: Lesson 8.1 Budgets and the Three Jars: Joseph's Seven Years: warm-up, video, teaching and picture study • Session 2: Lesson 8.1 project and ledger notebook
30	• Session 1: Lesson 8.2 Interest and Compound Growth: The Talents and Franklin's 200-Year Gift: warm-up, video, teaching and picture study • Session 2: Lesson 8.2 project and ledger notebook
31	• Session 1: Lesson 8.3 Stocks, Bonds and the Buttonwood Tree: warm-up, video, teaching and picture study • Session 2: Lesson 8.3 project and ledger notebook
32	• Session 1: Lesson 8.4 Debt, Giving and the Family Market Day: warm-up, video, teaching and picture study • Session 2: Lesson 8.4 project and ledger notebook • Session 3: Unit 8 review and portfolio project

WEEK	PLAN
	<i>Last week. Hold a family market day: the student sets up a table with the best project from each unit and its notebook pages, sells or shows something they made, and explains to guests how they priced it and what they earned.</i>
33	• Session 1: Lesson 9.1 Choose and Plan: The One-Page Plan: warm-up, video, teaching and picture study • Session 2: Lesson 9.1 project and ledger notebook <i>Optional bonus unit: run a real small business. Do it after market day, over the summer, or alongside the year.</i>
34	• Session 1: Lesson 9.2 Make It and Cost It: warm-up, video, teaching and picture study • Session 2: Lesson 9.2 project and ledger notebook
35	• Session 1: Lesson 9.3 Sell It Honestly: warm-up, video, teaching and picture study • Session 2: Lesson 9.3 project and ledger notebook
36	• Session 1: Lesson 9.4 Close the Books: Profit, Lessons and Giving: warm-up, video, teaching and picture study • Session 2: Lesson 9.4 project and ledger notebook • Session 3: Unit 9 review and portfolio project

MATERIALS

Ledger notebook (a graph-paper composition book)

One for the whole year: trade logs, price tables, ledgers, budgets and stakeholder scorecards.

A jar of mixed coins and some play money (or slips of paper marked \$1, \$5, \$10 and \$20)

Used in nearly every unit for counting, trading and making change.

A calculator

A basic one is fine. A free spreadsheet (Google Sheets or LibreOffice Calc) is helpful in Units 7 and 8.

A kitchen scale that reads in grams

For weighing coins, salt and ingredients in Units 2, 5 and 9.

Index cards, sticky notes, markers and a roll of masking tape

For price tags, trading cards, signs and auction bids.

Store flyers and receipts

Save them through the year for price surveys and ledger practice.

Three envelopes or jars labeled Give, Save and Spend

For the budgeting lessons in Unit 8 and the bonus business.

Household supplies for small projects

Paper, scissors, a ruler, plain paper cups, sandwich makings or paper for an assembly-line contest, and simple baking or craft supplies for the bonus business.

Optional: one of the books or games listed in a unit

Never required. See the list in each unit.

GRADING

Grades come mostly from the projects and the ledger notebook, because business and money are learned by doing and recording. A project whose numbers did not turn out well but are honestly recorded and explained earns full credit.

PART	%
Projects (effort, careful counting and the improve-it step)	40
Ledger notebook (dated pages, tables with units, honest records)	20
Unit reviews	15
Portfolio projects	25

Scale: A 90–100, B 80–89, C 70–79, D 60–69. Below 60: redo the project or review with help.

- Grade the process, not just the result. Did the student predict, count carefully, record honestly, explain the numbers and suggest an improvement?
- A ledger page earns full marks when it has a date, a title, labeled columns, correct totals and one sentence about what the numbers mean.
- Unit reviews may be done orally for a student who writes slowly; the parent writes down the answers.

- Keep each unit's portfolio pages in one folder. They make a fine record of the year and the centerpiece of the family market day.

A NOTE TO PARENTS

You do not need to be an economist or an accountant to teach this course. Read the story aloud together, watch the video, and then be the student's customer, supplier or banker in the project. Ask "What would you give up?", "Who gains from this trade?" and "How do you know? Show me the numbers." Those three questions are most of what a good business teacher does.

The course tells history honestly. Great businesses are shown with their strengths and their failings, and the lessons on fair rules are taught as settled history: what problem a law or a custom fixed, how it worked and what it cost, along with examples where rules went wrong. Nothing in the course asks you or your child to take a side in present-day public debates.

Real money should always be handled with you nearby. When the student sells something, you are the partner who keeps the cash box, checks the change and makes sure no one is cheated. Above all, the course hopes to raise a young person who works heartily, deals honestly, saves wisely and gives cheerfully. *Fabricando fit faber*: by making, one becomes a maker.

UNIT 1

WORK, TRADE AND VALUE

Before there were banks, stock markets or even coins, there was work. God put the first man in a garden “to dress it and to keep it,” and ever since, people have been making, growing, building and serving one another. In this unit you will learn why work is good and why it is a calling, why every choice has a cost because time and money are scarce, and why a team that divides the work, as Adam Smith saw in a small pin factory, can make far more than the same people working alone.

Then you will travel with the Phoenician sailors of Tyre, the camel caravans of the Silk Road and the merchants of the Hanseatic League, and discover the surprising secret of trade: when two people trade freely and honestly, *both* of them come out ahead. You will count, time and record everything in a ledger notebook that you will use all year.

PREREQUISITES

- Can add, subtract, multiply and divide whole numbers and money amounts
- Can read a simple table and make a bar graph
- Has a graph-paper composition book to use as a ledger notebook

MASTERY CHECKLIST

- ☐ I can explain why work is good and name goods and services that people in my town provide.
- ☐ I can explain scarcity and find the opportunity cost of a choice.
- ☐ I can tell how Adam Smith’s pin factory shows the power of the division of labor, and measure it in a contest of my own.
- ☐ I can trace the Phoenician, Silk Road and Hanseatic trade routes and explain why both sides gain from a free and honest trade.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **“I, Pencil,” by Leonard E. Read (1958)**: Free to read online. A short essay told by a pencil about the thousands of people in many countries who help make it, though no one of them knows how to make a whole pencil. Read it aloud in two sittings with Lessons 1.3 and 1.4. Ages 10 and up.
- **Catan (family board game)**: Ages 10 and up, 3–4 players. Players gather wood, brick, grain, sheep and ore and must trade with one another to build. A lively way to feel scarcity and the gains from trade after Lesson 1.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

1.1 Made to Work: Vocation and the Dignity of Labor	2 sessions of 45 minutes
1.2 Scarcity, Choice and Opportunity Cost	2 sessions of 45 minutes
1.3 Specialization: Adam Smith’s Pin Factory	2 sessions of 45 minutes
1.4 Trade Routes: The Phoenicians, the Silk Road and the Hanseatic League	2 sessions of 45 minutes

UNIT 1 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**
Give two reasons from the Bible that work is good, not a punishment.
2. **5 pts**
Sort these into goods and services: a loaf of bread, a haircut, a tent, a piano lesson, a pencil, delivering the mail.
3. **5 pts**
What is scarcity? Why does it mean every choice has a cost?

4. (5 pts)

Maria has \$12. She can buy a book for \$12 or a puzzle for \$12. She would rather have the book, and her second choice is the puzzle. She buys the book. What is her opportunity cost?

5. (5 pts)

What would happen if a town paid boys to break windows so that the glaziers would have more work? Use Bastiat's idea of "what is not seen."

6. (5 pts)

In Adam Smith's pin factory, ten workers made about 48,000 pins a day. How many pins is that per worker? Why could one person working alone make so few?

7. (5 pts)

Name Adam Smith's three reasons that the division of labor increases productivity.

8. (5 pts)

In an assembly-line contest, 3 workers made 12 paper boats in 5 minutes working alone, and 27 boats in 5 minutes working as a line. What is the productivity per worker in each round?

9. (5 pts)

Name one good that traveled on each route: the Phoenician sea routes, the Silk Road and the Hanseatic routes.

10. (5 pts)

A Norwegian fisherman trades dried fish for a Hansa merchant's grain. Explain why both of them are better off.

ANSWER KEY

1. Any two: God Himself works (creation); God gave Adam work in the garden before the Fall (Genesis 2:15); God filled Bezalel with skill for workmanship (Exodus 31); Paul worked as a tentmaker; we are told to work heartily as to the Lord (Colossians 3:23).
2. Goods: bread, tent, pencil. Services: haircut, piano lesson, delivering the mail.
3. Scarcity means there is not enough time, money or resources to satisfy every want. Because we cannot have everything, choosing one thing means giving up something else, so every choice has a cost.
4. The puzzle: the next-best thing she gave up.
5. The town would not be richer. The money spent fixing windows would have bought other things (shoes, books, food) that now are never made or bought. The glazier gains, but the shopkeepers and the other workers lose, and the town has spent its money just to get back to where it started.
6. $48,000 \div 10 = 4,800$ pins per worker. Working alone, one person must learn and do all eighteen steps, switch tools and tasks constantly, and never becomes fast at any one step.
7. Workers become more skillful (dexterous) at one step; no time is lost moving from one task to another; and workers focused on one task invent machines or better methods.
8. Alone: $12 \div 3 = 4$ boats per worker. Line: $27 \div 3 = 9$ boats per worker. The line was more than twice as productive.
9. Phoenician: cedar, purple dye (also glass, metals). Silk Road: silk, paper, porcelain, horses, glass, silver. Hansa: herring, salt, grain, timber, furs, wax, wool cloth.
10. Each values what he receives more than what he gives. The fisherman has plenty of fish but needs grain; the merchant can sell fish at home for more than the grain cost him. Because the trade is free and honest, both gain.

PORTFOLIO PIECE: MY TOWN'S WORK AND TRADE MAP

Make a poster or a two-page ledger spread about work and trade in your own town. Choose six local workers or businesses and, for each, record the good or service it produces, one thing it buys from somewhere else (and where it comes from), and one way it specializes. Draw a map of your town with the six marked, and arrows showing at least three goods that come in from far away. Finish with a paragraph explaining how specialization and trade make your town better off than if every family had to make everything for itself.

LOOK FOR	WHAT IT MEANS
Research	Six real workers or businesses, each with a good or service, an import and a specialty correctly identified.
Map	A clear map with labeled locations and at least three trade arrows showing where goods come from.
Ideas	The paragraph correctly uses the words specialization, trade and scarcity and explains why both sides gain.
Neatness and honesty	Neat, labeled work; facts are from real observation or interviews, not guesses presented as facts.

I.1 MADE TO WORK: VOCATION AND THE DIGNITY OF LABOR

OBJECTIVES

- Explain from Scripture why work is good and why it is called a vocation, or calling.
- Tell how Bezalel, Paul the tentmaker and ordinary workers served God and their neighbors through their work.
- Sort the work done in your home and town into goods and services, and estimate its value.

Warm-up. Set a timer for three minutes. List every person whose work you used since you got up this morning: the farmer who grew your breakfast, the driver who brought it to the store, the person who made your toothbrush. How many did you find? Circle the ones you have never met.

WATCH

Goods and Services for Kids

Homeschool Pop • 4:36

<https://www.youtube.com/watch?v=Jd4kD9TicbA>

WHEN TO WATCH

After the big idea, as a quick review of goods and services. Pause at each example and call out “good” or “service” before the answer appears.

Note: Made for younger students; it moves quickly and makes a good warm-up for the project’s goods-and-services column.

KEY TERMS

vocation

A calling: the work God gives a person to do, in a home, a trade, a business or a church, in order to serve Him and other people.

goods

Things people make or grow that you can touch, such as bread, shoes, tents and pencils.

services

Work that people do for others, such as teaching, nursing, repairing a car or delivering the mail.

producer

A person or business that makes goods or provides services.

consumer

A person who buys and uses goods and services.

value

How useful or wanted something is; in trade, what a person is willing to give up to get it.

CORE IDEAS

The story. The Bible begins with a God who works. He made the heavens and the earth, and on the seventh day He rested. Then He made man in His own image and gave him a job: “the LORD God took the man, and put him into the garden of Eden to dress it and to keep it” (Genesis 2:15). Work came *before* the Fall. Sin made work harder, with thorns and sweat, but it did not make work bad. Later, when Israel built the tabernacle in the wilderness, God named a craftsman, Bezalel, and filled him “in wisdom, and in understanding, and in knowledge, and in all manner of workmanship,” to work in gold, silver and brass, to cut stones and to carve timber (Exodus 31:3-5). Skill with your hands is a gift from God.

How they figured it out. The apostle Paul was a preacher, but he was also a tentmaker. When he came to the busy trading city of Corinth, he found Aquila and Priscilla, “and because he was of the same craft, he abode with them, and wrought: for by their occupation they were tentmakers” (Acts 18:3). Paul stitched tents of leather or goat-hair cloth to pay his own way so that he would not be a burden to the young churches. Many centuries later, monks who followed the Rule of Saint Benedict divided their days between prayer, study and work in the fields and workshops, and the Reformers taught that a farmer, a shoemaker or a mother caring for her children serves God just as truly as a priest. They called this a **vocation**, from the Latin word for “calling.”

The big idea. Work creates **value**. A pile of wood is worth little until a carpenter makes it into a table; a field of wheat feeds no one until it is harvested, milled and baked. Some work makes **goods**, things you can touch. Other work provides **services**, help that people do for others. A **producer** makes goods or services, and a **consumer** uses them. Every one of us is both. Because people are made in God’s

image, every honest job has dignity, whether it is running a bank or sweeping its floors.

In business today. Every business, from a corner bakery to a company with thousands of workers, exists to produce goods or services that people value enough to pay for. The wise worker does his job “heartily, as to the Lord, and not unto men” (Colossians 3:23), because someone is depending on it: the patient waiting for the nurse, the family driving over the bridge, the child eating the bread. When you do your chores well, you are practicing the same faithfulness that makes a business great.

PICTURE STUDY



The Harvesters, Pieter Bruegel the Elder, 1565 · Oil on wood · The Metropolitan Museum of Art, New York

Image: [Wikimedia Commons](#), public domain

Pieter Bruegel painted a series of pictures of the months of the year in 1565 for a wealthy merchant of Antwerp. This one shows the late-summer wheat harvest. Bruegel looked closely at ordinary farm people and painted their work with respect.

Look closely

- Count the different jobs you can see people doing. Which ones are making goods, and which are serving others?
- Find the workers eating their lunch under the tree. What did they bring to eat, and where do you think it came from?
- Find the sheaves of wheat that are already tied. Where will the grain go next before it becomes bread?
- Look far into the distance. Find the village, the church and the ships. How might the wheat reach a town or a ship?

Talk about it

1. Bruegel painted ordinary workers, not kings. What does that tell you about how he saw their work?
2. Which job in the painting looks hardest? Which would you choose, and why?

3. How many other people will depend on this harvest before winter comes?

PROJECT

A Week of Work: The Family Work Ledger

You will discover how much valuable work is done in your own home that no one pays for with money, and sort it into goods and services. Then you will interview one worker about his or her calling.

You will need

- Ledger notebook and a pencil
- A ruler for drawing columns
- A clock or timer
- A calculator

Steps

1. In your ledger notebook, rule a table with five columns: Day, Job, Who did it, Minutes, Good or service.
2. For one week, record every household job you see done: cooking, laundry, mowing, fixing, teaching, driving. Ask family members to tell you their jobs too. Record the minutes as closely as you can.
3. At the end of the week, add up the minutes for each person and for each kind of job. Change the minutes to hours (divide by 60).
4. Ask a parent what it might cost to pay someone outside the family to do three of the jobs (for example, a meal at a restaurant instead of a home-cooked one, or a lawn service). Write those prices next to the jobs.
5. Make a bar graph of hours worked by each person in your home.
6. Interview one worker you know (a parent, grandparent, neighbor or church member): What is your job? What goods or services do you produce? Who depends on your work? What do you like best about it? What is hardest? Write the answers in your notebook.
7. Write two or three sentences: Which job in our home creates the most value? Which job would I like to learn next?

Tips

- Count small jobs too. Wiping a counter or reading to a younger child is real work.
- For the interview, write down the person's words exactly when you can, in quotation marks.

Check your work

- ☐ I can sort jobs into goods and services.
- ☐ I can explain why work done at home has value even when no one is paid money for it.
- ☐ I can tell how one worker I know serves other people through his or her work.

LEDGER NOTEBOOK

1. Draw a "chain of workers" for one thing you ate today, from the field to your plate. Label each worker and whether he or she produced a good or a service.
2. Copy Genesis 2:15 at the top of a page. Underneath, list three jobs you do at home and write how each one helps someone else.
3. Sketch Paul at work making a tent, and label the tools you think he used (needle, awl, knife, thread, leather or cloth).

From history. The Latin word *vocatio* means "a calling." In the 1500s, Martin Luther and other Reformers taught that every honest station in life, from farmer to magistrate to parent, is a place where God calls a person to love and serve his neighbor. The word "vocational" in "vocational school" comes from the same root.

COMMON MISTAKES

- Thinking work is a punishment. Work was given in the garden before sin entered the world; sin made it harder, not bad.
- Thinking only paid work counts. A mother teaching her children or a volunteer serving at church creates real value.
- Mixing up goods and services. If you can hold it, it is usually a good; if someone does it for you, it is a service.

Make it a game • Calling Charades. Take turns acting out a calling without words: Bezalel carving, Paul stitching a tent, a baker, a farmer. The guesser names the worker, then says who is served and whether it is a good or a service. Add one more point for naming the producer and the consumer. First to five points wins, and the winner thanks the loser's last pretend customer.

Scripture. “And the LORD God took the man, and put him into the garden of Eden to dress it and to keep it.” (Genesis 2:15, KJV)

Work was part of God’s good plan from the very beginning. To dress and keep the garden was to make it fruitful and to protect it, which is what good workers and good businesses still do.

1.2 SCARCITY, CHOICE AND OPPORTUNITY COST

OBJECTIVES

- Define scarcity and explain why it forces every person, family and business to choose.
- Find the opportunity cost of a choice: the next-best thing given up.
- Use a budget and a ranked list to make a real choice and record what it cost.

Warm-up. Imagine you have exactly one free hour this afternoon. List five things you could do with it. Now circle the one you would choose and put a star by your second choice. The starred one is what your hour would really “cost” you.

WATCH

Scarcity and Opportunity Cost | Economics Explained

Federal Reserve Bank of St. Louis • 4:09

<https://www.youtube.com/watch?v=fSo777le8qo>

WHEN TO WATCH

After the story of Lewis’s packing list, before the big idea.

BACKUP VIDEO

Financial Literacy—Needs and Wants | Learn about needs, wants, and opportunity costs

Learn Bright • 4:37

<https://www.youtube.com/watch?v=aRcXutXvfmM>

Optional, before the \$20 decision project.

KEY TERMS

scarcity

Not having enough of something (time, money, land, materials) to satisfy every want, so that people must choose.

choice

Deciding to use a scarce resource one way instead of another.

opportunity cost

The value of the next-best thing you give up when you make a choice.

trade-off

Giving up some of one thing to get more of another.

budget

A plan for how to use a limited amount of money (or time).

CORE IDEAS

The story. In 1803 President Thomas Jefferson asked Congress for \$2,500 to send a small party of explorers up the Missouri River to the Pacific Ocean. Captain Meriwether Lewis went to Philadelphia and other towns to buy everything the men would need for a journey into lands no one in the party had seen: rifles and ammunition for hunting, scientific instruments, medicines, tools, tents, cooking kettles, and many gifts such as beads, knives, cloth and mirrors to trade with the nations they would meet. Every pound had to fit into boats that the men would row, pole and drag upstream for thousands of miles.

How they figured it out. Lewis could not take everything he wanted. He had only so much money and only so much room in the boats. Every extra barrel of flour meant less space for trade goods; every heavy tool meant more work for tired men. So he made lists, asked experts in Philadelphia what was most needed, and ranked his choices. Years later, in 1850, a French writer named Frédéric Bastiat put the same idea into a famous little story. When a boy breaks a shop window, people say it is good for business because the glazier gets work. But Bastiat said to look for “what is not seen”: the shopkeeper must now spend his money on a window instead of the new shoes or book he had planned to buy. The cost of anything is what you had to give up to get it.

The big idea. People have more wants than they have time, money, land or materials. This is called **scarcity**, and it is true for a child with \$10, a family with one paycheck and a company with a million dollars. Because of scarcity, every person must make **choices**, and every choice has a cost. The **opportunity cost** of a choice is the next-best thing you gave up. If you spend Saturday morning at the lake instead of mowing a neighbor’s lawn for \$15, the opportunity cost of the lake is the \$15 (and whatever you would have done with it). A good decision weighs the benefit of a choice against its opportunity cost.

In business today. A bakery owner with \$5,000 to spend must choose between a new oven and an advertising sign; whichever she does not choose is the opportunity cost. A farmer who plants corn on a field cannot plant soybeans on it that year. Families

make a **budget** because there is never enough money for every want. Wise people “count the cost” before they decide (Luke 14:28), and they remember that time is the scarcest thing of all: it can be spent only once.

PICTURE STUDY



The Gleaners, Jean-François Millet, 1857 · Oil on canvas · Musée d'Orsay, Paris

Image: [Wikimedia Commons](#), public domain

In France, as in ancient Israel, poor people were allowed to walk through a field after the harvest and pick up the grain that the reapers had missed. This was called gleaning. The law of Moses commanded farmers to leave the edges and the gleanings for the poor (Leviticus 19:9-10), and Ruth gleaned in the field of Boaz. Millet painted three gleaners near the village of Chailly, close to Barbizon, where he lived.

Look closely

- Compare the front of the picture with the back. Where is grain plentiful, and where is it scarce?
- Look at the women's hands and backs. How much grain do you think each one will gather in a whole day?
- Find the man on horseback in the distance. What do you think his job is?
- Look at the colors Millet used. How do they make you feel about these workers?

Talk about it

1. What did each gleaner give up to spend her day bent over in the field? What was her opportunity cost?

2. Why do you think God told farmers to leave some of their harvest for the poor?
3. If you owned this field, how would you decide how much to leave for gleaners?

PROJECT

The \$20 Decision

You will plan a real family purchase (a picnic lunch, a birthday party or supplies for a project) with a fixed budget of \$20, rank your choices and record exactly what each decision cost you in things given up.

You will need

- A grocery or store flyer, or prices from a store website looked up with a parent
- Ledger notebook, pencil and a calculator
- Index cards or sticky notes

Steps

1. With a parent, choose a real event to plan, such as a family picnic for four people.
2. Write every item you would like for it on its own index card, with its price from the flyer. Add up all the cards. Is the total more than \$20? That is scarcity.
3. Rank the cards from most important to least important. Lay them in a line.
4. Starting at the top, “buy” items until the next card would take you over \$20. Draw a line under the last item you can afford.
5. In your ledger, make two columns: Chosen and Given up. List the items above and below the line, with prices and totals.
6. For three of your choices, write the opportunity cost in a sentence: “By choosing lemonade for \$3.49, I gave up the cookies for \$3.29.”
7. Now do a time version. Write down how you spent your last free Saturday, hour by hour. For two of the hours, write what else you could have done and which you would choose next time.
8. If your parent agrees, carry out the picnic with your plan and record how well it worked.

Tips

- Look for trade-offs: could you buy a smaller size of one thing to afford a little of another?
- Remember that the opportunity cost is only the *next-best* choice, not everything on the list.

Check your work

- ☐ I can explain what scarcity is and why it forces a choice.
- ☐ I can name the opportunity cost of a choice I made.
- ☐ My ledger shows a list of chosen and given-up items with correct totals.

LEDGER NOTEBOOK

1. Draw a T-chart labeled “Chosen” and “Given up” for a choice you made this week, with a sentence naming the opportunity cost.
2. Sketch Lewis’s keelboat and list five things you would have packed in it, ranked by importance. What would you leave behind?
3. Write Bastiat’s broken-window story in four comic-strip boxes. In the last box, draw what the shopkeeper did *not* get to buy.

From history. The Lewis and Clark expedition, called the Corps of Discovery, left the St. Louis area in May 1804, reached the Pacific coast in November 1805 and returned in September 1806. The trip cost far more than the first \$2,500, as big projects often do. Planning for scarcity is one reason the party survived.

COMMON MISTAKES

- Thinking opportunity cost is the money you spent. It is the value of the next-best thing you gave up, which may be time, fun or another purchase.
- Thinking rich people or big companies do not face scarcity. Everyone has limited time, and every budget has a limit.
- Thinking that breaking or destroying things is good for business because it creates work. The money spent on repairs could have bought something new.

Make it a game • Next-Best Guess. Each of you secretly writes your top three ways to spend twenty pretend dollars, in order. Pick the first one as your choice. Your opponent has three guesses to name what you gave up, the next-best thing, which is your opportunity cost. Swap roles, then explain why scarcity forced the choice. Highest total guesses wins.

Scripture. “For which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?” (Luke 14:28, KJV)

Jesus expected His hearers to plan their spending before they began. Counting the cost is the first step in every wise choice, whether you are building a tower or planning a picnic.

1.3 SPECIALIZATION: ADAM SMITH'S PIN FACTORY

OBJECTIVES

- Tell what Adam Smith saw in a pin factory and why it made him think about the wealth of nations.
- Explain the three reasons Smith gave for why dividing the work makes people more productive.
- Measure the power of the division of labor with a timed assembly-line contest.

Warm-up. Look at a straight pin, a paper clip or a pencil. Guess how many separate steps it took to make it. Then list as many of the steps as you can think of, from the raw material to the box in the store.

WATCH

Productivity | Explore Economics

Federal Reserve Bank of St. Louis • 6:34

<https://www.youtube.com/watch?v=BVeKkQh3P3Q>

WHEN TO WATCH

After the story of the pin factory and before the assembly-line contest. Pause when the workers divide the jobs and predict how many more they will make.

KEY TERMS

division of labor

Splitting a job into separate steps so that each worker does one step.

specialization

When a person, business or country focuses on making a few things well instead of everything.

productivity

How much is produced in a given time by one worker, for example pins per person per day.

assembly line

A way of making things in which the product moves from worker to worker, and each adds one part or step.

CORE IDEAS

The story. Adam Smith was a Scottish thinker who had taught moral philosophy at the University of Glasgow. In 1776 he published a long book called *An Inquiry into the Nature and Causes of the Wealth of Nations*. He wanted to answer a simple question:

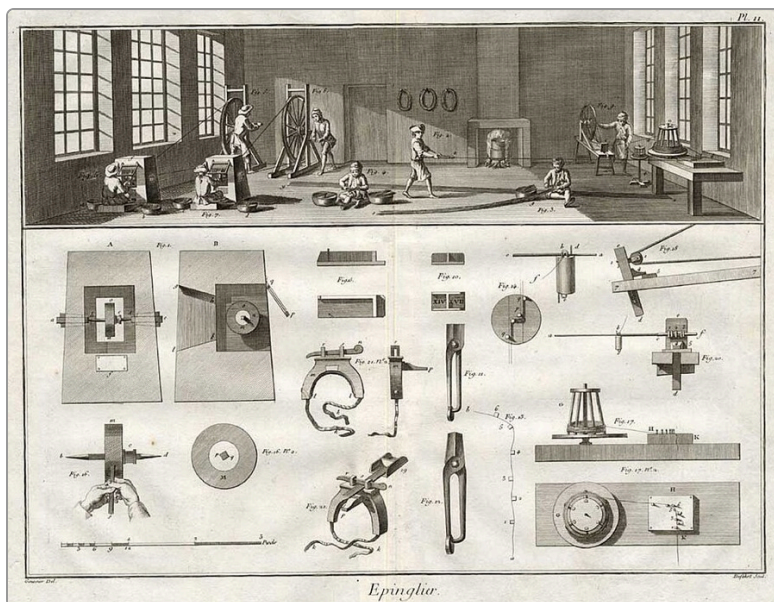
why are some nations rich and others poor? He began his answer not with gold or kings but with a small workshop that made straight pins. A pin seems a trifling thing, but Smith counted about eighteen separate steps to make one: “One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head,” and so on, down to putting the finished pins into paper.

How they figured it out. Smith described a small factory where only ten men worked, and some of them did two or three steps each. Even so, they made about twelve pounds of pins a day, more than 48,000 pins, or about 4,800 for each man. Smith said that if each man had worked alone, doing every step himself, he could perhaps not make even one pin in a day, and certainly not twenty. He had learned about the steps from pin-makers and from a French encyclopedia of trades. Smith gave three reasons the divided work was so much faster: each worker became very skillful at his one step; no time was wasted walking from one task and tool to the next; and workers who did one thing all day often thought of a machine or a trick to do it faster.

The big idea. When people divide the work and each **specializes**, the whole team becomes far more **productive**, and the same hours of work produce many more goods. That is one of the main reasons some nations grow rich: not by digging up more gold, but by working together more cleverly. Specialization also means people must **trade**, because a pin-maker cannot eat pins. Smith was honest about one danger, too. He warned that a person who spends his whole life doing one tiny task may never stretch his mind, so he urged that ordinary people should have schooling. Good businesses still try to train workers and let them learn more than one job.

In business today. A restaurant kitchen has a grill cook, a fry cook and a dishwasher. A hospital has surgeons, nurses and cleaners. Henry Ford would use the same idea in his moving assembly line (Lesson 4.3). Whole towns and countries specialize too: Florida grows oranges, Idaho grows potatoes, and they trade. When you make sandwiches for a picnic with one person spreading, one adding fillings and one cutting, you are using Adam Smith’s pin factory.

PICTURE STUDY



Épinglier (The Pin-Maker), Plate II from the *Encyclopédie*, Engraved by A.-J. Defehrt for Diderot and d'Alembert's *Encyclopédie*, 1760s · Engraving · Published in Paris

Image: [Wikimedia Commons](#), public domain

The great French *Encyclopédie* tried to describe every art and trade, with careful engravings of workshops and tools. Its article on pin-making appeared in 1755, and Adam Smith may have used it when he wrote about pins. The pictures let a reader “walk through” a workshop step by step.

Look closely

- Count the workers. What is each one doing? Can you match them to Smith's steps (drawing, straightening, cutting, pointing, heading)?
- Find the tools in the lower part of the plate. Which one do you think sharpens the points?
- Notice how the workers are arranged in the room. Does the work move from one person to the next?

Talk about it

1. Why would a worker who does only one step become faster at it?
2. What might be hard or dull about doing only one step all day? How could an owner make the work better for the worker?
3. Why do you think the encyclopedia's makers wanted ordinary readers to see how pins were made?

Safety first. Use paper, folding and sandwich makings for the contest, not real pins or sharp tools. Wash hands before handling food.

PROJECT

The Assembly-Line Contest

You will test Adam Smith's idea with your family. First, people work alone and each makes the whole product. Then the same people divide the steps. You will count, compare and calculate productivity.

You will need

- Paper for folding paper boats or airplanes (about 40 sheets), or bread and sandwich spreads for a sandwich line
- A timer, a pencil and the ledger notebook
- Three or more workers (family members or friends)
- A ruler and a marker for a quality check

Steps

1. Choose a product with at least four steps, such as a paper boat (fold in half, fold corners, fold up bottoms, open and flatten, fold again, pull open), or a sandwich (lay out bread, spread, add filling, close, cut, wrap).
2. Write the steps in order in your ledger. Write a quality rule: for example, every boat must stand up by itself.
3. **Round 1: alone.** Each worker makes complete products for 5 minutes, doing every step. Count the finished products that pass the quality rule. Record each person's total.
4. **Round 2: divided.** Give each worker one or two steps, and pass the product down the table. Work for 5 minutes. Count the products that pass the quality rule.
5. Calculate productivity for each round: $\text{products} \div \text{number of workers} = \text{products per worker in 5 minutes}$.
6. Make a bar graph comparing Round 1 and Round 2.
7. **Improve it.** Find the slowest step (where products pile up). Change the line: give that step two workers or a better tool or method. Run a third round and record the result.

8. Write a short report: Which round was more productive, and by how much? Which of Smith's three reasons did you see? Did anyone find the divided work dull?

Tips

- Practice the steps once before the timer starts so everyone knows them.
- The place where products pile up is called a bottleneck. Every factory manager watches for it.

Check your work

- ☐ I can calculate products per worker and compare two methods.
- ☐ I can name Smith's three reasons the division of labor increases productivity.
- ☐ I can find a bottleneck and suggest a way to fix it.

LEDGER NOTEBOOK

1. Draw your assembly line from above, with each worker's station labeled with the step he or she did. Mark the bottleneck in red.
2. Make a data table: Round, Workers, Products, Products per worker. Fill it in from your contest.
3. Copy Smith's numbers: 10 workers, about 48,000 pins a day. Work out pins per worker, and compare that with "perhaps not one pin in a day" for a person working alone.

From history. Adam Smith's face appears on the Bank of England's £20 note issued from 2007 to 2022, together with a drawing of the division of labor in a pin factory and the words "and the great increase in the quantity of work that results." Smith's first book, written before *The Wealth of Nations*, was about right and wrong: *The Theory of Moral Sentiments* (1759).

COMMON MISTAKES

- Thinking the workers in a pin factory worked harder or longer. They worked the same hours; they produced more because the work was divided.
- Thinking specialization means you never need anyone else. The more you specialize, the more you must trade with others for everything you do not make.
- Forgetting quality. A fast line that makes broken products has not really produced more.

Make it a game • Pin Factory Race. Round one: one person makes paper chain links alone for ninety seconds. Round two: split the jobs, one cuts strips, one links them, as in Adam Smith's pin factory. Compare counts. Then, in thirty seconds, name Smith's three reasons dividing the work makes people more productive. Each reason you remember earns a bonus link.

1.4 TRADE ROUTES: THE PHOENICIANS, THE SILK ROAD AND THE HANSEATIC LEAGUE

OBJECTIVES

- Locate and describe three great trade networks of history: the Phoenicians, the Silk Road and the Hanseatic League.
- Explain why both sides gain from a free and honest trade.
- Run a trading game and measure how trade made each player better off.

Warm-up. Find three things in your kitchen or closet that were made in another country (look at the labels). Write the item and the country. On a map or globe, find each country and guess how the item traveled to you.

WATCH

The Silk Road: Connecting the ancient world through trade - Shannon Harris Castelo

TED-Ed • 5:20

<https://www.youtube.com/watch?v=vn3e37VWc0k>

WHEN TO WATCH

After the story, before the big idea. Trace the routes on your own map as you watch.

KEY TERMS

trade

Freely giving one thing in exchange for another.

merchant

A person who buys goods in one place and sells them in another.

trade route

A path by land or sea that merchants regularly use to carry goods between places.

import / export

Goods brought into a place from elsewhere (imports) and goods sent out to sell elsewhere (exports).

gains from trade

The benefit both sides receive when each values what it gets more than what it gives up.

CORE IDEAS

The story. About three thousand years ago, sailors from the cities of Tyre and Sidon, on the coast of what is now Lebanon, became the greatest traders of the Mediterranean Sea. They were the **Phoenicians**. They cut the famous cedars of Lebanon, and King Hiram of Tyre sent cedar and skilled workmen to Solomon for the temple in Jerusalem (1 Kings 5). They made a costly purple dye from sea snails, so prized that purple became the color of kings, and they spread a simple alphabet that became the ancestor of our own. Far to the east, after about 130 BC, the rulers of China's Han dynasty opened routes west through deserts and mountains. Later people named this web of routes the **Silk Road**. And in the 1200s, merchant towns around the North Sea and the Baltic Sea, led by Lübeck in Germany, joined together in the **Hanseatic League**, or Hansa, with trading houses as far apart as London, Bruges, Bergen in Norway and Novgorod in Russia.

How they figured it out. Each network solved real problems. The Phoenicians learned to steer by the stars and built trading posts along the coasts, including Carthage in North Africa, so their ships always had a friendly harbor. On the Silk Road almost no one traveled the whole way; goods passed from merchant to merchant in a long relay, and oasis cities like Samarkand grew rich from caravans that rested there. Silk, paper and porcelain moved west; horses, glass, silver and gold moved east, along with new foods and ideas. The Hansa merchants agreed on common rules, protected each other's ships from pirates and sailed sturdy cargo ships called cogs. They carried salted herring, salt, grain, timber, furs, wax and woolen cloth between places that had too much of one thing and too little of another.

The big idea. Why would anyone trade? Because people, places and countries are different. Norway had fish but little grain; the lands south of the Baltic had grain but few fish. When a Bergen fisherman traded dried cod for a Hansa merchant's grain, *each* of them got something he valued more than what he gave up. That is the surprising secret of trade: in a free and honest trade, **both sides gain**. Nobody has to

lose for the other to win. Trade lets each place specialize in what it does best, just as the workers in the pin factory did.

In business today. Ships, trucks, trains and airplanes still carry goods along trade routes around the world. A banana from Ecuador, a phone from Asia and wheat from Kansas may all meet on your table. Trade stays healthy only when merchants keep their word and use honest weights. The Phoenicians, the Silk Road traders and the Hansa all depended on trust between people who spoke different languages and lived far apart. A merchant's good name was worth more than a single shipload.

PICTURE STUDY



Portrait of the Merchant Georg Gisze, Hans Holbein the Younger, 1532 · Oil on oak panel ·
Gemäldegalerie, Berlin

Image: [Wikimedia Commons](#), public domain

Georg Gisze was a German merchant from Danzig (now Gdańsk) who worked at the Steelyard, the Hanseatic League's great trading house beside the River Thames in London. Hans Holbein painted him surrounded by the tools of his trade. The letter in his hand is addressed to him in London.

Look closely

- Find the small scale and the coins. Why would a merchant need to weigh coins?
- Find the letters on the walls and in his hand. How did a merchant in London learn what goods cost in other cities?
- Find the seal, the pen and the inkpot. What were they used for?
- Look at the costly carpet on the table. It came from the lands of the Ottoman Turks. What does it tell you about trade in 1532?

Talk about it

1. Which objects in the picture came from far away? How did they get to London?
2. Why would a merchant want his portrait painted with his tools around him?

3. If you were Georg Gisze, what would you buy in London to send home to Danzig, and what would you ask your family to send you?

PROJECT

The Trading Game: Measuring the Gains from Trade

Each player starts with a bag of goods that he did not choose. You will measure how happy each player is with his bag before and after a round of free trading, and find out whether trade made everyone better off.

You will need

- Small paper bags, one per player (3–6 players)
- Small items to put in the bags: wrapped snacks, stickers, pencils, small toys, trading cards (about 5 items per bag, different in each bag)
- Index cards, a pencil and the ledger notebook

Steps

1. A parent fills each bag with a different mix of items. Players may not choose their own bag.
2. Each player opens his bag and rates how much he likes it, from 1 (not at all) to 10 (love it). The scorekeeper writes every rating in the ledger and adds them up.
3. **Round 1.** Players may trade only with the person on their left, for 3 minutes. No one has to trade, and every trade must be agreed by both. Rate again and add up the total.
4. **Round 2.** Now anyone may trade with anyone for 5 minutes. Rate again and add up the total.
5. Record every trade in a trade log: who gave what, and who got what.
6. Make a line graph of the class total after the start, Round 1 and Round 2.
7. Discuss and write: Did the total go up? Was anyone made worse off by a trade he agreed to? Why did more trading partners help?
8. On a map, trace the Phoenician, Silk Road and Hanseatic routes. Label three goods carried on each.

Tips

- Players should be honest: no tricks, no pressure. A trade only counts if both people want it.

- Notice that the items in the room did not change at all. Only who had them changed, and yet the total happiness went up.

Check your work

- ☐ I can explain why both sides gain from a free and honest trade.
- ☐ I can name a good carried on the Phoenician routes, the Silk Road and the Hanseatic routes.
- ☐ My trade log and graph show how the total ratings changed.

LEDGER NOTEBOOK

1. Draw a simple map of the Mediterranean, Asia and northern Europe. Mark Tyre, Carthage, Chang'an (Xi'an), Samarkand, Lübeck, London and Bergen, and draw the trade routes.
2. Make a two-column chart for the Hansa: "Had too much" and "Needed." Fill it in for Norway (fish) and the Baltic grain lands, and draw an arrow for the trade.
3. Write a short letter from a Hansa merchant in London to his brother in Lübeck, telling what he bought, what he sold and what prices he paid.

From history. The Hanseatic League's London trading house, the Steelyard, stood where Cannon Street station is today. Several Hansa towns, including Lübeck, Hamburg and Bremen, still call themselves "Hanseatic cities," and the letters HH on Hamburg car license plates stand for *Hansestadt Hamburg*.

COMMON MISTAKES

- Thinking that in every trade one side wins and the other loses. In a free and honest trade, both sides expect to gain, or they would not agree.
- Thinking the Silk Road was one paved road. It was a web of many routes by land and sea, and most goods changed hands many times.
- Thinking trade is only about goods. Ideas, skills, inventions and even the alphabet traveled along trade routes.

Make it a game • Three Networks Map. On a big sheet of paper, draw from memory the Phoenician sea routes, the Silk Road and the Hansa seas. Your parent calls out goods, such as purple dye, silk or furs, and you set a button on the right route and say who imported it and who exported it. Finish by naming why both sides gained.

Scripture. “When thy wares went forth out of the seas, thou filledst many people; thou didst enrich the kings of the earth with the multitude of thy riches and of thy merchandise.” (Ezekiel 27:33, KJV)

Ezekiel’s long poem about Tyre lists the goods that flowed through the Phoenician city from many lands. Trade filled many people. The same chapter also warns that Tyre’s boasting about its riches led to its fall.

UNIT 1

WORK, TRADE AND VALUE

Before there were banks, stock markets or even coins, there was work. God put the first man in a garden “to dress it and to keep it,” and ever since, people have been making, growing, building and serving one another. In this unit you will learn why work is good and why it is a calling, why every choice has a cost because time and money are scarce, and why a team that divides the work, as Adam Smith saw in a small pin factory, can make far more than the same people working alone.

Then you will travel with the Phoenician sailors of Tyre, the camel caravans of the Silk Road and the merchants of the Hanseatic League, and discover the surprising secret of trade: when two people trade freely and honestly, *both* of them come out ahead. You will count, time and record everything in a ledger notebook that you will use all year.

PREREQUISITES

- Can add, subtract, multiply and divide whole numbers and money amounts
- Can read a simple table and make a bar graph
- Has a graph-paper composition book to use as a ledger notebook

MASTERY CHECKLIST

- ☐ I can explain why work is good and name goods and services that people in my town provide.
- ☐ I can explain scarcity and find the opportunity cost of a choice.
- ☐ I can tell how Adam Smith’s pin factory shows the power of the division of labor, and measure it in a contest of my own.
- ☐ I can trace the Phoenician, Silk Road and Hanseatic trade routes and explain why both sides gain from a free and honest trade.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **“I, Pencil,” by Leonard E. Read (1958):** Free to read online. A short essay told by a pencil about the thousands of people in many countries who help make it, though no one of them knows how to make a whole pencil. Read it aloud in two sittings with Lessons 1.3 and 1.4. Ages 10 and up.
- **Catan (family board game):** Ages 10 and up, 3–4 players. Players gather wood, brick, grain, sheep and ore and must trade with one another to build. A lively way to feel scarcity and the gains from trade after Lesson 1.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

1.1 Made to Work: Vocation and the Dignity of Labor	2 sessions of 45 minutes
1.2 Scarcity, Choice and Opportunity Cost	2 sessions of 45 minutes
1.3 Specialization: Adam Smith’s Pin Factory	2 sessions of 45 minutes
1.4 Trade Routes: The Phoenicians, the Silk Road and the Hanseatic League	2 sessions of 45 minutes

UNIT 1 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

Give two reasons from the Bible that work is good, not a punishment.

2. **5 pts**

Sort these into goods and services: a loaf of bread, a haircut, a tent, a piano lesson, a pencil, delivering the mail.

3. **5 pts**

What is scarcity? Why does it mean every choice has a cost?

4. (5 pts)

Maria has \$12. She can buy a book for \$12 or a puzzle for \$12. She would rather have the book, and her second choice is the puzzle. She buys the book. What is her opportunity cost?

5. (5 pts)

What would happen if a town paid boys to break windows so that the glaziers would have more work? Use Bastiat's idea of "what is not seen."

6. (5 pts)

In Adam Smith's pin factory, ten workers made about 48,000 pins a day. How many pins is that per worker? Why could one person working alone make so few?

7. (5 pts)

Name Adam Smith's three reasons that the division of labor increases productivity.

8. (5 pts)

In an assembly-line contest, 3 workers made 12 paper boats in 5 minutes working alone, and 27 boats in 5 minutes working as a line. What is the productivity per worker in each round?

9. (5 pts)

Name one good that traveled on each route: the Phoenician sea routes, the Silk Road and the Hanseatic routes.

10. (5 pts)

A Norwegian fisherman trades dried fish for a Hansa merchant's grain. Explain why both of them are better off.

ANSWER KEY

1. Any two: God Himself works (creation); God gave Adam work in the garden before the Fall (Genesis 2:15); God filled Bezalel with skill for workmanship (Exodus 31); Paul worked as a tentmaker; we are told to work heartily as to the Lord (Colossians 3:23).
2. Goods: bread, tent, pencil. Services: haircut, piano lesson, delivering the mail.
3. Scarcity means there is not enough time, money or resources to satisfy every want. Because we cannot have everything, choosing one thing means giving up something else, so every choice has a cost.
4. The puzzle: the next-best thing she gave up.
5. The town would not be richer. The money spent fixing windows would have bought other things (shoes, books, food) that now are never made or bought. The glazier gains, but the shopkeepers and the other workers lose, and the town has spent its money just to get back to where it started.
6. $48,000 \div 10 = 4,800$ pins per worker. Working alone, one person must learn and do all eighteen steps, switch tools and tasks constantly, and never becomes fast at any one step.
7. Workers become more skillful (dexterous) at one step; no time is lost moving from one task to another; and workers focused on one task invent machines or better methods.
8. Alone: $12 \div 3 = 4$ boats per worker. Line: $27 \div 3 = 9$ boats per worker. The line was more than twice as productive.
9. Phoenician: cedar, purple dye (also glass, metals). Silk Road: silk, paper, porcelain, horses, glass, silver. Hansa: herring, salt, grain, timber, furs, wax, wool cloth.
10. Each values what he receives more than what he gives. The fisherman has plenty of fish but needs grain; the merchant can sell fish at home for more than the grain cost him. Because the trade is free and honest, both gain.

PORTFOLIO PIECE: MY TOWN'S WORK AND TRADE MAP

Make a poster or a two-page ledger spread about work and trade in your own town. Choose six local workers or businesses and, for each, record the good or service it produces, one thing it buys from somewhere else (and where it comes from), and one way it specializes. Draw a map of your town with the six marked, and arrows showing at least three goods that come in from far away. Finish with a paragraph explaining how specialization and trade make your town better off than if every family had to make everything for itself.

LOOK FOR	WHAT IT MEANS
Research	Six real workers or businesses, each with a good or service, an import and a specialty correctly identified.
Map	A clear map with labeled locations and at least three trade arrows showing where goods come from.
Ideas	The paragraph correctly uses the words specialization, trade and scarcity and explains why both sides gain.
Neatness and honesty	Neat, labeled work; facts are from real observation or interviews, not guesses presented as facts.

UNIT 2

THE STORY OF MONEY

Money is so ordinary that we hardly notice it, but it is one of the cleverest inventions in history. In this unit you will follow money from the very beginning: people trading one thing for another, then using salt, shells, cattle, beaver skins and even dried leaves as money, then weighing out silver as Abraham did. You will see the kings of Lydia stamp the first coins, follow the gold trade across the Sahara with Mansa Musa, and watch Chinese merchants and London goldsmiths invent paper money and banks.

Last, you will learn the story most grown-ups have never heard: how the dollar was once tied to gold, how that link was loosened in 1933 and 1944 and cut on August 15, 1971, and what gives a dollar its value today. You will also learn why printing too much money has always led to trouble, from the Roman emperors to Germany in 1923. All along, you will weigh, count and test real coins at the kitchen table.

PREREQUISITES

- Knows what trade, goods and services are (Unit 1)
- Can multiply and divide decimals and money amounts with a calculator
- Can read a timeline

MASTERY CHECKLIST

- ☐ I can explain the problems of barter and the qualities that make something good money.
- ☐ I can name money's three jobs: a medium of exchange, a unit of account and a store of value.
- ☐ I can tell the story of the first coins in Lydia and of the gold trade across the Sahara.
- ☐ I can explain how goldsmiths' receipts became banknotes and how a bank works.
- ☐ I can explain what the gold standard was, what changed in 1971, what gives fiat money its value today, and why printing too much money causes inflation.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Econ Lowdown, from the Federal Reserve Bank of St. Louis**: Free. Short lessons, videos and activities on money, banking and inflation from a Federal Reserve bank, written for students. A good extra for Lessons 2.1, 2.3 and 2.4. Parents can browse without an account.
- **U.S. Mint coin specifications (usmint.gov)**: Free. On the U.S. Mint’s website, look under “Coin Specifications” for the official weight, size and metal of every U.S. coin. Use it to check your measurements in Lesson 2.2.
- **One Grain of Rice, by Demi (Scholastic)**: Ages 6–11. An Indian folktale picture book about a girl who asks to be paid one grain of rice, doubled each day for thirty days. A quick, memorable picture of how fast numbers grow when they keep doubling, useful with the inflation lesson (2.4) and again in Lesson 8.2.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

2.1 Barter and Commodity Money

2 sessions of 45 minutes

2.2 The First Coins and the Gold Trade: Lydia, Croesus, Rome and Mansa Musa

2 sessions of 45 minutes

2.3 Banks and Paper Money: China’s Jiaozi, the Goldsmiths and the Bank of England

2 sessions of 45 minutes

2.4 From the Gold Standard to Fiat Money

2 sessions of 45 minutes

UNIT 2 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What is the “double coincidence of wants,” and how does money solve it?

2. (5 pts)

Name four qualities of good money. Explain why cattle make poor money by one of them.

3. (5 pts)

Name money's three jobs and give an example of each.

4. (5 pts)

Where and about when were the first coins made, and why were they stamped?

5. (5 pts)

What did the camel caravans across the Sahara carry north and south? What happened in Cairo when Mansa Musa spent so much gold there in 1324?

6. (5 pts)

Twenty dimes weigh 45.4 grams. How much does one dime weigh? Is a dime's metal worth 10¢?

7. (5 pts)

How did London goldsmiths become bankers?

8. (5 pts)

A bank has \$1,000 in deposits and keeps 10% as reserves. How much can it lend? What would happen if every depositor asked for his money on the same day?

9. (5 pts)

What happened on August 15, 1971? What gives the dollar its value today?

10. (5 pts)

What would happen to prices if a government doubled the amount of money but the amount of goods stayed the same? Give one example from history.

ANSWER KEY

1. In barter, you must find someone who has what you want and also wants what you have. Money solves it because you can sell to anyone for money and buy from anyone with money.
2. Any four: durable, portable, divisible, uniform, limited in supply, accepted. Cattle are not portable (hard to carry) or divisible (you cannot pay with half a cow), and one cow is not the same as another.
3. Medium of exchange (buying bread with a dollar); unit of account (a price tag that says \$3.50); store of value (saving \$10 for next month).
4. In Lydia (western Turkey) about 600 BC. The king's stamp promised the right weight and purity, so people did not have to weigh and test the metal each time.
5. Salt went south; gold went north. So much gold arrived in Cairo that each piece of gold bought less there for years afterward.
6. $45.4 \div 20 = 2.27$ grams (the Mint says 2.268 g). No: today's coins have a face value greater than the value of their metal.
7. Merchants left gold with them for safekeeping and took receipts, which began to circulate as money. The goldsmiths saw that most gold sat unused, so they lent part of it out at interest while keeping some in reserve.
8. 10% of \$1,000 = \$100 in reserves, so it can lend \$900. It could pay only \$100 that day, so most depositors could not get their money at once: a bank run.
9. President Nixon announced that the United States would no longer exchange dollars for gold (he closed the gold window). Today the dollar is fiat money: it has value because it is legal tender, taxes are paid in it, people trust and accept it, and its supply is limited.
10. Prices would tend to rise, roughly doubling, because more money would be chasing the same goods (inflation). Examples: the Continental dollar, Roman debased coins, Germany in 1923, Zimbabwe in 2008–09.

PORTFOLIO PIECE: A TIMELINE OF MONEY

Make a long timeline (taped sheets of paper or a poster) of the story of money, from barter to fiat money, with at least ten dated events. Include commodity money, Abraham's weighed silver, the Lydian coins, Rome, the *jiaozi*, Mansa Musa, the Bank of England, the U.S. Mint, the Federal Reserve, Bretton Woods and August 15, 1971. For each, draw a small picture and write one sentence. Attach your coin-weight table from Lesson 2.2 and your auction table from Lesson 2.4, and finish with a paragraph answering: what makes money valuable?

LOOK FOR	WHAT IT MEANS
Accuracy	At least ten correctly dated events in the right order, with true one-sentence descriptions.
Understanding	The closing paragraph explains the qualities of good money, money's three jobs and what gives fiat money its value.
Evidence	The coin and auction tables are attached, neat and correctly calculated.
Presentation	Clear, labeled drawings and neat lettering; the timeline can be read from across a room.

2.1 BARTER AND COMMODITY MONEY

OBJECTIVES

- Explain barter and the problem of the “double coincidence of wants.”
- Describe real commodity monies: salt, shells, cattle, beaver skins and tobacco leaves in colonial Virginia.
- Test everyday objects against the qualities of good money, and name money’s three jobs.

Warm-up. You have a basket of apples and you want new shoes. The shoemaker does not want apples; he wants a chair. The chair maker wants fish. Draw arrows showing how many trades you must make before you get your shoes. How long might that take?

WATCH

What Makes Something Useful as Money? | Explore Economics (Grades 2-5)

Federal Reserve Bank of St. Louis • 2:56

<https://www.youtube.com/watch?v=9fyJ2BhUAPM>

WHEN TO WATCH

After the story, before the money test in the project.

BACKUP VIDEO

Money: An Economist's Perspective - The Curious Case of the Yap Stones (Part 4)

Atlanta Fed • 7:39

<https://www.youtube.com/watch?v=VbqW3A3PsXo>

Optional, with the history note about the stone money of Yap.

KEY TERMS

barter

Trading goods or services directly for other goods or services, without money.

double coincidence of wants

The rare luck that the person who has what you want also wants what you have. Barter needs it; money does not.

commodity money

Money that is also a useful good in itself, such as salt, cattle, shells, tobacco leaves, silver or gold.

medium of exchange

Money's first job: something people accept in trade for anything.

unit of account

Money's second job: a common measuring stick for prices, so we can compare the value of different things.

store of value

Money's third job: a way to save buying power for later.

CORE IDEAS

The story. For most of history, many people traded without money. A farmer swapped eggs for a blacksmith's nails; a trapper swapped furs for a kettle. This is called **barter**. It works well among neighbors who know each other, but it has a big problem. To trade, you must find someone who has what you want *and* wants what you have. In 1875 an English economist, William Stanley Jevons, gave this problem a name: the **double coincidence of wants**. What if the shoemaker does not want apples? What if your cow is worth ten pairs of shoes, and you only need one?

How they figured it out. People solved the problem by agreeing on one thing that almost everyone wanted and would accept. That thing became money. Around the world, people chose different **commodity money**. Herders counted wealth in cattle; the Latin word for money, *pecunia*, comes from *pecus*, cattle. Salt was so valuable that our word "salary" comes from the Latin *sal*, salt. Small cowrie shells were used as money in Africa, India and ancient China. At the trading posts of the Hudson's Bay Company in Canada, prices were counted in "made beaver," one prime beaver skin. And in colonial Virginia, where nearly every farm grew tobacco for sale to England, taxes, fines and even ministers' salaries were paid in pounds of dried tobacco leaves. After 1730, Virginia's inspectors gave paper receipts, called tobacco notes, for leaves stored in public warehouses, and people passed the notes from hand to hand like money. Long before any of these, people weighed out metal: Abraham paid for a field "four hundred shekels of silver, current money with the merchant" (Genesis 23:16).

The big idea. Money is anything people widely accept in trade. Good money has a few important qualities. It is **durable** (it does not rot), **portable** (easy to carry), **divisible** (can be split into small amounts), **uniform** (one piece is as good as another),

limited in supply (no one can make more of it whenever he likes) and **accepted** by others. Cattle are not very portable or divisible; salt can get wet; tobacco can rot. That is why people kept looking for better money, and why silver and gold won out. Money does three jobs. It is a **medium of exchange** (you can trade it for anything), a **unit of account** (you can measure every price in it), and a **store of value** (you can save it for later).

In business today. Barter has not disappeared. Neighbors still trade babysitting for garden vegetables, and some businesses swap services. But money saves a huge amount of time. Instead of searching for the one person who wants your apples *and* has your shoes, you sell your apples to anyone and buy shoes from anyone. That is why money lets people specialize, as you learned in Unit 1. Every price tag in every store uses money as a unit of account.

PICTURE STUDY



Fur Traders Descending the Missouri, George Caleb Bingham, about 1845 · Oil on canvas · The Metropolitan Museum of Art, New York
Image: [Wikimedia Commons](#), public domain

In the early 1800s, trappers and traders carried beaver and other furs down the Missouri River to sell in St. Louis. Furs were so widely traded on the frontier and in Canada that they worked almost like money. The American painter George Caleb Bingham, who grew up in Missouri, painted this quiet morning on the river.

Look closely

- Find the bundles of cargo in the canoe. What do you think is inside them?
- Look at the two people. Who do you think is the father, and who is the son? What is each doing?
- Find the small animal at the front of the canoe. Why might the traders have it with them?
- Look at the misty river. Where do you think the traders are going to sell their furs?

Talk about it

1. Why would furs make a good kind of money on the frontier? What would make them a poor kind of money?

2. If the traders wanted coffee, salt and cloth in St. Louis, why would it help to sell the furs for money first?
3. What does the calm, golden light tell you about how the painter felt about this kind of work?

PROJECT

The Barter Market and the Money Test

First you will run a family market with barter only and count how many trades it takes for everyone to get what they want. Then you will add a commodity money and see what changes. Last, you will test real objects to see which would make the best money.

You will need

- Index cards: write one good on each card (Apples, Shoes, Bread, Fish, Chair, Candles, Cloth, Milk), about 4 cards per player
- A second set of cards, “I want ___,” one secret want card for each player
- Dried beans or wrapped salt packets for commodity money (about 30)
- Test objects: a coin, a dried bean, a paper clip, a cracker, a pinch of salt in a paper twist, a leaf
- Ledger notebook, pencil and timer

Steps

1. **Barter round.** Deal each player 4 goods cards and one secret want card. Players may only swap cards for cards. Each player must end with the good on his want card. Time the round and count every trade in a tally.
2. Record in your ledger: minutes taken, number of trades, number of players who got what they wanted.
3. **Money round.** Shuffle and deal again with new want cards. This time give each player 5 beans. Any good can be sold for beans and bought with beans; players set their own prices. Time it and count trades again.
4. Compare the two rounds in a table. Which round was faster? Why?
5. **The money test.** Rule a table with the test objects down the side and these qualities across the top: durable, portable, divisible, uniform, limited in supply, accepted. Test each object: drop it, carry ten of it in a pocket for an hour, try to split it, compare two of them, and so on. Mark ✓ or ✗.
6. Give each object a score out of 6. Which would make the best money? Which the worst?

7. Write three sentences explaining money's three jobs, using an example from your market.

Tips

- In the barter round, notice how often you meet someone who has what you want but does not want what you have. That is the double coincidence of wants problem.
- Be honest in the money test. A leaf is easy to find, which means it is *not* limited in supply.

Check your work

- ☐ I can explain why barter is slow, using the double coincidence of wants.
- ☐ I can name six qualities of good money and test objects against them.
- ☐ I can name money's three jobs and give an example of each.

LEDGER NOTEBOOK

1. Draw a timeline from barter to commodity money: cattle, cowrie shells, salt, weighed silver, beaver skins, tobacco leaves. Add a picture and one sentence for each.
2. Copy your money-test table and circle the winning object.
3. Draw a Virginia tobacco note as you imagine it, and list one advantage and one problem of using it as money.

From history. On the Pacific island of Yap, people used huge carved stone discs called *rai* as a kind of money. Some were too heavy to move, so everyone simply remembered who owned each one, even when a stone changed owners. Money, in the end, rests on what people agree to accept and remember.

COMMON MISTAKES

- Thinking money must be coins or paper. Anything that people widely accept in trade can serve as money.
- Thinking commodity money was worthless. It was valuable because it was also a useful good, which is why people accepted it.
- Mixing up money's jobs. Trading with it is the medium of exchange; pricing with it is the unit of account; saving it is the store of value.

Make it a game • No Match, No Deal. Each of you writes five things you have and five things you want on cards. Try to barter, finding a double coincidence of wants. Count the failed tries. Then add one commodity money, such as a salt packet or shell, and trade again. Compare how many deals each way, and name money's three jobs.

Scripture. “And Abraham hearkened unto Ephron; and Abraham weighed to Ephron the silver, which he had named in the audience of the sons of Heth, four hundred shekels of silver, current money with the merchant.” (Genesis 23:16, KJV)

Before coins, silver was weighed out on a scale. Abraham paid the full price, in public, with silver that any merchant would accept: an honest trade done in the sight of witnesses.

2.2 THE FIRST COINS AND THE GOLD TRADE: LYDIA, CROESUS, ROME AND MANSA MUSA

OBJECTIVES

- Tell how the kingdom of Lydia made the first coins and what problem coins solved.
- Trace the gold trade from Lydia and Rome to the camel caravans across the Sahara of Mali and Mansa Musa's journey of 1324.
- Weigh real coins and explain the difference between a coin's metal value and its face value.

Warm-up. Look closely at a penny, a nickel, a dime and a quarter with a magnifying glass if you have one. List everything printed on each: words, numbers, pictures, dates, letters. Which words appear on all four?

WATCH

The Invention of Coinage: Lydia, 630 BCE

The Israel Museum, Jerusalem • 3:04

<https://www.youtube.com/watch?v=SkjrvsTf6ew>

WHEN TO WATCH

After the story of the Lydian coins, before the coin-scale project.

BACKUP VIDEO

Mansa Musa, one of the wealthiest people who ever lived - Jessica Smith

TED-Ed • 3:54

<https://www.youtube.com/watch?v=O3YJMaL55TM>

After reading about Mansa Musa's journey of 1324.

KEY TERMS

coin

A piece of metal of a set weight and purity, stamped by a trusted authority so people can accept it without weighing it.

electrum

A natural mix of gold and silver found in the rivers of Lydia; the first coins were made of it.

mint

A place where coins are made, or to make coins.

face value

The value printed on a coin or bill, such as 25¢.

caravan

A large group of traders and pack animals, especially camels, traveling together across a desert.

CORE IDEAS

The story. About 600 years before Christ, in the kingdom of Lydia (in what is now western Turkey), the rivers carried flakes of a pale gold-and-silver metal called **electrum**. The Lydians began to melt it into small lumps of a set weight and stamp them with a lion's head, the sign of their king. These were the first **coins**. The most famous Lydian king, Croesus, who ruled from about 560 to 546 BC, is credited with something even better: separate coins of pure gold and pure silver. Croesus became so rich that people still say “as rich as Croesus.” Soon Greek cities were striking their own coins, like the silver “owls” of Athens, and later Rome struck gold coins called *aurei* and silver ones called *denarii*. When Jesus asked to see “the tribute money,” He was handed a denarius and asked, “Whose is this image and superscription?” (Matthew 22:20).

How they figured it out. Before coins, every payment in metal had to be weighed and tested, because a lump might be lighter than it looked or mixed with cheaper metal. The stamp on a coin was a promise from the king: this piece is the right weight and purity. That saved time and built trust, and trade grew. Gold also drew traders across great distances. Ancient Egypt took gold from the mines of Nubia, to the south. Much later, from about AD 800 to 1500, camel caravans crossed the Sahara Desert, carrying salt mined in the desert south to West Africa and bringing gold north from the mines near the upper Senegal and Niger rivers. The empire of Mali grew rich by keeping that trade safe. In 1324 its ruler, **Mansa Musa**, made a pilgrimage to Mecca with thousands of followers and camels loaded with gold. He gave and spent so much gold in Cairo that, according to a historian who wrote there a few years later, gold was still worth less in Cairo twelve years afterward. Too much of even the most precious money makes each piece worth less.

The big idea. A coin turns metal into money that is **uniform** and **trusted**. Gold and silver made excellent money because they are durable, divisible, beautiful and scarce: no one can make more of them at will, only dig them up with hard work. But even gold can lose value when a great deal of it appears all at once, as Cairo learned from Mansa Musa, and as Spain learned later when ships carried tons of American silver and gold home and prices in Europe rose. Spain's silver coin, the "piece of eight," was so trusted that it became the model for the first U.S. dollar.

In business today. In 1792 the new United States set up the U.S. Mint in Philadelphia to make honest coins. Today's coins are no longer made of gold or silver. Their **face value** is greater than the value of their metal, and people accept them because they trust the government that issues them, not because of the metal inside. The penny shows the other side of the coin: by the 2020s each one cost the Mint more than a cent to make, and in 2025 the Mint struck its last pennies for everyday use. Gold is still bought and stored by banks, governments and families, and it still sends its price up and down as people trade it.

PICTURE STUDY



Mansa Musa on the Catalan Atlas, Attributed to Abraham Cresques, 1375 · Ink, color and gold on parchment · Bibliothèque nationale de France, Paris

Image: [Wikimedia Commons](#), public domain

The Catalan Atlas was made on the island of Majorca, probably by the Jewish mapmaker Abraham Cresques, about fifty years after Mansa Musa's famous journey. Europeans had heard so much about the gold of Mali that the mapmaker painted its king in the middle of the Sahara, holding up a nugget of gold. The writing beside him says that he was the richest and noblest king in all the land because of the gold found there.

Look closely

- Find Mansa Musa. What is he holding in each hand?
- Look at his crown and throne. How did the mapmaker show that he was a king?
- Find the writing above him. It tells European readers about the gold found in his land. Why would merchants want to read it?
- Look for the thin straight lines crossing the map. Sailors used lines like these to find their direction. Why would traders want a map like this?

Talk about it

1. Why did European mapmakers in 1375 care so much about a king in West Africa?

2. What did the caravans carry south across the Sahara, and what did they bring north?
3. What happened to the value of gold in Cairo when Mansa Musa spent so much of it? Why?

PROJECT

The Coin Scale: Metal Value and Face Value

You will weigh U.S. coins on a kitchen scale, compare their weights with their face values, and discover a clue left over from the days when coins were made of silver. Then you will design and stamp a clay coin of your own.

You will need

- 20 pennies, 20 nickels, 20 dimes and 20 quarters (borrowed from the family coin jar)
- A kitchen scale that reads in grams
- A calculator and the ledger notebook
- Air-dry clay or salt dough, a bottle cap and a toothpick for stamping

Steps

1. Weigh 20 coins of one kind at a time (one gram is too small to measure a single coin accurately). Record the total in grams.
2. Divide by 20 to find the weight of one coin. Do this for each kind of coin and record it in a table: Coin, Face value, Weight of 20, Weight of 1.
3. Check your answers against the U.S. Mint's numbers: penny 2.5 grams, nickel 5.0 grams, dime 2.268 grams, quarter 5.670 grams. How close were you?
4. Calculate cents per gram for each coin (face value $\div$ weight). Which coin gives the most money for its weight?
5. **The clue.** Divide the quarter's weight by the dime's weight. Then divide 25¢ by 10¢. What do you notice? Before 1965, dimes and quarters were 90% silver, so their weights were set in proportion to their values. The rule stayed even after the silver was taken out.
6. Design your own coin. Choose a symbol (like the Lydian lion), a value and a motto. Press a ball of clay flat with the bottom of a jar, cut it round with a bottle cap and stamp your design with a toothpick. Make several of the same weight by weighing each lump of clay first.
7. Write a paragraph: Why did people trust a stamped coin more than a lump of metal? What makes you trust the coins in your pocket today?

Tips

- Zero the scale with nothing on it before each weighing.
- Pennies made before 1982 are heavier (about 3.1 grams) because they were mostly copper. If one of your weights is off, look at the dates.

Check your work

- ☐ I can explain why the first coins were stamped.
- ☐ I can calculate the weight of one coin from the weight of 20.
- ☐ I can explain the difference between a coin's face value and the value of its metal.

LEDGER NOTEBOOK

1. Copy your coin table with weights and cents per gram, and write one sentence about what it shows.
2. Draw a map of the gold-and-salt trade across the Sahara: mark the Sahara, the Niger River, Timbuktu, Cairo and Mecca. Draw salt going south and gold going north, and trace Mansa Musa's journey of 1324.
3. Sketch both sides of your clay coin at twice its size and label the symbol, value and motto.

From history. The Greek historian Herodotus, writing about a hundred years after Croesus, said that the Lydians were the first people to make and use coins of gold and silver and the first to keep shops. Archaeologists digging at Sardis, Lydia's capital, have found the workshops where gold was refined.

COMMON MISTAKES

- Thinking the first coins were made in Rome or by the Greeks. The first coins were made in Lydia about 600 BC; the Greeks and Romans copied the idea.
- Thinking gold always keeps the same value. When a lot of gold arrives at once, as in Cairo in 1324, each ounce buys less.
- Thinking a quarter contains 25¢ worth of metal. Today's coins are worth more than the metal they are made of.

Make it a game • Weigh the Coin. Gather a few coins and a kitchen scale. Before weighing, each of you guesses the weight of each coin and what the metal might be worth. Closest guess wins a point. Then say what face value means and how Lydia's stamped electrum coins solved the problem of weighing metal at every sale.

Scripture. “The silver is mine, and the gold is mine, saith the LORD of hosts.” (Haggai 2:8, KJV)

Kings have stamped their faces on gold and silver for thousands of years, but every ounce belongs to God, who made it. We hold money as stewards, not as owners.

2.3 BANKS AND PAPER MONEY: CHINA'S JIAOZI, THE GOLDSMITHS AND THE BANK OF ENGLAND

OBJECTIVES

- Explain how paper money began as a receipt for coins or metal, in Song China and in London.
- Describe how goldsmiths became bankers and how the Bank of England was founded in 1694.
- Run a model bank with deposits, receipts and loans, and explain why banks depend on trust.

Warm-up. Hold 20 coins in one hand and a dollar bill in the other. Which is easier to carry? Which would you rather carry on a long journey? Now look at the dollar bill: what does it promise, and who signed it?

WATCH

The History of Paper Money - Not Just Noodles - Extra History - Part 2

Extra History • 7:46

<https://www.youtube.com/watch?v=rPHTmGjoe2k>

WHEN TO WATCH

After the story, before the goldsmith's bank project.

Note: A cartoon history from Marco Polo's China to the London goldsmiths.

BACKUP VIDEO

Why did we start using paper money? - The History of Money (3/10)

OpenLearn from The Open University • 1:21

<https://www.youtube.com/watch?v=v2zIJWtk1jo>

Optional, a one-minute review of why paper money began.

KEY TERMS

deposit

Money or valuables left with a bank for safekeeping.

receipt

A written note proving that someone has paid or left something with you.

banknote

A paper promise from a bank to pay the holder; later, paper money.

bank

A business that keeps people's money safe, lends money to others and charges interest on loans.

reserves

The part of its deposits that a bank keeps on hand instead of lending out.

bank run

When many depositors rush to take their money out of a bank at the same time because they fear it will fail.

CORE IDEAS

The story. In the province of Sichuan in western China, about a thousand years ago, people used coins made of iron. Iron coins were cheap and heavy: buying a bolt of silk could take a load of coins too heavy for one person to carry. So merchants in the city of Chengdu began leaving their coins with trusted shops and taking paper receipts, called *jiaozi*, which they could pass to others in trade. In the 1020s the government of the Song dynasty took over and printed official *jiaozi*, the first government paper money in the world. Centuries later, in England, merchants in London left their gold and silver for safekeeping with goldsmiths, who had strong vaults. The goldsmiths gave them written receipts, and soon people were paying each other with the receipts instead of fetching the gold.

How they figured it out. The goldsmiths noticed something. Most of the time, only a few customers came to take out their gold on any day. The rest of the gold sat in the vault. So the goldsmiths began to **lend** part of it to others, at interest, while keeping enough on hand, their **reserves**, for the usual withdrawals. They had become **banks**. The word comes from the Italian *banco*, the bench where moneychangers did business. In 1694 a group of London merchants and investors founded the **Bank of England** to lend £1.2 million to the government of King William III, which needed money for a war with France. The Bank issued paper notes that promised to pay the bearer in coin on demand. Today's Bank of England notes still carry the words "I promise to pay the bearer on demand the sum of..."

The big idea. Paper money began as a **receipt**: a promise that real coins or metal were waiting in a vault. Banks do two useful things. They keep money safe, and they take the money that savers are not using and lend it to people who need it to build a house, buy a farm or start a business. But this only works with **trust**. If everyone

tries to take out their gold at once, in a **bank run**, no bank that has lent out deposits can pay everyone on the same day. Paper money also tempts rulers to print more than they have metal for. China's later paper money lost value when too much was printed, a lesson you will meet again in the next lesson.

In business today. When a family puts money in a bank, the bank lends most of it to other customers and pays the family a little interest. Since the Federal Deposit Insurance Corporation (FDIC) was created in 1933, deposits at most U.S. banks have been insured, so ordinary savers do not lose their money if a bank fails, and the old panics and bank runs have become rare. A bank's whole business still rests on keeping its promises.

PICTURE STUDY



The Moneylender and His Wife, Quentin Matsys, 1514 · Oil on panel · Musée du Louvre, Paris

Image: [Wikimedia Commons](#), public domain

Antwerp in 1514 was one of the busiest trading cities in Europe, full of merchants and moneychangers. Quentin Matsys painted a moneychanger testing coins on a scale, the job that came before banking. His wife holds a book of prayers but cannot take her eyes off the gold.

Look closely

- Find the scale. Why does the moneychanger weigh each coin instead of just counting them?
- Look at the coins, pearls and rings on the table. Which are money, and which are valuables left with him?
- Find the small round mirror on the table. Who can you see reflected in it, and where is he?
- Find the papers and books on the shelves. What might be written in them?

Talk about it

1. Why did people need moneychangers when coins came from many different cities and kings?
2. The wife is turning the pages of a prayer book but looking at the money. What do you think the painter is saying about money and the heart?

3. Why would honest weighing matter so much in a business like this?

PROJECT

The Goldsmith's Bank

You will run a model bank for your family. Depositors leave “gold” (coins) with you and get paper receipts. You will see how receipts start to work as money, how lending works, and what happens in a bank run.

You will need

- A box with a lid for the vault, and about 50 coins (the “gold”)
- Slips of paper for receipts, a pen and a stamp or special mark only you can make
- Ledger notebook ruled with columns: Date, Name, Deposited, Withdrawn, Lent, Balance in vault
- 3–4 family members as depositors and borrowers

Steps

1. Each depositor brings 10 coins to the bank. Count them in front of the depositor, put them in the vault and write a receipt: “Received from ___ 10 gold coins, to be paid on demand.” Sign it with your special mark. Record every deposit in the ledger.
2. Let the depositors buy things from each other (snacks, chores, drawings) using only receipts. Notice: the receipts are now acting as paper money.
3. Over a few days, record how many coins are actually withdrawn. What fraction of the vault sat untouched?
4. **Lending.** A family member asks to borrow 15 coins and promises to repay 16 next week. Keep 20% of the coins in the vault as reserves. How many coins may you lend? Lend, and record the loan in the ledger.
5. **The bank run.** Announce a rumor that the bank has lost its gold. Every depositor comes to withdraw all 10 coins at once. Can you pay them all? Record what happens.
6. When the loan is repaid with interest, record the extra coin as the bank’s earnings. Pay each depositor a small share if you can.

7. Write a paragraph: Why do banks need trust? What could a bank do to keep depositors from panicking?

Tips

- Keep the ledger perfectly honest. A goldsmith with sloppy books would soon lose every customer.
- Your special mark on each receipt guards against counterfeits. Real banknotes have watermarks, special threads and fine engraving for the same reason.

Check your work

- ☐ I can explain how a receipt for gold became paper money.
- ☐ I can calculate how much a bank may lend if it keeps a set share as reserves.
- ☐ I can explain what a bank run is and why trust matters to a bank.

LEDGER NOTEBOOK

1. Copy one page of your bank ledger with deposits, withdrawals and a loan, and check that the balance in the vault is correct.
2. Draw a goldsmith's receipt from 1670 and a *jiaozi* from 1024 side by side. Write what each promised.
3. Make a flow chart: saver → bank → borrower → bank (with interest) → saver.

From history. When the Venetian traveler Marco Polo visited China in the late 1200s, he was astonished that the emperor Kublai Khan's paper money, made from the bark of mulberry trees and stamped with red seals, was accepted everywhere. Europeans who read his book could hardly believe that paper could be money.

COMMON MISTAKES

- Thinking a bank keeps all your money in a vault with your name on it. A bank keeps part as reserves and lends the rest.
- Thinking paper money has always been worthless paper. It began as a receipt for real coins or metal.
- Thinking a bank run means the bank was dishonest. Even a sound bank cannot pay everyone in a single day if all depositors panic at once.

Make it a game • The Goldsmith's Safe. You are the goldsmith. Your parent deposits ten buttons and gets a paper receipt. Secretly lend three buttons to a pretend neighbor, keeping only seven as reserves. Your parent then asks for all ten back at once. If you cannot pay, that is a bank run. Explain how a receipt became a banknote.

2.4 FROM THE GOLD STANDARD TO FIAT MONEY

OBJECTIVES

- Explain what the gold standard was and trace the dollar's link to gold through 1913, 1933–34, 1944 and August 15, 1971.
- Explain what gives fiat money its value today: law, taxes, trust and a limited supply.
- Explain inflation and show, with an auction experiment, why printing more money makes prices rise.

Warm-up. Ask a grandparent or older friend what a candy bar, a postage stamp or a gallon of milk cost when he or she was your age. Write down the old price and today's price. How many times bigger is today's price?

WATCH

The Gold Standard Explained

Federal Reserve Bank of St. Louis • 2:01

<https://www.youtube.com/watch?v=5FHtcCpAMQ0>

WHEN TO WATCH

After the story of 1971, before the big idea.

Note: A short explanation by an economist at the Federal Reserve Bank of St. Louis.

BACKUP VIDEO

Inflation - Economic Lowdown

Federal Reserve Bank of St. Louis • 4:55

<https://www.youtube.com/watch?v=TQILLHAlgqU>

Before the inflation auction.

KEY TERMS

gold standard

A system in which a country's money can be exchanged for a fixed amount of gold.

fiat money

Money that is not backed by gold or silver; it has value because the law makes it legal tender and because people trust it and accept it.

legal tender

Money that the law says must be accepted to pay debts and taxes.

inflation

A general rise in prices over time, which means each dollar buys less.

debasement

Lowering the amount of gold or silver in coins while keeping their face value the same.

central bank

A nation's bank for banks and for the government, which manages the supply of money; in the United States, the Federal Reserve.

CORE IDEAS

The story. For most of the 1800s and early 1900s, the U.S. dollar was tied to gold. From the 1830s until 1933 an ounce of gold was set at about \$20.67, the Gold Standard Act of 1900 made the link official, and a paper dollar could be traded at a bank for gold coin. This was the **gold standard**. In 1913 Congress created the **Federal Reserve**, a central bank that would issue the Federal Reserve notes you use today and help banks in a panic. During the Great Depression, the government in 1933 ordered Americans to turn in most of their gold coins, and in 1934 it raised the price of gold to \$35 an ounce. In July 1944, near the end of the Second World War, delegates from 44 nations met at Bretton Woods, New Hampshire, and agreed that their currencies would be tied to the dollar, and the dollar to gold: foreign governments could trade dollars for gold at \$35 an ounce. Then, on **August 15, 1971**, President Richard Nixon announced on television that the United States would no longer trade gold for dollars. This was called “closing the gold window.” Since then, the dollar has not been tied to gold at all.

How they figured it out. The gold standard had real strengths: the government could not create more dollars than it had gold for, so prices stayed fairly steady over long periods. But it also had weaknesses. The amount of money in a country depended on how much gold miners happened to dig up, and in a panic people rushed to turn paper into gold, which could make bank failures worse. By the 1960s, many more dollars were held around the world than the United States had gold to cover at \$35 an ounce, and other countries began asking for their gold. Leaders decided they could no longer keep the promise. So the world moved to **fiat money**, from the Latin *fiat*, “let it be done.”

The big idea. Why is a paper dollar worth anything if you cannot trade it for gold? Look at a bill: it says, “This note is legal tender for all debts, public and private.” Fiat money has value for four reasons. The law makes it **legal tender** for debts; the government requires **taxes** to be paid in it; people **trust** that others will accept it tomorrow; and its **supply is limited**. That last reason is the most important. If a government creates too much money, there is more money chasing the same goods, and prices rise. This is **inflation**. It has happened again and again. Roman emperors **debased** the silver coin until it was mostly copper, and Diocletian’s attempt to fix the damage in AD 301 failed. The Continental Congress printed so many paper “Continental” to pay for the War of Independence that people said worthless things were “not worth a Continental.” In Germany in 1923, the government printed money so fast that by November one U.S. dollar was worth about 4.2 trillion German marks, and people carried bundles of bills to buy bread. Zimbabwe printed a 100-trillion-dollar note in 2009.

In business today. The Federal Reserve manages the amount of money and credit in the United States, aiming for steady employment and prices that rise only slowly, about 2 percent a year. Businesses watch inflation closely, because it changes what they must pay for materials and wages and what they must charge customers. Families feel it when the same groceries cost more. Fiat money gives a nation flexibility in a crisis, but it depends on the people in charge using restraint. Honest money, whether gold or paper, requires honest stewards: “Divers weights, and divers measures, both of them are alike abomination to the LORD” (Proverbs 20:10).

PICTURE STUDY



*A Fifty-Five-Dollar Continental Currency Note, Printed by order of the Continental Congress, 1779 ·
Printed paper money (front)*

Image: [Wikimedia Commons](#), public domain

To pay for the War of Independence, the Continental Congress printed paper money called Continental currency, starting in 1775. This note from 1779 promised that its owner could receive fifty-five Spanish silver dollars, “or an equal Sum in Gold or Silver.” Benjamin Franklin designed many of the emblems and mottoes on these notes. But Congress printed far more notes than it could ever repay in silver, and by 1780 they had lost almost all their value.

Look closely

- Read the printed promise. What does it say the bearer may receive?
- Find the round emblem and its Latin motto, *Post nubila Phoebus*, “after the clouds, the sun.” Why might Congress have chosen a hopeful motto in 1779?
- Find the serial number and the two handwritten signatures. Why would each note be numbered and signed by hand?
- Look at how worn the paper is. What does that tell you about how it was used?

Talk about it

1. Why did the Continental lose its value?

2. If you were a farmer in 1779, would you rather be paid in Continentals or in silver coins? Why?
3. What does the saying “not worth a Continental” teach about printing money?

PROJECT

The Inflation Auction

You will hold two auctions for the same goods. In the second, everyone has ten times as much play money. You will record the prices and discover, with your own numbers, why printing more money does not make anyone richer.

You will need

- Play money (or paper slips marked in dollars)
- Three small prizes to auction twice (for example three wrapped snacks), or two sets of three identical prizes
- 3 or more bidders, a parent as auctioneer
- Ledger notebook, pencil and a calculator

Steps

1. **Auction 1.** Give each bidder \$10 in play money. Auction the three prizes one at a time. Record the winning bid for each.
2. Return the prizes (or bring out the second identical set). Now the “government” prints money: give each bidder \$90 more, so everyone has \$100.
3. **Auction 2.** Auction the same three prizes again. Record each winning bid.
4. Make a table: Prize, Price in Auction 1, Price in Auction 2, How many times higher (Auction 2 ÷ Auction 1).
5. Discuss: Did anyone get more snacks because there was more money? Who would be hurt if prices rose like this in real life (a saver with \$10 in a jar, a worker whose pay stayed the same)?
6. **Real prices.** Using your warm-up interview, find how many times higher a price is now than when your grandparent was young. Add the result to your table.
7. **Timeline.** Make a timeline of the dollar and gold: 1792 Mint Act, 1900 Gold Standard Act (gold at \$20.67 an ounce), 1913 Federal Reserve, 1933–34 gold at \$35, 1944 Bretton Woods, August 15, 1971 the gold window closed.

8. Write a paragraph: “Why printing more money does not make a country richer.”

Tips

- Bidders should bid what the prize is really worth to them; no teaming up to keep prices low.
- In Auction 2, notice that the snacks did not change at all. Only the amount of money changed.

Check your work

- ☐ I can explain what the gold standard was and what happened on August 15, 1971.
- ☐ I can name four things that give fiat money its value.
- ☐ My auction table shows how more money chasing the same goods raised prices.

LEDGER NOTEBOOK

1. Draw the dollar-and-gold timeline with a small picture for each date.
2. Make a two-column chart: “Strengths of the gold standard” and “Strengths of fiat money,” with at least two in each, and one danger for each.
3. Copy your auction price table and write one sentence explaining what it proves.

From history. The words “legal tender for all debts, public and private” appear on every Federal Reserve note. The motto “In God We Trust” first appeared on a U.S. coin, the two-cent piece, in 1864, and began appearing on paper money in 1957.

COMMON MISTAKES

- Thinking the government can make everyone rich by printing more money. More money chasing the same goods only raises prices.
- Thinking a dollar today is backed by gold in Fort Knox. Since 1971 the dollar has not been exchangeable for gold.
- Thinking fiat money is worthless. It is valuable because the law makes it legal tender, taxes are paid in it, people trust it and its supply is limited.

Make it a game • Date and Dollar Duel. Make flash cards for 1913, 1933 to 1934, 1944 and August 15, 1971, with the event on the back. Your parent shows a date and you say what happened to the dollar's link to gold. Then hold up four fingers and name four things that give fiat money value today. Beat your best time.

Scripture. “Divers weights, and divers measures, both of them are alike abomination to the LORD.” (Proverbs 20:10, KJV)

Debasing coins and printing too much money are a kind of false weight: the money says one thing but is worth less. God cares about honest measures, in a market stall and in a nation's money.

UNIT 2

THE STORY OF MONEY

Money is so ordinary that we hardly notice it, but it is one of the cleverest inventions in history. In this unit you will follow money from the very beginning: people trading one thing for another, then using salt, shells, cattle, beaver skins and even dried leaves as money, then weighing out silver as Abraham did. You will see the kings of Lydia stamp the first coins, follow the gold trade across the Sahara with Mansa Musa, and watch Chinese merchants and London goldsmiths invent paper money and banks.

Last, you will learn the story most grown-ups have never heard: how the dollar was once tied to gold, how that link was loosened in 1933 and 1944 and cut on August 15, 1971, and what gives a dollar its value today. You will also learn why printing too much money has always led to trouble, from the Roman emperors to Germany in 1923. All along, you will weigh, count and test real coins at the kitchen table.

PREREQUISITES

- Knows what trade, goods and services are (Unit 1)
- Can multiply and divide decimals and money amounts with a calculator
- Can read a timeline

MASTERY CHECKLIST

- ☐ I can explain the problems of barter and the qualities that make something good money.
- ☐ I can name money's three jobs: a medium of exchange, a unit of account and a store of value.
- ☐ I can tell the story of the first coins in Lydia and of the gold trade across the Sahara.
- ☐ I can explain how goldsmiths' receipts became banknotes and how a bank works.
- ☐ I can explain what the gold standard was, what changed in 1971, what gives fiat money its value today, and why printing too much money causes inflation.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Econ Lowdown, from the Federal Reserve Bank of St. Louis**: Free. Short lessons, videos and activities on money, banking and inflation from a Federal Reserve bank, written for students. A good extra for Lessons 2.1, 2.3 and 2.4. Parents can browse without an account.
- **U.S. Mint coin specifications (usmint.gov)**: Free. On the U.S. Mint’s website, look under “Coin Specifications” for the official weight, size and metal of every U.S. coin. Use it to check your measurements in Lesson 2.2.
- **One Grain of Rice, by Demi (Scholastic)**: Ages 6–11. An Indian folktale picture book about a girl who asks to be paid one grain of rice, doubled each day for thirty days. A quick, memorable picture of how fast numbers grow when they keep doubling, useful with the inflation lesson (2.4) and again in Lesson 8.2.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

2.1 Barter and Commodity Money

2 sessions of 45 minutes

2.2 The First Coins and the Gold Trade: Lydia, Croesus, Rome and Mansa Musa

2 sessions of 45 minutes

2.3 Banks and Paper Money: China’s Jiaozi, the Goldsmiths and the Bank of England

2 sessions of 45 minutes

2.4 From the Gold Standard to Fiat Money

2 sessions of 45 minutes

UNIT 2 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What is the “double coincidence of wants,” and how does money solve it?

2. (5 pts)

Name four qualities of good money. Explain why cattle make poor money by one of them.

3. (5 pts)

Name money's three jobs and give an example of each.

4. (5 pts)

Where and about when were the first coins made, and why were they stamped?

5. (5 pts)

What did the camel caravans across the Sahara carry north and south? What happened in Cairo when Mansa Musa spent so much gold there in 1324?

6. (5 pts)

Twenty dimes weigh 45.4 grams. How much does one dime weigh? Is a dime's metal worth 10¢?

7. (5 pts)

How did London goldsmiths become bankers?

8. (5 pts)

A bank has \$1,000 in deposits and keeps 10% as reserves. How much can it lend? What would happen if every depositor asked for his money on the same day?

9. (5 pts)

What happened on August 15, 1971? What gives the dollar its value today?

10. (5 pts)

What would happen to prices if a government doubled the amount of money but the amount of goods stayed the same? Give one example from history.

ANSWER KEY

1. In barter, you must find someone who has what you want and also wants what you have. Money solves it because you can sell to anyone for money and buy from anyone with money.
2. Any four: durable, portable, divisible, uniform, limited in supply, accepted. Cattle are not portable (hard to carry) or divisible (you cannot pay with half a cow), and one cow is not the same as another.
3. Medium of exchange (buying bread with a dollar); unit of account (a price tag that says \$3.50); store of value (saving \$10 for next month).
4. In Lydia (western Turkey) about 600 BC. The king's stamp promised the right weight and purity, so people did not have to weigh and test the metal each time.
5. Salt went south; gold went north. So much gold arrived in Cairo that each piece of gold bought less there for years afterward.
6. $45.4 \div 20 = 2.27$ grams (the Mint says 2.268 g). No: today's coins have a face value greater than the value of their metal.
7. Merchants left gold with them for safekeeping and took receipts, which began to circulate as money. The goldsmiths saw that most gold sat unused, so they lent part of it out at interest while keeping some in reserve.
8. 10% of \$1,000 = \$100 in reserves, so it can lend \$900. It could pay only \$100 that day, so most depositors could not get their money at once: a bank run.
9. President Nixon announced that the United States would no longer exchange dollars for gold (he closed the gold window). Today the dollar is fiat money: it has value because it is legal tender, taxes are paid in it, people trust and accept it, and its supply is limited.
10. Prices would tend to rise, roughly doubling, because more money would be chasing the same goods (inflation). Examples: the Continental dollar, Roman debased coins, Germany in 1923, Zimbabwe in 2008–09.

PORTFOLIO PIECE: A TIMELINE OF MONEY

Make a long timeline (taped sheets of paper or a poster) of the story of money, from barter to fiat money, with at least ten dated events. Include commodity money, Abraham's weighed silver, the Lydian coins, Rome, the *jiaozi*, Mansa Musa, the Bank of England, the U.S. Mint, the Federal Reserve, Bretton Woods and August 15, 1971. For each, draw a small picture and write one sentence. Attach your coin-weight table from Lesson 2.2 and your auction table from Lesson 2.4, and finish with a paragraph answering: what makes money valuable?

LOOK FOR	WHAT IT MEANS
Accuracy	At least ten correctly dated events in the right order, with true one-sentence descriptions.
Understanding	The closing paragraph explains the qualities of good money, money's three jobs and what gives fiat money its value.
Evidence	The coin and auction tables are attached, neat and correctly calculated.
Presentation	Clear, labeled drawings and neat lettering; the timeline can be read from across a room.

UNIT 3

MARKETS

A market is any place where buyers and sellers meet: a farmers' market on Saturday morning, a grocery store, a website or a stock exchange. Nobody is in charge of a market, and yet every day it somehow brings the right oranges, shoes and bread to the right places. In this unit you will learn how: through prices. You will see how a frost in the Florida orange groves sent a signal to growers and shoppers all over the country, and how competition, from Aaron Montgomery Ward's catalog to the farmers' market, pushes sellers to serve customers better and charge them less.

Then you will look honestly at the limits of markets. When there is only one seller, as with a monopoly, or a few sellers who agree not to compete, as with some guilds and cartels, customers can be harmed. When planners try to set every price, as in the Soviet Union, shelves go empty. And some things, such as roads, courts and protection from fraud, markets do poorly on their own. You will finish knowing why markets work best with honest rules, like a game with a fair referee.

PREREQUISITES

- Knows scarcity, opportunity cost and the gains from trade (Unit 1)
- Knows money's three jobs (Unit 2)
- Can make a line graph and read a table

MASTERY CHECKLIST

- ☐ I can explain the laws of supply and demand and draw a simple supply-and-demand graph.
- ☐ I can explain how prices act as signals to buyers and sellers.
- ☐ I can explain how competition helps customers, and compare prices across several sellers.
- ☐ I can describe a monopoly, a guild and a cartel, and name their benefits and harms.
- ☐ I can compare a market economy with a planned economy, and name things markets do poorly on their own.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Federal Reserve Bank of St. Louis: Econ Lowdown classroom resources**: Free. Lessons, videos and simple games from a Federal Reserve bank on supply and demand, prices and competition. Fits Lessons 3.1–3.3. Ages 10 and up.
- ***The Toothpaste Millionaire*, by Jean Merrill (HarperCollins)**: Ages 8–12. A funny novel about a sixth grader who makes a cheaper, better toothpaste and builds a business. Good discussion of costs, prices and competition with Lessons 3.2 and 6.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

3.1 Supply and Demand: Prices Are Signals

2 sessions of 45 minutes

3.2 Competition: Why Many Sellers Serve Customers Well

2 sessions of 45 minutes

3.3 Monopolies, Guilds and Cartels: The Limits of One or a Few Sellers

2 sessions of 45 minutes

3.4 Who Decides? Markets, Planners and the Mixed Economy

2 sessions of 45 minutes

UNIT 3 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

State the law of demand and the law of supply.

2. **5 pts**

On a supply-and-demand graph, which way does each line slope, and what is the point where they cross?

3. (5 pts)

What would happen to the price of oranges if a freeze destroyed half of Florida's orange trees? What signal would that price send to buyers and to growers elsewhere?

4. (5 pts)

A store has set the price of a toy so low that crowds want it and the shelves are empty. What is this called, and what would happen if the store raised the price?

5. (5 pts)

Store A sells a 16-ounce jar of peanut butter for \$3.20; Store B sells a 40-ounce jar for \$6.00. Which is the better price per ounce?

6. (5 pts)

How did Montgomery Ward's catalog help farm families?

7. (5 pts)

Name one benefit and one harm of medieval guilds.

8. (5 pts)

What did the Supreme Court decide in *Gibbons v. Ogden* (1824), and what happened to steamboat fares afterward?

9. (5 pts)

Why did the Soviet Union's planned economy have empty shelves and long lines?

10. (5 pts)

Name two things markets do poorly on their own, and explain why for one of them.

ANSWER KEY

1. Demand: when the price rises, buyers buy less (and when it falls, they buy more). Supply: when the price rises, sellers offer more (and when it falls, they offer less).
2. Demand slopes down to the right; supply slopes up to the right. Where they cross is the market (equilibrium) price and quantity.
3. The supply would fall, so the price would rise. Buyers would buy fewer oranges and switch to other fruit; growers in warmer places would plant and ship more.
4. A shortage. A higher price would lower the amount people want and encourage more supply, until the shelves stopped running empty.
5. A: $\$3.20 \div 16 = \$0.20$ per ounce. B: $\$6.00 \div 40 = \$0.15$ per ounce. Store B's jar is cheaper per ounce.
6. It let them buy by mail at low prices straight from a large seller, compare prices with the local store, and return goods they did not like. That competition pushed local stores to lower prices and improve.
7. Benefits: training through apprenticeship, quality standards, punishing cheats, caring for members. Harms: limiting the number of masters, fixing prices, keeping out newcomers and new methods.
8. That New York could not keep out steamboats licensed by the nation to trade between the states, which broke the Fulton–Livingston monopoly. Competition grew and fares fell.
9. Planners could not know what millions of people wanted or what was scarce, and because they set prices by order, prices could not act as signals. So they made too much of some things and too little of others.
10. Any two: roads, courts, national defense, lighthouses, preventing fraud, pollution that falls on neighbors. Example: a lighthouse's light shines for every ship, so it is hard to charge each ship, and few would build one to sell its light.

PORTFOLIO PIECE: A MARKET REPORT ON ONE PRODUCT

Choose one product your family buys often (milk, apples, bread, gasoline). For four weeks, record its price at three sellers each week. Graph the prices on one line graph with a different color for each seller. Then write a one-page report: How much competition is there for this product? What caused any price changes you saw (seasons, sales, weather, news about supply)? Is any seller a monopoly? Does the government set any rules for it (for example, inspecting gas pumps or scales)? End with what you would advise your family about buying it.

LOOK FOR	WHAT IT MEANS
Data	Four weeks of prices at three sellers, recorded with dates and the same size of product.
Graph	A correct line graph with labeled axes, a title and a key.
Ideas	The report correctly uses supply, demand, price signal and competition to explain what happened.
Advice	Sensible, specific advice backed by the numbers.

3.1 SUPPLY AND DEMAND: PRICES ARE SIGNALS

OBJECTIVES

- State the laws of supply and demand and draw a simple supply-and-demand graph.
- Explain how a change in supply, like a frost in the orange groves, changes the price.
- Explain how prices act as signals that tell buyers and sellers what to do.

Warm-up. Strawberries in June and strawberries in January: which do you think cost more at the grocery store? Why? Write your guess and your reason. If you can, check a store flyer or ask a parent what strawberries cost this month.

WATCH

Demand - Economic Lowdown

Federal Reserve Bank of St. Louis • 6:53

<https://www.youtube.com/watch?v=LqOzRAVOV9o>

WHEN TO WATCH

After the story of the orange freeze, before the dinner-table auction. Pause when the demand curve is drawn and compare it with yours.

BACKUP VIDEO

Shortage and Surplus for Kids

Homeschool Pop • 7:39

<https://www.youtube.com/watch?v=jjBEcwbvs04>

Optional, with the common mistakes: a simple review of shortage and surplus.

KEY TERMS

market

Any place or way in which buyers and sellers come together to trade.

demand

How much of something buyers are willing and able to buy at each price. When the price goes up, people usually buy less.

supply

How much of something sellers are willing and able to sell at each price. When the price goes up, sellers usually offer more.

market price

The price where the amount buyers want to buy equals the amount sellers want to sell; also called the equilibrium price.

shortage / surplus

A shortage is when buyers want more than sellers offer at the current price; a surplus is when sellers offer more than buyers want.

price signal

Information carried by a price that tells people whether something has become more scarce or more plentiful.

CORE IDEAS

The story. In the winter of 1894–95, Florida’s orange growers were enjoying their biggest crops ever. Then, in late December 1894, a hard freeze swept down the state, and in February 1895 an even worse one followed. Orange trees froze and split, and across most of northern and central Florida whole groves died. The next season Florida shipped only a small fraction of the oranges it had shipped before. All over the country, oranges suddenly became scarce, and their price went up.

How they figured it out. No one had to send a letter to every grocer in America telling him oranges were scarce. The rising price told everyone. Shoppers saw the price and bought apples or bananas instead, which left the scarce oranges for those who wanted them most. Growers in California and in the warmer southern parts of Florida saw the high price and planted more groves, and over the next years Florida’s orange-growing moved south. In 1945 an economist named Friedrich Hayek explained this in a famous essay. Suppose, he wrote, that a metal called tin suddenly becomes scarcer somewhere in the world. Most people who use tin will never know why, but they do not need to. They see that the price has gone up, so they use less of it, and the tin goes where it is needed most. A price, Hayek said, is a kind of message that carries knowledge no single person could ever gather.

The big idea. The **law of demand** says that when the price of something rises, people buy less of it. The **law of supply** says that when the price rises, sellers offer more of it. Put the two together on a graph, with price going up and quantity going across: the demand line slopes down, the supply line slopes up, and where they cross is the **market price**. If the price is set too low, buyers want more than sellers offer and

there is a **shortage**. If it is set too high, sellers offer more than buyers want and there is a **surplus**. When a frost cuts the supply of oranges, the supply line moves to the left, and the market price rises. That higher price is a **signal**: “Use oranges carefully; grow more if you can.”

In business today. Store managers watch prices and sales every day. A gas station raises its price when its supplier charges more; a clothing store marks down coats in March to clear out a surplus; a farmer decides what to plant next spring by looking at prices. Strawberries are cheap in June, when local farms are full of them, and dear in January, when they must be grown far away and shipped. An honest seller lets prices tell the truth. Scripture warns against the man who hoards grain in a famine to squeeze his neighbors, and blesses the one who brings it to market (Proverbs 11:26).

PICTURE STUDY



A Florida Orange Grove, Detroit Publishing Company, early 1900s · Colored photographic postcard · New York Public Library

Image: [Wikimedia Commons](#), public domain

Around 1900 the Detroit Publishing Company made colored postcards from photographs taken all over America. This card shows a Florida orange grove like those the great freezes of 1894 and 1895 destroyed and that growers later replanted farther south. Someone mailed it from Jacksonville.

Look closely

- Look at how the trees are planted. Why would a grower plant them in straight rows with space between?
- Find the oranges on the trees. About how many can you count on one tree?
- Find the handwriting at the bottom. Where was the card sent from?

Talk about it

1. What would happen to this grower's income if a frost ruined his trees? What would happen to the price of oranges in New York?
2. Why would a high orange price encourage a grower in California to plant more trees?
3. Name another crop or product whose price changes with the seasons.

PROJECT

The Dinner-Table Auction and a Supply-and-Demand Graph

You will hold an auction at the dinner table to measure demand, then change the supply and watch the price move. Then you will draw a real supply-and-demand graph from your own numbers.

You will need

- Ten small identical treats (cookies, crackers or stickers)
- Play money: give each bidder \$10
- 3 or more bidders and a parent as auctioneer
- Graph paper, a ruler and the ledger notebook

Steps

1. **Measuring demand.** Ask each bidder to write down secretly the most he would pay for one treat, then for a second treat, then a third. Collect the papers.
2. Make a demand table: at each price from \$1 to \$8, count how many treats the family would buy in total (a person buys a treat if his number is equal to or more than the price).
3. **Measuring supply.** The parent plays the baker and decides how many treats she would be willing to sell at each price (for example, 2 at \$1, 4 at \$2, 6 at \$3, 8 at \$4, 10 at \$5). Write a supply table.
4. On graph paper, put price going up and quantity going across. Plot the demand table and connect the points. Plot the supply table and connect those points. Mark where the lines cross: that is the market price.
5. **Test it.** Hold an auction for the treats one at a time and record each winning price. Was it close to the market price on your graph?
6. **The frost.** Now take away half the treats (a “freeze” has cut the supply). Auction the remaining treats. Record the prices. Did they go up?
7. Write a paragraph: what signal did the higher price send to the buyers? What signal would it send to the baker?

Tips

- Bidders must bid honestly with what the treat is really worth to them.
- The lines on your graph may be bumpy. Real data usually is. Draw the best line you can through the points.

Check your work

- ☐ I can state the laws of supply and demand.
- ☐ I can draw a supply-and-demand graph and find the market price where the lines cross.
- ☐ I can explain what happens to the price when the supply goes down.

LEDGER NOTEBOOK

1. Copy your supply-and-demand graph. Draw a second supply line farther left for the frost, and mark the new, higher market price.
2. Make a price diary: for four weeks, record the price of one fruit or vegetable at your store each week. Write what you think caused any change.
3. Draw a comic strip of Hayek's tin story: the tin becomes scarce, the price rises, and people use less without knowing why.

From history. After the great freezes, the railroad builder Henry Flagler pushed his Florida East Coast Railway south to Miami in 1896, partly because growers wanted to plant groves in the warmer south and needed a way to ship their fruit. Prices and new railroads together moved a whole industry.

COMMON MISTAKES

- Thinking sellers simply choose any price they like. If a price is too high, customers buy elsewhere or buy less, and the seller is left with a surplus.
- Mixing up the lines. Demand slopes down (higher price, fewer bought); supply slopes up (higher price, more offered).
- Thinking high prices after a disaster are always unfair. A higher price helps scarce goods go where they are needed most and calls more supply to the place. A seller must still be honest and must never cheat or deceive.

Make it a game • Orange Grove Graph. On a big sheet draw price up the side and quantity along the bottom, then lay two strips of paper as the supply and demand lines. Your parent calls out news, such as a frost in the groves. Slide the right line, say the new market price, and name the shortage or surplus. Score ten events.

Scripture. “He that withholdeth corn, the people shall curse him: but blessing shall be upon the head of him that selleth it.” (Proverbs 11:26, KJV)

In a famine, a man who hoards his grain to drive the price still higher harms his neighbors, but the one who brings his grain to market serves them. Markets work for good when sellers bring their goods honestly.

3.2 COMPETITION: WHY MANY SELLERS SERVE CUSTOMERS WELL

OBJECTIVES

- Explain how competition among many sellers leads to lower prices, better quality and new ideas.
- Tell how Aaron Montgomery Ward's mail-order catalog brought competition to farm families in 1872.
- Survey the price of the same items at three stores and explain the differences.

Warm-up. There are two lemonade stands on the same street. One charges 50¢ a cup and the other \$1. What will most customers do? What might the \$1 stand do to win customers back? List three ideas.

WATCH

Introduction to Perfect Competition | Economics Explained

Federal Reserve Bank of St. Louis • 6:18

<https://www.youtube.com/watch?v=J9O09ISQnG8>

WHEN TO WATCH

After the big idea, before the price survey.

KEY TERMS

competition

When several sellers try to win the same customers by offering lower prices, better quality or better service.

consumer

A person who buys and uses goods and services; in a competitive market, consumers can choose among sellers.

middleman

A trader who buys goods from producers and resells them to others, adding a charge for the service.

mail-order catalog

A printed book of goods with prices, from which customers order by mail and receive goods by post or railroad.

price survey

Recording the price of the same item at several sellers in order to compare them.

CORE IDEAS

The story. In the 1860s, many American farm families lived miles from the nearest town. Often there was only one general store within reach, and its owner could charge high prices because there was nowhere else to go. Goods passed through a long chain of middlemen, each adding a charge. Aaron Montgomery Ward, a young traveling salesman who had worked in country stores, saw the problem. In 1872, in Chicago, he printed a single sheet listing goods and prices and mailed it to farmers. Farmers could order by mail, and the goods would come by railroad to the nearest station. Ward bought in large amounts straight from makers and sold for cash at low prices. Within a few years he was promising “satisfaction guaranteed or your money back.” His catalog grew into a thick book, and in the 1890s Sears, Roebuck and Company started a rival catalog that grew even bigger.

How they figured it out. Ward had to win the trust of customers who had never seen him or his goods. So he described each item honestly, printed pictures, and let unhappy customers send goods back. Then competition went to work. With the catalog on the kitchen table, a farm family could compare its prices with the general store’s. Many country storekeepers had to lower their prices, carry better goods or offer credit and friendly service to keep customers. The catalog companies had to compete with each other, too, printing better descriptions, adding new products and shipping faster. The farmer who had once had one choice now had several.

The big idea. When many sellers **compete** for the same customers, each has a reason to lower prices, improve quality, serve customers kindly and invent new products. No law has to order them to; the customers’ freedom to walk away is enough. That is why markets with many sellers usually serve customers well. Competition also rewards those who serve best, and it lets the next newcomer with a better idea in. Competition is hard on sellers, who must keep working to stay ahead, but it is good for customers, and every seller is also a customer of someone else.

In business today. Walk through a farmers’ market and you will see competition at work: several sellers of tomatoes side by side, each trying to offer the freshest, the

tastiest or the best price. Grocery chains compete with weekly sales; airlines compete on fares and comfort; websites let shoppers compare prices in seconds. A wise shopper compares before buying, and an honest seller competes by serving better, never by lying about his goods or his rivals.

PICTURE STUDY



Poultry Market at Gisors, Camille Pissarro, 1885 · Gouache and pastel on paper · Museum of Fine Arts, Boston

Image: [Wikimedia Commons](#), public domain

Camille Pissarro painted many markets in the small towns of Normandy, near his home. Every week farm families brought their chickens, ducks, eggs and vegetables to town, and many sellers stood side by side offering the same kinds of goods. Pissarro used quick strokes of chalky pastel to catch the busy crowd.

Look closely

- Count the baskets and sellers you can see. Are there many sellers or only a few?
- Find a seller talking with a buyer. What do you think they are saying?
- Look at the sellers' clothes. Do they look like farmers or shopkeepers?
- Look for the poultry in the baskets. How would a buyer choose which basket to buy from?

Talk about it

1. With so many sellers of the same thing, what could one seller do to win more customers?
2. Why can't one seller in this market charge much more than the others?
3. How is this market like a farmers' market or a grocery store today?

PROJECT

The Three-Store Price Survey

You will compare the prices of the same five items at three different stores (in person with a parent, from store flyers, or on store websites with a parent) and look for the effects of competition.

You will need

- Store flyers or a parent's help to visit or look up three stores
- Ledger notebook, pencil and a calculator
- A ruler for drawing the table

Steps

1. Choose five common items your family buys, and write the exact size of each (for example, a gallon of whole milk, a 1-pound loaf of white bread, a dozen large eggs, a 5-pound bag of flour, a 16-ounce jar of peanut butter).
2. Rule a table: Item, Size, Store A, Store B, Store C, Lowest price, Difference between highest and lowest.
3. Record the price of each item at each store. Be careful to compare the same size.
4. Find the lowest price for each item and the difference between the highest and lowest. Add up the cost of all five items at each store.
5. Ask the questions a competitor would ask: Which store was cheapest overall? Was any store cheapest on every item? What else might bring a customer to a store with higher prices (closer to home, better quality, friendlier service, a store brand)?
6. Make a bar graph of the total cost at each store.
7. Write a short report: "What competition among these three stores does for my family."

Tips

- If two sizes are different, divide the price by the number of ounces to find the price per ounce. That is called the unit price, and many store shelf tags show it.

- Sale prices count, but write “sale” next to them.

Check your work

- ☐ I can compare prices fairly by using the same size or the unit price.
- ☐ I can explain three ways stores compete for customers besides price.
- ☐ My table and bar graph are complete and correctly added.

LEDGER NOTEBOOK

1. Copy your price-survey table and circle the lowest price in each row.
2. Draw a page from a 1872 Montgomery Ward catalog as you imagine it: three items with honest descriptions and prices, and the money-back promise at the bottom.
3. Draw a diagram of a farmer buying a plow before the catalog (farmer ← storekeeper ← wholesaler ← maker) and after (farmer ← catalog company ← maker). Which chain is shorter?

From history. Montgomery Ward’s first catalog of 1872 was one sheet listing about 160 items. By 1883 it had grown to a book of about 240 pages. Farm families came to call the big mail-order catalogs the “wish book.”

COMMON MISTAKES

- Thinking competition means the cheapest seller always wins. Customers also choose quality, convenience, service and trust.
- Comparing prices of different sizes. Always compare the same amount, or use the unit price.
- Thinking competition is only bad for sellers. It pushes every seller to improve, and every seller is a customer of other sellers.

Make it a game • Undercut Duel. Each item costs six pretend coins to make. Both secretly write a selling price on a slip, then reveal. The customer, your parent, buys from the lower price and the seller earns price minus cost. Play six rounds and tally. Discuss what happened to prices and how Montgomery Ward's catalog brought competition to farm families.

3.3 MONOPOLIES, GUILDS AND CARTELS: THE LIMITS OF ONE OR A FEW SELLERS

OBJECTIVES

- Define monopoly, guild and cartel, and explain how each can limit competition.
- Describe the benefits medieval guilds gave (training, quality) and the harms (keeping newcomers out, fixing prices).
- Tell the story of the New York steamboat monopoly and *Gibbons v. Ogden* (1824), and run a monopoly experiment.

Warm-up. Imagine there is only one ice-cream shop in your whole town and no one else is allowed to open one. Write three things the owner might do differently from an owner who has two competitors across the street.

WATCH

What is a Monopoly? | Economics Explained

Federal Reserve Bank of St. Louis • 7:18

<https://www.youtube.com/watch?v=146O2tCFBWs>

WHEN TO WATCH

After the story of *Gibbons v. Ogden*, before the monopoly experiment.

KEY TERMS

monopoly

A market with only one seller of a good or service that has no close substitute.

apprentice

A young person bound to learn a trade from a master for a set number of years.

guild

In the Middle Ages, an association of craftsmen or merchants in one trade and one town that set rules for training, quality, prices and who could work.

cartel

A group of sellers who agree not to compete, for example by fixing prices or limiting how much they produce.

natural monopoly

A business, such as a water or power-line company, where one network serves a town more cheaply than several competing ones could; usually regulated by government.

CORE IDEAS

The story. In the Middle Ages, the craftsmen of a town, the bakers, weavers, shoemakers or goldsmiths, joined together in **guilds**. A boy who wanted to be a baker became an **apprentice** to a master baker for several years, then a journeyman who worked for wages, and finally, if the guild approved his “masterpiece,” a master who could open his own shop. Guilds checked the quality of goods and punished cheats who sold short loaves or bad cloth. They cared for members’ widows and orphans. But guilds also had another side. They often limited how many masters could work in a town, set prices, and fought new methods and newcomers that might compete with them. Centuries later, in the early 1800s, the state of New York gave Robert Fulton and Robert Livingston, the builders of the first successful steamboat, a **monopoly**: no one else could run steamboats on New York’s waters without their permission.

How they figured it out. Thomas Gibbons ran a steamboat between New Jersey and New York with a license from the United States government, and his young captain, Cornelius Vanderbilt, kept running it in spite of the monopoly. Aaron Ogden, who held a license from the monopoly, sued. In 1824 the U.S. Supreme Court decided the case of *Gibbons v. Ogden*: a state could not stop boats licensed by the nation from trading between the states. The monopoly was broken. New steamboat lines rushed in, fares fell sharply, and boats got faster and better. People saw that when a law keeps competitors out, customers pay for it.

The big idea. With many sellers, competition protects customers. With only one seller, a **monopoly**, customers have nowhere else to go, so the seller can charge more, give less and stop improving. A **cartel** is a group of sellers who agree not to compete, such as by fixing a common price. Guilds sometimes acted like cartels. But some things, like water pipes and power lines, are cheaper with only one network in a town: no one wants three sets of water pipes under every street. These are called **natural monopolies**, and in the United States they are usually regulated, so that a

public commission must approve their prices. The lesson is balanced: one or a few sellers are not always bad, but they need watching, and competition is usually the customer's best friend.

In business today. The good parts of the guilds live on: apprenticeships still train electricians, plumbers and carpenters, and trade groups set quality standards. The harmful parts are guarded against by law. In the United States it is against the law for competing companies to secretly agree on prices. A new business can usually open if it obeys fair rules, and that freedom to enter is what keeps established sellers working hard.

PICTURE STUDY



American Steamboats on the Hudson: Passing the Highlands, Currier & Ives, 1874 · Hand-colored lithograph · Library of Congress, Prints and Photographs Division

Image: [Wikimedia Commons](#), public domain

Currier & Ives, a New York printing firm, sold inexpensive colored prints of American life to ordinary families. This one shows the great steamboats of the Hudson River half a century after *Gibbons v. Ogden* broke the steamboat monopoly. By then many rival lines carried passengers up and down the river.

Look closely

- Count the steamboats. Do they all belong to one company?
- Find the paddle wheels and the smokestacks. What made these boats move?
- Look at the size and decoration of the boats. Why would steamboat lines make their boats grand and comfortable?

Talk about it

1. If only one company had been allowed to run steamboats on this river, how might this picture look different?
2. Why would rival steamboat lines lower their fares and build faster, finer boats?
3. What did customers gain when the monopoly ended?

PROJECT

The Monopoly Experiment

You will run two markets for the same goods. In one, there is a single seller; in the other, three sellers compete. You will record prices, quality and customer satisfaction, and then write the rules for a fair guild.

You will need

- A plate of crackers or cookies, cut paper “goods” or small toys to sell
- Play money (\$10 per customer)
- Price tags (index cards) and markers
- At least 4 people: sellers and customers
- Ledger notebook

Steps

1. **Market 1: monopoly.** One person is the only seller of crackers. She may set any price and may decide how many crackers go on each plate. Customers may buy or go without. Run the market for 5 minutes and record each sale: price and number of crackers.
2. **Market 2: competition.** Divide the same crackers among three sellers. Each sets his own price and portion and may change them at any time. Customers may buy from anyone. Run for 5 minutes and record each sale.
3. For each market, calculate the average price per cracker (total money paid ÷ total crackers sold).
4. Ask each customer to rate how happy he was with each market from 1 to 10. Record the ratings.
5. Compare in a table: average price per cracker, crackers sold, customer rating. Which market served customers better? Which did sellers prefer?
6. **A fair guild.** Imagine you are founding a guild of young bakers in your town. Write five rules: two that protect customers (for example, honest weights), two that train new members, and one that keeps newcomers welcome rather than shutting them out.

7. Write a paragraph explaining why a town has one water company but many restaurants.

Tips

- In the monopoly market, the seller should try to earn as much money as she can, just as a real monopoly would.
- Watch for any seller in Market 2 who suggests, “Let’s all charge \$3.” That is a cartel.

Check your work

- ☐ I can define monopoly, guild, cartel and natural monopoly.
- ☐ My table compares prices and satisfaction in the two markets.
- ☐ I can name a benefit and a harm of medieval guilds.

LEDGER NOTEBOOK

1. Draw a three-step ladder for a guild craftsman: apprentice, journeyman, master. Write what each one could and could not do.
2. Draw two pictures of a street: one with one ice-cream shop (monopoly) and one with three. Label the prices and choices you would expect in each.
3. Make a list of five services in your town with only one provider (water, sewer, power lines...) and five with many (restaurants, barbers...). Why the difference?

From history. Some guild rules survive in our language. A “masterpiece” was first the piece of work a journeyman made to prove he deserved to be a master. In London, many old guilds, called livery companies, still exist today as charities and still hold their ancient halls.

COMMON MISTAKES

- Thinking a monopoly is always illegal. Some, like a water company, are allowed but regulated; patents give inventors a monopoly for a limited time. What the law forbids is gaining or keeping a monopoly by unfair means and secretly fixing prices.
- Thinking guilds were all bad. They trained young people, protected quality and cared for members, even though they also limited competition.
- Thinking a big company must be a monopoly. A company can be very large and still face strong competition.

Make it a game • Guildmaster's Quiz. You are the guildmaster. Your parent asks you five questions about benefits of guilds, harms of guilds and the words monopoly and cartel. Answer each. Then your parent tells you a short story about a guild and sneaks in one false fact. Catch the false fact to win. Swap roles and use the word apprentice.

3.4 WHO DECIDES? MARKETS, PLANNERS AND THE MIXED ECONOMY

OBJECTIVES

- Compare how a market economy and a planned (command) economy decide what to make, how to make it and who gets it.
- Tell how central planning in the Soviet Union led to shortages and long lines.
- Name things that markets do poorly on their own (roads, courts, defense, pollution that falls on neighbors, fraud) and explain why honest rules are needed.

Warm-up. Look in your kitchen cupboard. Count how many different kinds of cereal, bread, crackers or soup are there. Who decided which kinds the store would sell? Who decided how many boxes to make?

WATCH

Command and market economies | Basic economics concepts | AP Macroeconomics | Khan Academy

Khan Academy • 9:44

https://www.youtube.com/watch?v=Ve6K10-Yx_M

WHEN TO WATCH

After the big idea. Pause after each type of economy and say it back in your own words.

Note: From Khan Academy's high-school economics course and drawn on a blackboard; parents may want to watch with the student and pause often.

KEY TERMS

market economy

An economy in which most decisions about what to produce and at what price are made by buyers and sellers trading freely.

command economy

An economy in which government planners decide what to produce, how much, and at what price; also called a planned economy.

mixed economy

An economy that relies mostly on markets but in which government also provides some services and sets rules.

public good

Something, like a lighthouse, national defense or a street light, that serves everyone and that people cannot easily be kept from using, so markets tend to provide too little of it.

spillover

A cost or benefit that falls on people outside a trade, such as smoke from a factory that dirties the neighbors' laundry.

CORE IDEAS

The story. From the late 1920s until 1991, the Soviet Union, a huge country centered on Russia, ran a **command economy**. A planning office in Moscow called Gosplan decided how many shoes, tractors, loaves of bread and winter coats each factory would make, and officials set the prices of millions of goods. On paper, every need was planned for. In real life, shops often had empty shelves, people waited in long lines for bread, meat or soap, and families joined a line first and asked what it was for afterward. In September 1989, a Soviet official named Boris Yeltsin, who later became the first president of Russia, visited an ordinary supermarket near Houston, Texas. He walked the aisles in amazement at the thousands of foods, fresh and plentiful, in a store that no planner had stocked.

How they figured it out. Why did the planners fail, when many of them were clever and worked hard? Remember Hayek's idea from Lesson 3.1. The knowledge of what people want and what is scarce is scattered among millions of people: shoppers, farmers, shopkeepers, truck drivers. No office can gather it all. When planners set prices by order, prices could no longer act as signals. A joke of the time told of a nail factory ordered to make a certain *weight* of nails, which made a few giant nails nobody could use; ordered instead to make a certain *number*, it made thousands of tiny ones. Factories really did aim at the planners' targets instead of at what customers needed. Meanwhile, in a market economy, every grocery manager orders more of what sells and less of what does not, and the rising and falling prices guide millions of choices without anyone in charge.

The big idea. Markets are very good at deciding what to make and getting goods to the people who want them, and they reward people who serve others well. But markets also have limits. They do poorly at things that serve everyone and that no one can be kept from using, such as roads, courts, national defense and lighthouses: these are **public goods**, and they are paid for mostly by taxes. Markets also do poorly with **spillovers**, such as a factory whose smoke dirties the neighbors' air or whose waste spoils a river that others fish in. And markets need protection from fraud and theft. That is why nearly every country today has a **mixed economy**: mostly free markets, with government providing some services and setting honest rules, like a fair referee in a game.

In business today. In the United States, most of what you buy is made and priced by private businesses. Your town or state builds the roads, runs the courts and the fire department, and inspects scales at the gas pump and the grocery store. Wise citizens ask two questions about any job: “Would free buyers and sellers do this well?” and “Does this need a rule, a referee or a public service?” Too few rules invite fraud and harm; too many or badly made rules can empty shelves and stop honest work.

PICTURE STUDY



Inside a Piggly Wiggly, the First Self-Service Grocery Store, Photographer for Clarence Saunders' Piggly Wiggly company, about 1917 · Photograph · Library of Congress, Prints and Photographs Division
Image: [Wikimedia Commons](#), public domain

Before 1916, most grocery shoppers told a clerk what they wanted, and the clerk fetched each item from behind the counter. In 1916 Clarence Saunders opened the first Piggly Wiggly in Memphis, Tennessee, where shoppers took a basket, walked the aisles and chose for themselves. No planner told him to try it; he risked his own money on a new idea, and customers liked it so much that self-service stores spread across the country.

Look closely

- Find the turnstile and the entrance sign. Where did shoppers go in?
- Find the stack of small baskets. What were they for?
- Look at the shelves. How are the goods arranged so shoppers can find them?
- Find the check-out counter. What happened there?

Talk about it

1. How did this store let customers choose for themselves? Why would that help the store learn what people wanted?
2. How is this store different from a shop where a planner decides what each family gets?

3. What jobs in this store would be done by workers, and which by the shoppers themselves?

PROJECT

The Planner and the Market: A Sandwich Experiment

You will feed your family lunch twice: once as a planner who decides everything in advance, and once as a market where family members “order” with tokens. You will count shortages and waste, then map which jobs in your town are done by markets and which by government.

You will need

- Makings for two or three kinds of simple sandwiches or snacks
- Tokens (buttons or paper slips), 5 per person
- Ledger notebook and pencil
- A sheet of paper for a town map

Steps

1. **Day 1: the planner.** Without asking anyone, decide how many of each kind of sandwich to make for the family. Make them and serve them. Record how many of each were eaten, how many were left over (surplus) and how many people wanted a kind that ran out (shortage).
2. **Day 2: the market.** Post a menu with a price in tokens for each kind (for example, 2 tokens each). Let each person order. Make what is ordered. If one kind runs short, raise its price by 1 token and see what happens. Record the same numbers.
3. Compare the two days in a table: Surplus, Shortage, How happy each person was (1–10).
4. Discuss: What did the planner not know? How did the tokens and prices tell the sandwich maker what to do?
5. **Town map.** Draw a simple map of your town or neighborhood. Mark ten places with a color: blue for services provided mostly by markets (stores, restaurants, banks) and green for services provided mostly by government (roads, courts, library, fire station, water).
6. Next to three of the green places, write why markets might do that job poorly on their own.

7. Write a paragraph: “Why markets need honest rules, but not too many.”

Tips

- On Day 1, really guess. Planners in real life guess too, which is the point.
- Keep it friendly. This is about how decisions get made, not about who made the best sandwich.

Check your work

- ☐ I can compare a market economy and a command economy.
- ☐ I can explain why central planners caused shortages.
- ☐ I can name three public goods or services and explain why markets do them poorly alone.

LEDGER NOTEBOOK

1. Draw a two-column chart, “Market decides” and “Planner decides,” for three questions: What to make? How much? At what price?
2. Sketch an empty shop shelf with a long line outside it, and a full grocery shelf with no line. Write a caption explaining the difference.
3. Draw a lighthouse and explain in two sentences why it is hard to sell lighthouse light to each passing ship.

From history. Lighthouses are a famous example in economics. In Britain, many lighthouses were long paid for by fees collected from ships when they docked in port, rather than from each ship as it passed the light. Even public goods sometimes find clever private or mixed ways to be paid for.

COMMON MISTAKES

- Thinking that a planned economy is just as good if the planners are smart enough. The problem is not intelligence but knowledge, which is scattered among millions of people, and the loss of price signals.
- Thinking free markets need no rules at all. Markets need laws against fraud and theft, honest weights and measures, and courts to enforce contracts.
- Thinking every problem needs a new law. Badly made rules can cause shortages and stop people from working and building.

Make it a game • Planner or Market Lunch. Cut paper sandwiches: ham, cheese and jelly. Round one: you are the planner and decide in advance how many of each each family member gets. Round two: everyone chooses freely and trades. Count leftovers and unhappy people each time. Say which round showed shortages, and how the Soviet planners ran into the same trouble.

UNIT 3

MARKETS

A market is any place where buyers and sellers meet: a farmers' market on Saturday morning, a grocery store, a website or a stock exchange. Nobody is in charge of a market, and yet every day it somehow brings the right oranges, shoes and bread to the right places. In this unit you will learn how: through prices. You will see how a frost in the Florida orange groves sent a signal to growers and shoppers all over the country, and how competition, from Aaron Montgomery Ward's catalog to the farmers' market, pushes sellers to serve customers better and charge them less.

Then you will look honestly at the limits of markets. When there is only one seller, as with a monopoly, or a few sellers who agree not to compete, as with some guilds and cartels, customers can be harmed. When planners try to set every price, as in the Soviet Union, shelves go empty. And some things, such as roads, courts and protection from fraud, markets do poorly on their own. You will finish knowing why markets work best with honest rules, like a game with a fair referee.

PREREQUISITES

- Knows scarcity, opportunity cost and the gains from trade (Unit 1)
- Knows money's three jobs (Unit 2)
- Can make a line graph and read a table

MASTERY CHECKLIST

- ☐ I can explain the laws of supply and demand and draw a simple supply-and-demand graph.
- ☐ I can explain how prices act as signals to buyers and sellers.
- ☐ I can explain how competition helps customers, and compare prices across several sellers.
- ☐ I can describe a monopoly, a guild and a cartel, and name their benefits and harms.
- ☐ I can compare a market economy with a planned economy, and name things markets do poorly on their own.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Federal Reserve Bank of St. Louis: Econ Lowdown classroom resources**: Free. Lessons, videos and simple games from a Federal Reserve bank on supply and demand, prices and competition. Fits Lessons 3.1–3.3. Ages 10 and up.
- ***The Toothpaste Millionaire*, by Jean Merrill (HarperCollins)**: Ages 8–12. A funny novel about a sixth grader who makes a cheaper, better toothpaste and builds a business. Good discussion of costs, prices and competition with Lessons 3.2 and 6.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

3.1 Supply and Demand: Prices Are Signals

2 sessions of 45 minutes

3.2 Competition: Why Many Sellers Serve Customers Well

2 sessions of 45 minutes

3.3 Monopolies, Guilds and Cartels: The Limits of One or a Few Sellers

2 sessions of 45 minutes

3.4 Who Decides? Markets, Planners and the Mixed Economy

2 sessions of 45 minutes

UNIT 3 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

State the law of demand and the law of supply.

2. **5 pts**

On a supply-and-demand graph, which way does each line slope, and what is the point where they cross?

3. (5 pts)

What would happen to the price of oranges if a freeze destroyed half of Florida's orange trees? What signal would that price send to buyers and to growers elsewhere?

4. (5 pts)

A store has set the price of a toy so low that crowds want it and the shelves are empty. What is this called, and what would happen if the store raised the price?

5. (5 pts)

Store A sells a 16-ounce jar of peanut butter for \$3.20; Store B sells a 40-ounce jar for \$6.00. Which is the better price per ounce?

6. (5 pts)

How did Montgomery Ward's catalog help farm families?

7. (5 pts)

Name one benefit and one harm of medieval guilds.

8. (5 pts)

What did the Supreme Court decide in *Gibbons v. Ogden* (1824), and what happened to steamboat fares afterward?

9. (5 pts)

Why did the Soviet Union's planned economy have empty shelves and long lines?

10. (5 pts)

Name two things markets do poorly on their own, and explain why for one of them.

ANSWER KEY

1. Demand: when the price rises, buyers buy less (and when it falls, they buy more). Supply: when the price rises, sellers offer more (and when it falls, they offer less).
2. Demand slopes down to the right; supply slopes up to the right. Where they cross is the market (equilibrium) price and quantity.
3. The supply would fall, so the price would rise. Buyers would buy fewer oranges and switch to other fruit; growers in warmer places would plant and ship more.
4. A shortage. A higher price would lower the amount people want and encourage more supply, until the shelves stopped running empty.
5. A: $\$3.20 \div 16 = \$0.20$ per ounce. B: $\$6.00 \div 40 = \$0.15$ per ounce. Store B's jar is cheaper per ounce.
6. It let them buy by mail at low prices straight from a large seller, compare prices with the local store, and return goods they did not like. That competition pushed local stores to lower prices and improve.
7. Benefits: training through apprenticeship, quality standards, punishing cheats, caring for members. Harms: limiting the number of masters, fixing prices, keeping out newcomers and new methods.
8. That New York could not keep out steamboats licensed by the nation to trade between the states, which broke the Fulton–Livingston monopoly. Competition grew and fares fell.
9. Planners could not know what millions of people wanted or what was scarce, and because they set prices by order, prices could not act as signals. So they made too much of some things and too little of others.
10. Any two: roads, courts, national defense, lighthouses, preventing fraud, pollution that falls on neighbors. Example: a lighthouse's light shines for every ship, so it is hard to charge each ship, and few would build one to sell its light.

PORTFOLIO PIECE: A MARKET REPORT ON ONE PRODUCT

Choose one product your family buys often (milk, apples, bread, gasoline). For four weeks, record its price at three sellers each week. Graph the prices on one line graph with a different color for each seller. Then write a one-page report: How much competition is there for this product? What caused any price changes you saw (seasons, sales, weather, news about supply)? Is any seller a monopoly? Does the government set any rules for it (for example, inspecting gas pumps or scales)? End with what you would advise your family about buying it.

LOOK FOR	WHAT IT MEANS
Data	Four weeks of prices at three sellers, recorded with dates and the same size of product.
Graph	A correct line graph with labeled axes, a title and a key.
Ideas	The report correctly uses supply, demand, price signal and competition to explain what happened.
Advice	Sensible, specific advice backed by the numbers.

GREAT BUSINESSES AND THEIR STAKEHOLDERS

What makes a business great? Not just being big or rich. In this unit you will learn to weigh a business by what it meant for **six stakeholders**: the **financiers** who lent or invested the money, the **risk-takers** who started it and put their savings and good name on the line, the **builders** who designed and made its products, the **workers** who earned wages there, the **customers** who bought from it, and the **community** around it. A business is great when it creates real value and serves all six over a long time.

You will test this idea on four famous businesses: Josiah Wedgwood's pottery in England, the Medici Bank of Florence, Henry Ford's Model T and \$5 day, and Milton Hershey's chocolate factory, town and school. Each did great good, and each also fell short somewhere. You will learn to give an honest **stakeholder scorecard**, with a rating and a reason for each of the six, and finish by writing a stakeholder report on a business of your own choosing.

PREREQUISITES

- Knows specialization, trade and competition (Units 1 and 3)
- Knows what a bank does (Unit 2)
- Can find an average and work with simple percents

MASTERY CHECKLIST

- ☐ I can name and explain the six stakeholders of a business.
- ☐ I can tell how Josiah Wedgwood, the Medici, Henry Ford and Milton Hershey built their businesses, and what each did well and badly.
- ☐ I can give a stakeholder scorecard with a 1–5 rating and a reason for each of the six.
- ☐ I can explain why a business may be big without being great.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **The Henry Ford museum: digital collections**: Free. Thousands of photographs and documents from Ford’s factories, the Model T and American business history. Search “Highland Park assembly line” or “Five Dollar Day” for Lesson 4.3.
- **Hershey Community Archives**: Free. Photographs, timelines and stories about Milton Hershey, the chocolate factory, the town of Hershey and the school. Good for Lesson 4.4 and the portfolio.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

4.1 What Makes a Business Great? The Six Stakeholders and Josiah Wedgwood

2 sessions of 45 minutes

4.2 The Medici Bank: Financiers, Risk and Trust

2 sessions of 45 minutes

4.3 Ford’s Model T and the \$5 Day: Builders, Workers and Customers

2 sessions of 45 minutes

4.4 Milton Hershey: A Chocolate Bar, a Town and a School

2 sessions of 45 minutes

UNIT 4 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

Name the six stakeholders of a business, and say what one of them puts in and hopes to get out.

2. **5 pts**

What is the difference between a big business and a great business?

3. **5 pts**

How did the Trent and Mersey Canal help Josiah Wedgwood’s business and his community?

4. (5 pts)

How did a Medici bill of exchange let a London merchant pay someone in Florence without sending coins?

5. (5 pts)

Give two reasons the Medici Bank failed.

6. (5 pts)

A Model T cost \$850 in 1908 and a worker earned \$2.34 a day. About how many days of work did a car cost? In the mid-1920s it cost \$260 and pay was \$6 a day. About how many days then?

7. (5 pts)

Why did Henry Ford start the \$5 day? Name one way it helped and one way Ford still fell short with workers.

8. (5 pts)

What happens to stakeholders if a company always pays all its profit to shareholders and never buys new machines?

9. (5 pts)

Name three ways Milton Hershey's business served its community.

10. (5 pts)

A company with \$50,000 profit gives \$20,000 to shareholders, \$15,000 to new machines, \$10,000 to workers' raises and \$5,000 to the town. What percent goes to each?

ANSWER KEY

1. Financiers, risk-takers, builders, workers, customers, community. Example: workers put in time and skill and hope for fair pay, safety and respect.
2. A big business sells a lot or earns a lot. A great business creates real value and serves all six stakeholders well over a long time; a big business can still cheat customers, harm workers or damage its town.
3. Barges carried clay in and pottery out smoothly, so less pottery broke and transport cost less. The canal also helped other businesses and towns along its route.
4. He paid pounds to the Medici in London and got a written order. The person in Florence took it to the Medici bank there and was paid in florins. The branches settled up in their books.
5. Any two: large loans to kings and princes who did not repay (Edward IV, the Duke of Burgundy); poor supervision of branch managers; Lorenzo cared more about ruling Florence than about the bank; the Medici were driven out of Florence in 1494.
6. $850 \div 2.34 \approx 363$ days. $260 \div 6 \approx 43$ days.
7. So many workers quit the dull, fast line that Ford had to keep hiring; doubling pay kept workers and raised productivity. It helped families earn more for a shorter day. Shortcomings: harsh discipline, dull work, inspections of workers' homes, later harsh treatment of men who wanted a union.
8. Shareholders gain now, but the company falls behind, products get worse or costlier, customers leave, jobs may be lost and in the end the shareholders lose too.
9. Any three: steady jobs; buying milk from local dairy farms; building homes, parks, a trolley and community buildings; founding the school for orphan boys; giving his fortune to the school's trust; keeping people employed through the Depression.
10. Shareholders 40%, machines 30%, workers 20%, town 10%.

PORTFOLIO PIECE: A STAKEHOLDER REPORT

Choose one business: your family's business, a local store or farm, or a historical business you have read about. Gather facts by interviewing the owner (with a parent present), reading, or visiting. Write a two-page report that tells the business's story, what problems it had to solve, and how it serves each of the six stakeholders. Include a stakeholder scorecard with a 1–5 rating and a reason for each, an average score, and your advice: one thing the business does very well and one thing it could do better.

LOOK FOR	WHAT IT MEANS
Research	Real facts from an interview, visit or reliable sources, with the sources named.
Story	The business's beginning, its main problems and how it solved them are clearly told.
Scorecard	All six stakeholders are rated with honest, specific reasons; the average is correctly calculated.
Fairness	The report shows both strengths and weaknesses and avoids unfair guesses.
Advice	Sensible, kind and specific advice that would help the business serve its stakeholders better.

4.1 WHAT MAKES A BUSINESS GREAT? THE SIX STAKEHOLDERS AND JOSIAH WEDGWOOD

OBJECTIVES

- Name the six stakeholders of a business and explain what each one puts in and hopes to get out.
- Tell the story of Josiah Wedgwood: his pottery, his experiments, the canal and his workers.
- Make an honest stakeholder scorecard for Wedgwood's business and for a business you know.

Warm-up. Think of a business near your home: a bakery, a hardware store, a restaurant. List every kind of person who would be affected if it closed tomorrow. Who would lose money? Who would lose a job? Who would miss it?

WATCH

Staffordshire's Historic Heroes: Josiah Wedgwood

Visit Staffordshire • 1:51

https://www.youtube.com/watch?v=2Y-E5_S7KTE

WHEN TO WATCH

After the story of Wedgwood, before the stakeholder scorecard.

Note: A short film from Staffordshire, Wedgwood's home county, with an actor playing Wedgwood in the museum.

KEY TERMS

stakeholder

Anyone who has something to gain or lose from what a business does.

financier

A person or bank that lends or invests money in a business: a banker, partner or shareholder.

risk-taker

A founder or owner who puts his own savings, time and good name on the line to start or run a business; also called an entrepreneur.

builder

An inventor, engineer, manager or craftsman who designs and makes the product or the system that makes it.

stakeholder scorecard

A short report that rates how well a business served each of its six stakeholders, with a reason for each rating.

brand

A name or mark that customers trust to stand for a certain quality.

CORE IDEAS

The story. Josiah Wedgwood was born in 1730 in Burslem, a village of small potteries in Staffordshire, England, the youngest of a large family of potters. As a boy he had smallpox, which left his right knee so weak that he could not work the potter's wheel well, and years later his leg had to be amputated. So he turned to experimenting, designing and managing instead. In 1759 he started his own pottery. He tested thousands of mixtures of clay and glaze and recorded every trial in a notebook with code numbers. His smooth, cream-colored earthenware pleased Queen Charlotte, who ordered a tea service in 1765, and he named it "Queen's Ware." In 1769 he opened a large new factory he called Etruria, and later he invented a fine stoneware called jasper, often blue with white raised figures.

How they figured it out. Wedgwood had to solve many problems. Pottery broke when it bumped along rough roads in packhorse panniers, so he helped promote the Trent and Mersey Canal, which opened in 1777 and carried his clay in and his wares out smoothly by barge. He divided the work at Etruria into specialized jobs, as Adam Smith described, and trained workers to make every plate of a set match. With his partner Thomas Bentley he opened showrooms in London, printed catalogs with numbered patterns, and sent samples to wealthy buyers so that others would want the same. He also built houses for many of his workers near the factory. But he was a strict master: he rang a bell to call workers in, kept a careful record of their hours, fined them for being late, careless or drunk, and expected long, regular days.

The big idea. A business is a web of people. **Financiers** lend or invest money and hope to be repaid with interest or profit. **Risk-takers**, the founders and owners, put

their savings and good name on the line. **Builders** design and make the product. **Workers** give their time and skill for wages and hope for fair pay, safety and respect. **Customers** pay money and hope for good value and honesty. And the **community** hopes for jobs, taxes, good neighbors and no harm. A business is **great** when it creates real value and serves all six over a long time. A business can be very big and still not be great, if it cheats customers, harms workers or damages its town.

Stakeholder scorecard: Wedgwood, about 1790. *Financiers: 4.* Wedgwood grew mostly from his own profits and his partners' money, and partners like Bentley were well rewarded. *Risk-takers: 5.* He risked everything on new wares and a new factory and became very successful. *Builders: 5.* His careful experiments, new materials and factory methods were admired across Europe. *Workers: 3.* Steady wages and houses, but long hours, strict fines, and the lead in glazes of that time made some potters ill. *Customers: 5.* Handsome, matching, well-made ware at prices many middle-class families could afford. *Community: 4.* The canal and better roads helped the whole district, and the potteries gave thousands of jobs. Overall, a great business, with its weakest score for its workers.

In business today. Wise business owners still think about all six stakeholders. A good name, or **brand**, like Wedgwood's, is built slowly by serving customers honestly year after year and can be lost quickly. "A good name is rather to be chosen than great riches" (Proverbs 22:1).

PICTURE STUDY



Josiah Wedgwood, Painted on a Wedgwood Tablet, George Stubbs, 1780 · Enamel colors fired on a Wedgwood ceramic tablet · Wedgwood Museum, Barlaston, Staffordshire

Image: [Wikimedia Commons](#), public domain

George Stubbs was famous for painting horses, and he wanted to try painting in enamel colors, which are fired in a kiln and never fade. Ordinary copper plates were too small, so Wedgwood's factory spent years experimenting until it could make large, flat ceramic tablets for him. Stubbs painted this portrait of Wedgwood on one of them. It is a picture of two craftsmen helping each other: a painter and a potter.

Look closely

- Look at Wedgwood's clothes and wig. Do they look showy or plain? What does that tell you about him?
- Look at his face. What kind of person does Stubbs show us?
- Remember that this picture is painted on a ceramic tablet that Wedgwood's own workers made. What problems did they have to solve to make it large and flat?

Talk about it

1. Which stakeholder is Wedgwood in this picture: financier, risk-taker or builder? Could he be more than one?

2. How did Stubbs, an outside artist, gain from working with Wedgwood's factory, and how did Wedgwood gain?
3. If you made a portrait of a great business, which of its six stakeholders would you include?

PROJECT

My First Stakeholder Scorecard

You will learn the six stakeholders by sorting real examples, then make an honest scorecard for a business you know, with a rating from 1 to 5 and a reason for each stakeholder.

You will need

- 18 index cards
- Ledger notebook, pencil and colored pencils
- A parent to help you choose a local or family business

Steps

1. Write each of the six stakeholders on its own card: Financiers, Risk-takers, Builders, Workers, Customers, Community.
2. On 12 more cards, write people from Wedgwood's story: Thomas Bentley, Josiah Wedgwood, a plate maker at Etruria, Queen Charlotte, a barge owner on the canal, a farmer whose land the canal crossed, a London lady buying a tea set, a glaze tester, a young apprentice, a banker who lent money, a shop owner in Burslem, Sarah Wedgwood. Sort each under the stakeholder it best fits. Some may fit two.
3. Choose a business you know: a family business, a store, a farm, a restaurant or your church's bake sale.
4. In your ledger, rule a table with columns: Stakeholder, What they put in, What they hope to get, Rating (1–5), Reason.
5. Fill in a row for each of the six. Ask a parent or the owner (with a parent) for facts you do not know. Use 5 for excellent and 1 for poor.
6. Add up the six ratings and find the average (total ÷ 6).
7. Write two sentences: Which stakeholder does this business serve best? Which could it serve better, and how?

Tips

- Be fair. Give a reason for every number, and do not guess about things you do not know; write "not sure" instead.

- Remember that one person can be several stakeholders: a shop owner is usually both the risk-taker and one of the workers.

Check your work

- ☐ I can name the six stakeholders and give an example of each.
- ☐ My scorecard has a rating and a reason for each of the six.
- ☐ I can explain why a business may be big without being great.

LEDGER NOTEBOOK

1. Draw a wheel with the business in the center and six spokes, one for each stakeholder. On each spoke write what that stakeholder puts in and what it hopes to get out.
2. Copy the Wedgwood scorecard as a bar graph with six bars.
3. Draw Wedgwood's jasper vase or a piece of his Queen's Ware, and label the qualities that made customers trust his brand.

From history. Josiah Wedgwood kept his "Experiment Book" for years, recording each clay and glaze trial by a code number. He tested thousands of samples before he was satisfied with jasper. Some of his trial pieces still survive in the Wedgwood collection.

COMMON MISTAKES

- Thinking only the owners matter. A business that ignores its workers, customers or town will not stay great for long.
- Thinking a high score in one place makes up for a very low score in another. A business that cheats its customers is not great, no matter how much it pays its owners.
- Giving ratings without reasons. A scorecard is only as good as the facts behind it.

Make it a game • Who Am I Stakeholder. Write six riddle cards, one for each stakeholder. Each says what that person puts in and hopes to get out, such as money in, return out. Your parent solves them. Then your parent writes one Wedgwood riddle about his pottery, his experiments, the canal or his workers for you to answer. Highest score wins.

Scripture. “A good name is rather to be chosen than great riches, and loving favour rather than silver and gold.” (Proverbs 22:1, KJV)

Wedgwood’s name became a promise of quality that lasted for more than two hundred years. A good name is earned by serving every stakeholder honestly, and it is worth more than any single profit.

4.2 THE MEDICI BANK: FINANCIERS, RISK AND TRUST

OBJECTIVES

- Tell how the Medici family built the greatest bank in Europe from 1397, with branches, partners and letters of credit.
- Explain how a bill of exchange let a merchant send money across Europe without carrying coins.
- Explain why the Medici Bank declined and failed, and give it a stakeholder scorecard.

Warm-up. You need to send \$50 to a cousin in another state. List every way you can think of to do it, and what could go wrong with each. Which would you trust most? Why?

WATCH

How did Medieval Banking Work? (Short Animated Documentary)

History Matters • 3:17

<https://www.youtube.com/watch?v=UE7nd36EpRU>

WHEN TO WATCH

After the story, before the bills-of-exchange project.

KEY TERMS

florin

The gold coin of Florence, first struck in 1252, trusted all over Europe.

partnership

A business owned by two or more partners who share its profits and losses.

branch

An office of a business in another city.

bill of exchange

A written order telling a banker in another city to pay a sum of money to a named person; it let merchants move money without carrying coins. A letter of credit is a similar promise of payment.

default

Failing to repay a loan.

CORE IDEAS

The story. In 1397 Giovanni di Bicci de' Medici founded a bank in Florence, Italy, a rich city of wool and silk merchants whose gold florin was trusted everywhere. His son Cosimo, who led the bank from 1429 until his death in 1464, made it the greatest bank in Europe. It had branches in Rome, Venice, Milan, Pisa, Geneva, Avignon, Bruges and London. Its most important customer was the pope, for whom the Rome branch collected and moved church money from all over Europe. The Medici became so rich that they paid for some of the most beautiful art and buildings of the Renaissance, and they used their wealth to gain power over the city of Florence.

How they figured it out. Carrying chests of coins across the Alps was slow and dangerous. So the Medici used the **bill of exchange**. A wool merchant in London paid pounds to the Medici branch there and received a letter. He sent it to his partner in Florence, who took it to the Medici bank and was paid in florins. No coins crossed the mountains; only paper and trust did. The branches settled up with each other in their books, kept by careful double-entry bookkeeping. Cosimo also made each branch a separate **partnership**: the Medici owned most of it, but the local manager owned a share and earned part of the profit, so he had a reason to work hard and be careful. And if one branch failed, it would not bring down all the others.

The big idea. Banking is built on **trust** and careful judgment about **risk**. A bank earns money by lending, but if borrowers **default**, the bank loses. After Cosimo died, the bank began to slip. His grandson Lorenzo, called “the Magnificent,” cared more about ruling Florence and supporting artists and scholars than about watching the books. Branch managers made huge loans to kings and princes, who were powerful but often did not repay. The London branch lent heavily to King Edward IV during England's wars, and the Bruges branch to the Duke of Burgundy, who died in battle in 1477; both loans were largely lost and both branches closed. In 1494, when the Medici were driven out of Florence, the bank collapsed.

Stakeholder scorecard: the Medici Bank. *Financiers (partners and depositors):* 3. Rich returns for decades, then heavy losses at the end. *Risk-takers (the Medici family):* 4. Enormous wealth and influence for nearly a century, though the bank itself was lost. *Builders (managers and bookkeepers):* 4. Clever partnership design and fine

bookkeeping, but later managers were poorly supervised. *Workers (clerks and messengers)*: 3. Skilled work and good training for some, though little is known about most of them. *Customers (merchants and the church)*: 4. Safe, fast transfer of money all over Europe. *Community*: 4. Florence gained great art, buildings and the first public library at San Marco, but the family's money also gave it too much power over the city. Lesson: even a great bank fails when it stops watching its risks.

In business today. Banks still send money across the world, now by electronic messages instead of paper letters, and they still fail when they lend too much to borrowers who cannot repay. Good bankers spread their loans among many borrowers, keep honest books, check on their managers and never let a powerful customer talk them into a loan they doubt.

PICTURE STUDY



Portrait of Cosimo de' Medici the Elder, Jacopo da Pontormo, about 1518–1520 · Oil on panel · Uffizi Gallery, Florence

Image: [Wikimedia Commons](#), public domain

Cosimo de' Medici had been dead for more than fifty years when Pontormo painted this portrait for the Medici family. The painter copied his face from older pictures and medals. The cut laurel branch with a new shoot is a symbol: when one branch is cut, another grows.

Look closely

- Look at Cosimo's clothes. Do they look grand or plain? What does that tell you about how he wanted to be remembered?
- Find the laurel branch. Which part is cut, and which part is growing?
- Look at his hands and face. What kind of person does the painter want you to think he was?

Talk about it

1. Why might the Medici family want a portrait of the man who built the bank?
2. The cut branch with a new shoot was a hopeful sign for the Medici. How could it also remind a banker that branches need care?
3. Which stakeholder was Cosimo: financier, risk-taker or builder? Could he be all three?

PROJECT

The Medici Branches: Bills of Exchange and a Risky Loan

Your family will become a bank with branches in different rooms. You will send money with bills of exchange instead of coins, keep the books, and then face the decision that ruined the Medici: a large loan to a powerful prince.

You will need

- Play money or coins, divided between “branches” in two or three rooms (Florence, London, Bruges)
- Slips of paper for bills of exchange and a special seal or mark
- Ledger notebook for each branch, or one shared ledger with columns for each branch
- A die (number cube) for the prince’s fortunes

Steps

1. Set up two or three branches, each with a manager and \$100 in play money. Each branch keeps a ledger: Date, Received, Paid out, Balance.
2. A merchant in “London” pays \$20 to the London branch and receives a bill of exchange: “Pay to ___ in Florence the sum of \$20. Signed, London branch.” The London manager records \$20 received.
3. The merchant walks the bill (not the money) to Florence, where the manager pays \$20 and records it. At the end of the round, the branches settle up in their books. Check that every ledger balances.
4. Charge a small fee of \$1 for each bill. Record the fees as the bank’s earnings.
5. **The prince’s loan.** A “prince” asks the Bruges branch for a loan of \$80, promising to repay \$100. The manager must decide. If he lends, roll the die: on 1 or 2, the prince is defeated in battle and repays nothing; on 3–6, he repays \$100. Play this out three times with fresh \$100 branches and record the results.
6. Now try a different rule: lend no more than \$20 to any one borrower, and make four small loans to four merchants. Roll for each loan separately (on 1 the borrower fails to repay). Record the results.

7. Compare in a table: which way of lending lost the bank everything more often? Write a paragraph on what Cosimo would have advised Lorenzo.
8. Fill in your own stakeholder scorecard for the Medici Bank, with ratings and reasons. Do you agree with the scorecard in the lesson?

Tips

- Bills of exchange only work if every branch trusts the seal. Make your mark hard to copy.
- Notice how one big loan to a single borrower can wipe out a branch, while several small loans spread out the risk.

Check your work

- ☐ I can explain how a bill of exchange moved money without moving coins.
- ☐ My branch ledgers balance.
- ☐ I can explain why lending too much to one powerful borrower is risky.

LEDGER NOTEBOOK

1. Draw a map of Europe with Florence in the center and lines to each Medici branch: Rome, Venice, Milan, Pisa, Geneva, Avignon, Bruges, London.
2. Write out a bill of exchange from 1450 as you imagine it, with the amount, the cities, the names and a seal.
3. Make a timeline of the Medici Bank: 1397 founded, 1429 Cosimo takes charge, 1464 Cosimo dies, 1470s losses in London and Bruges, 1494 collapse.

From history. Cosimo de' Medici paid for the rebuilding of the convent of San Marco in Florence, where the friar-painter Fra Angelico painted scenes of the life of Christ on the walls of the monks' cells. Cosimo also gave San Marco a library that was open to scholars, one of the first public libraries in Europe since ancient times.

COMMON MISTAKES

- Thinking the Medici invented banking. Banks and bills of exchange existed before them; the Medici ran them better and on a larger scale.
- Thinking a powerful borrower is a safe borrower. Kings and princes often borrowed for wars and did not repay.
- Thinking a bill of exchange is money itself. It is a promise, and it is only as good as the bank behind it.

Make it a game • Bill Across the House. Two rooms are the Medici branches. You are the Florence banker; your parent, a merchant, must send money to the other branch without carrying coins. Write a bill of exchange on paper, and have it carried and paid out. Then lend ten buttons and flip a coin: heads repaid, tails default. Say why trust matters.

Scripture. “He that is faithful in that which is least is faithful also in much: and he that is unjust in the least is unjust also in much.” (Luke 16:10, KJV)

A bank is built on faithfulness in small things: each entry in the books, each promise in a bill of exchange. When the Medici stopped watching the small things, the large things fell apart.

4.3 FORD'S MODEL T AND THE \$5 DAY: BUILDERS, WORKERS AND CUSTOMERS

OBJECTIVES

- Tell how Henry Ford built the Model T, the moving assembly line and the \$5 day.
- Calculate how many days a worker had to work to buy a Model T in 1908 and in the 1920s.
- Weigh the Ford Motor Company with a stakeholder scorecard, including the conflict between Ford and his shareholders.

Warm-up. A new car today costs many thousands of dollars. Ask a parent how many weeks of work it would take a family to pay for one. In 1908 a Model T cost \$850. Guess how many days a factory worker would have had to work to buy one.

WATCH

History of the Model T | The Henry Ford's Innovation Nation

The Henry Ford • 3:16

<https://www.youtube.com/watch?v=gglrbduPbQ0>

WHEN TO WATCH

After the story, before the days-of-work project.

Note: From The Henry Ford, the museum in Dearborn, Michigan, that keeps Ford's cars and factory records.

KEY TERMS

mass production

Making very large numbers of identical products quickly and cheaply, using standard parts, machines and assembly lines.

interchangeable parts

Parts made so exactly alike that any one will fit any product of that model.

moving assembly line

A line on which the product is carried past workers by a conveyor or rope, so each worker stays in one place and adds one part.

wage

Pay for work, usually by the hour or the day.

turnover

How often workers quit and must be replaced.

shareholder

A person who owns a share of a company and receives part of its profit, called a dividend.

CORE IDEAS

The story. Henry Ford grew up on a farm near Detroit, Michigan, and loved taking machines apart. In 1903, with \$28,000 from a dozen investors, he started the Ford Motor Company. In October 1908 he introduced the **Model T**, a tough, simple car that farmers could drive on muddy roads and fix themselves. It cost \$850, far less than most cars but still more than a year's pay for many workers. Ford wanted to build "a motor car for the great multitude." To do it, he had to make cars much faster and cheaper.

How they figured it out. At the Highland Park plant, Ford's engineers studied every step. They used **interchangeable parts** made so exactly that no fitting was needed. In 1913 they tried something new: a **moving assembly line**. First the magneto (a part of the engine) moved past workers on a line; then the whole car frame was pulled along by a rope while workers added parts as it passed. By 1914 the time to put together a chassis fell from about twelve and a half hours to about an hour and a half. But the work was dull and fast, and so many men quit that Ford had to keep hiring new ones. So on January 5, 1914, Ford announced the **\$5 day**: about double the usual pay, for a shorter, eight-hour day. Thousands of men lined up for jobs, workers stayed, and Ford's output and profits rose. The Model T's price kept falling, to about \$260 by the mid-1920s, and more than 15 million were built by 1927.

The big idea. Ford showed that a business could serve **builders, workers** and **customers** together: better methods made cars cheaper, higher wages kept skilled workers, and lower prices brought millions of customers, including Ford's own workers. But the stakeholders also pulled against each other. In 1916 Ford wanted to stop paying large dividends so he could lower prices and build a giant new factory. Two of his shareholders, the Dodge brothers, sued him, and in 1919 a Michigan court ordered Ford to pay the dividends, saying a company is run chiefly for the profit of its owners. Ford then bought out the other shareholders.

Stakeholder scorecard: Ford Motor Company, about 1920. *Financiers (shareholders):* 5. The first investors were repaid many times over. *Risk-takers:* 5. Henry Ford's bold

bets made him one of the richest men in the world. *Builders*: 5. The moving assembly line changed manufacturing everywhere. *Workers*: 3. The \$5 day was a great gift, but the line was tiring and dull, the discipline was harsh, and to receive the full \$5 men had to pass inspections by Ford's "Sociological Department," which visited their homes to judge how they lived. Later, in the 1930s, the company treated workers who wanted a union very harshly. *Customers*: 5. A reliable car that ordinary families could afford. *Community*: 4. Jobs for tens of thousands and a booming Detroit, though Ford kept making the same Model T too long, until customers moved to rival carmakers in the late 1920s.

In business today. Car factories now use robots as well as people, but the ideas of standard parts, a moving line and constant improvement came from Ford's engineers. Good companies still look for ways to pay workers well because skilled, loyal workers make better products. Jesus said, "the labourer is worthy of his hire" (Luke 10:7).

PICTURE STUDY



The Magneto Assembly Line at Highland Park, Ford Motor Company photographer, 1913 · Photograph · Highland Park, Michigan

Image: [Wikimedia Commons](#), public domain

The first moving line at Ford's Highland Park plant, tried in the spring of 1913, put together the flywheel magneto, a part of the Model T's engine. Each worker added one part and slid the magneto along to the next man. The time to make one fell from about twenty minutes to a few minutes, and the idea soon spread to the whole car.

Look closely

- Count the workers you can see. Are they doing the same step or different steps?
- Find the round magnetos on the line. Which way are they moving?
- Look at the bins of small parts. Why would each worker keep his own parts close at hand?
- Look at the workers' clothes and posture. What would it feel like to do this job all day?

Talk about it

1. How is this line like Adam Smith's pin factory? How is it different?
2. Would you rather build a whole car slowly or add one part to a thousand cars a day? Why?

3. Why do you think Ford doubled the pay of workers on a line like this?

PROJECT

The Model T in Days of Work

You will calculate how affordable the Model T became for the people who built it, compare it with something your family buys today, and make a stakeholder scorecard of your own for Ford.

You will need

- A calculator and the ledger notebook
- Graph paper and colored pencils

Steps

1. **1908.** A Model T cost \$850. A typical factory worker earned about \$2.34 for a nine-hour day. Divide to find how many days of work it took to earn the price of a car. Round to the nearest day.
2. **1914.** The \$5 day began. How much more was \$5 than \$2.34? What percent increase is that? ($\text{Increase} \div \text{old pay} \times 100$.)
3. **Mid-1920s.** A Model T cost about \$260, and Ford's minimum pay had risen to \$6 a day in 1919. How many days of work did a car cost now?
4. Make a bar graph: days of work to buy a Model T in 1908 and in the mid-1920s.
5. **Today.** With a parent, choose something your family bought recently (a bicycle, a refrigerator, a used car). Divide its price by a day's pay at a wage you look up together. Compare with the Model T.
6. Make your own six-row stakeholder scorecard for Ford, with a rating and a reason for each. You may disagree with the lesson's scorecard, but you must give your reasons.
7. Write a paragraph about the Dodge brothers' lawsuit: Should Ford have used the profits to lower prices and build a new factory, or paid them to the shareholders? Which stakeholders would each choice help?

Tips

- Days of work is a good way to compare prices across many years, because wages and prices both change.

- In the scorecard, think about both the good and the hard parts of a worker's day on the line.

Check your work

- ☐ I can calculate the days of work needed to buy a Model T in two years and explain the change.
- ☐ I can explain how the moving assembly line and the \$5 day helped workers and customers.
- ☐ I can name a way Ford fell short with his workers.

LEDGER NOTEBOOK

1. Draw a diagram of a moving assembly line with five stations. Label what each worker adds.
2. Copy your days-of-work bar graph and write one sentence explaining what made the difference.
3. Write a diary entry from a Ford worker in January 1914, the week the \$5 day was announced.

From history. Ford's workers called the Model T the "Tin Lizzie." For years it came in only one color: Ford is said to have joked that a customer could have it "painted any colour that he wants so long as it is black." Black paint dried fastest, which kept the assembly line moving.

COMMON MISTAKES

- Thinking Ford invented the automobile. Others built cars before him; Ford found a way to make them cheaply for ordinary families.
- Thinking the \$5 day was simply generosity. It was also a smart business decision that cut turnover and raised productivity.
- Thinking every stakeholder always agrees. Shareholders, workers and customers may want different things from the same profits.

Make it a game • Days of Work Race. Make up numbers: a car costs 600 pretend dollars and a worker earns 2 pretend dollars a day. Your parent calls the price after the moving assembly line, and you figure how many days of work it takes. Race a one-minute timer on five problems. Then explain what mass production and the five-dollar day did for workers and customers.

Scripture. “for the labourer is worthy of his hire.” (Luke 10:7, KJV)

Jesus said these words when He sent out His disciples, and Paul repeated them (1 Timothy 5:18). Work deserves fair pay. Ford found that paying workers well was not only right; it also helped his business.

4.4 MILTON HERSHEY: A CHOCOLATE BAR, A TOWN AND A SCHOOL

OBJECTIVES

- Tell how Milton Hershey failed several times, then built a chocolate company, a town and a school for orphan boys.
- Explain how a business can serve its community through jobs, homes, schools and giving.
- Divide a company's profit among stakeholders and weigh the trade-offs.

Warm-up. Unwrap (but do not eat yet!) a piece of chocolate. Read the label. List the ingredients and guess where each one came from. How many different workers and farms helped make it?

WATCH

The Story of Milton Hershey | For Kids

Bedtime History • 7:36

<https://www.youtube.com/watch?v=-aSCMii-f4Y>

WHEN TO WATCH

After the story, before the profit-dividing project.

KEY TERMS

perseverance

Keeping on with a good work in spite of difficulty, failure or delay.

trust (charitable)

Money or property given and set aside to be managed for a good purpose, such as a school, forever.

company town

A town built by one company, where the company provided homes, stores and services for its workers.

profit

The money left over after all the costs of a business are paid.

philanthropy

Giving money or work for the good of others.

CORE IDEAS

The story. Milton Hershey was born in 1857 in central Pennsylvania and left school after the fourth grade. He was apprenticed to a printer but did not like it, so he was apprenticed instead to a candy maker in Lancaster. At eighteen he opened his own candy shop in Philadelphia. It failed. He tried again in Chicago, New York and elsewhere, and failed again. Back in Lancaster in 1886 he finally succeeded with caramels made with fresh milk. At the World's Columbian Exposition in Chicago in 1893, he saw German chocolate-making machines, bought them and began making chocolate. In 1900 he sold his caramel company for \$1 million to put everything into chocolate.

How they figured it out. In 1900 fine milk chocolate was made mostly in Switzerland, and its recipe was a secret. Hershey and his workers experimented for years to make milk chocolate that would keep well and could be made in huge amounts at a price ordinary people could afford. Hershey chose to build his new factory among the dairy farms of Derry Township, Pennsylvania, so fresh milk was close at hand. He then built a whole town for his workers: houses they could buy, a trolley line, a park, a bank, schools, churches and a community building. In 1909 he and his wife Catherine, who had no children of their own, founded the Hershey Industrial School for orphan boys. In 1918, after Catherine died, he gave most of his fortune to the school's trust. During the Great Depression of the 1930s, Hershey kept workers employed by building a hotel, a sports arena and other buildings for the town.

The big idea. A business can serve its **community** in many ways: by giving steady jobs, buying from local farmers and suppliers, paying taxes, and through the **philanthropy** of its owners. Hershey's story also shows **perseverance**: he failed more than once before he succeeded. But a company town has two sides. The company supplied homes, schools and parks, but it also had great power over the lives of the people who lived there, and some workers wished for more say in their own affairs.

Stakeholder scorecard: Hershey, about 1930. *Financiers:* 5. The company was very profitable. *Risk-takers:* 5. Hershey risked his whole fortune on chocolate and won, then gave most of it away. *Builders:* 5. He and his workers developed a milk chocolate

process for mass production. *Workers:* 4. Steady jobs, good homes and a pleasant town, even through the Depression, though the company's power over the town was very great. *Customers:* 5. Affordable chocolate of steady quality for millions. *Community:* 5. A town, a school, jobs for local dairy farmers, and a trust that still supports the school today.

In business today. The school Milton and Catherine Hershey founded is now the Milton Hershey School, which gives a free home and education to children from families with low incomes, and it is still supported by the trust. Many businesses today give part of their profits to their communities. The Bible teaches that we work not only to support ourselves but so that we may have something to give: "It is more blessed to give than to receive" (Acts 20:35).

PICTURE STUDY



The Lancaster Caramel Company Factory, Unknown photographer, about 1896 · Photograph · Lancaster, Pennsylvania

Image: [Wikimedia Commons](#), public domain

After failing in Philadelphia, Chicago and New York, Milton Hershey finally succeeded with his Lancaster Caramel Company, which grew into this large factory. When he sold it in 1900 for \$1 million, he used the money to build his chocolate business and, later, the town of Hershey.

Look closely

- Count the floors and windows of the factory. How many workers do you think it needed?
- Find the wagons in the street. What are they carrying, and where might they be going?
- Look for signs, doors and loading places. How did goods come in and go out?

Talk about it

1. Hershey failed several times before this factory. What do you think he learned from his failures?
2. Why might Hershey have sold a successful caramel business to start something new?
3. Which of the six stakeholders can you find signs of in this picture?

PROJECT

Dividing the Profit: The Hershey Decision

Every year a business must decide what to do with its profit. You will be the owner of a pretend chocolate company with \$100,000 of profit and divide it among the stakeholders. Then you will see how each choice helps some stakeholders more than others.

You will need

- 100 dried beans or paper slips (each one stands for \$1,000)
- Six cups labeled Financiers, Risk-taker (you), Builders (new machines and research), Workers, Customers (lower prices), Community
- Ledger notebook and a calculator

Steps

1. Read the situation: your company earned \$100,000 in profit this year. Shareholders expect dividends, the machines are getting old, workers would like a raise, customers would like lower prices, and the town needs a new school roof.
2. Divide your 100 beans among the six cups. Write down how many beans (thousands of dollars) went to each.
3. Calculate the percent for each stakeholder ($\text{beans} \div 100 \times 100$).
4. Make a pie chart or bar graph of your choice.
5. For each cup, write one sentence about what that money will do and one about what might happen if you gave that stakeholder nothing.
6. Compare your plan with another family member's. Did you agree? Why or why not?
7. Write a paragraph: How do you think Milton Hershey would have divided the beans? Is there a way to serve all six stakeholders over many years, not just this one?

Tips

- There is no single right answer. A good plan can explain every choice.

- Remember: if you give nothing to new machines this year, the company may not earn as much profit next year.

Check your work

- ☐ I can explain how a business can serve its community.
- ☐ I can divide a profit and calculate the percent for each stakeholder.
- ☐ I can explain a trade-off between two stakeholders.

LEDGER NOTEBOOK

1. Draw a map of the town of Hershey as you imagine it in 1920: the factory, workers' homes, the park, the school, the trolley and the dairy farms.
2. Make a timeline of Milton Hershey's failures and successes from 1876 to 1918.
3. Copy your pie chart of the profit decision and explain your largest slice.

From history. Hershey's small foil-wrapped chocolate drops were first made in 1907. For many years the Hershey company did almost no advertising, trusting the quality of its chocolate and word of mouth. The town of Hershey still has streets named Chocolate Avenue and Cocoa Avenue, with streetlights shaped like those foil-wrapped chocolate drops.

COMMON MISTAKES

- Thinking successful people never failed. Hershey failed at business more than once before he succeeded.
- Thinking a company town was all good or all bad. It gave homes and services, but it also gave one company great power over people's lives.
- Thinking giving to the community means a business is not interested in profit. Hershey's profits paid for his gifts.

Make it a game • Divide the Profit. Spread twenty beans as one year's profit. Your parent plays Milton Hershey's advisor and asks who should receive what: owners, workers, the town, the school, or savings for hard times. Decide how to divide the beans and defend each choice. Then swap, and tell Hershey's story of failing and trying again.

Scripture. “It is more blessed to give than to receive.” (Acts 20:35, KJV)

Paul told the elders of Ephesus that he had worked with his own hands so that he could help the weak, remembering these words of Jesus. Hershey worked hard for many years and then gave most of what he earned to a school for children who needed a home.

UNIT 4

GREAT BUSINESSES AND THEIR STAKEHOLDERS

What makes a business great? Not just being big or rich. In this unit you will learn to weigh a business by what it meant for **six stakeholders**: the **financiers** who lent or invested the money, the **risk-takers** who started it and put their savings and good name on the line, the **builders** who designed and made its products, the **workers** who earned wages there, the **customers** who bought from it, and the **community** around it. A business is great when it creates real value and serves all six over a long time.

You will test this idea on four famous businesses: Josiah Wedgwood's pottery in England, the Medici Bank of Florence, Henry Ford's Model T and \$5 day, and Milton Hershey's chocolate factory, town and school. Each did great good, and each also fell short somewhere. You will learn to give an honest **stakeholder scorecard**, with a rating and a reason for each of the six, and finish by writing a stakeholder report on a business of your own choosing.

PREREQUISITES

- Knows specialization, trade and competition (Units 1 and 3)
- Knows what a bank does (Unit 2)
- Can find an average and work with simple percents

MASTERY CHECKLIST

- ☐ I can name and explain the six stakeholders of a business.
- ☐ I can tell how Josiah Wedgwood, the Medici, Henry Ford and Milton Hershey built their businesses, and what each did well and badly.
- ☐ I can give a stakeholder scorecard with a 1–5 rating and a reason for each of the six.
- ☐ I can explain why a business may be big without being great.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **The Henry Ford museum: digital collections**: Free. Thousands of photographs and documents from Ford’s factories, the Model T and American business history. Search “Highland Park assembly line” or “Five Dollar Day” for Lesson 4.3.
- **Hershey Community Archives**: Free. Photographs, timelines and stories about Milton Hershey, the chocolate factory, the town of Hershey and the school. Good for Lesson 4.4 and the portfolio.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

4.1 What Makes a Business Great? The Six Stakeholders and Josiah Wedgwood

2 sessions of 45 minutes

4.2 The Medici Bank: Financiers, Risk and Trust

2 sessions of 45 minutes

4.3 Ford’s Model T and the \$5 Day: Builders, Workers and Customers

2 sessions of 45 minutes

4.4 Milton Hershey: A Chocolate Bar, a Town and a School

2 sessions of 45 minutes

UNIT 4 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

Name the six stakeholders of a business, and say what one of them puts in and hopes to get out.

2. **5 pts**

What is the difference between a big business and a great business?

3. **5 pts**

How did the Trent and Mersey Canal help Josiah Wedgwood’s business and his community?

4. (5 pts)

How did a Medici bill of exchange let a London merchant pay someone in Florence without sending coins?

5. (5 pts)

Give two reasons the Medici Bank failed.

6. (5 pts)

A Model T cost \$850 in 1908 and a worker earned \$2.34 a day. About how many days of work did a car cost? In the mid-1920s it cost \$260 and pay was \$6 a day. About how many days then?

7. (5 pts)

Why did Henry Ford start the \$5 day? Name one way it helped and one way Ford still fell short with workers.

8. (5 pts)

What happens to stakeholders if a company always pays all its profit to shareholders and never buys new machines?

9. (5 pts)

Name three ways Milton Hershey's business served its community.

10. (5 pts)

A company with \$50,000 profit gives \$20,000 to shareholders, \$15,000 to new machines, \$10,000 to workers' raises and \$5,000 to the town. What percent goes to each?

ANSWER KEY

1. Financiers, risk-takers, builders, workers, customers, community. Example: workers put in time and skill and hope for fair pay, safety and respect.
2. A big business sells a lot or earns a lot. A great business creates real value and serves all six stakeholders well over a long time; a big business can still cheat customers, harm workers or damage its town.
3. Barges carried clay in and pottery out smoothly, so less pottery broke and transport cost less. The canal also helped other businesses and towns along its route.
4. He paid pounds to the Medici in London and got a written order. The person in Florence took it to the Medici bank there and was paid in florins. The branches settled up in their books.
5. Any two: large loans to kings and princes who did not repay (Edward IV, the Duke of Burgundy); poor supervision of branch managers; Lorenzo cared more about ruling Florence than about the bank; the Medici were driven out of Florence in 1494.
6. $850 \div 2.34 \approx 363$ days. $260 \div 6 \approx 43$ days.
7. So many workers quit the dull, fast line that Ford had to keep hiring; doubling pay kept workers and raised productivity. It helped families earn more for a shorter day. Shortcomings: harsh discipline, dull work, inspections of workers' homes, later harsh treatment of men who wanted a union.
8. Shareholders gain now, but the company falls behind, products get worse or costlier, customers leave, jobs may be lost and in the end the shareholders lose too.
9. Any three: steady jobs; buying milk from local dairy farms; building homes, parks, a trolley and community buildings; founding the school for orphan boys; giving his fortune to the school's trust; keeping people employed through the Depression.
10. Shareholders 40%, machines 30%, workers 20%, town 10%.

PORTFOLIO PIECE: A STAKEHOLDER REPORT

Choose one business: your family's business, a local store or farm, or a historical business you have read about. Gather facts by interviewing the owner (with a parent present), reading, or visiting. Write a two-page report that tells the business's story, what problems it had to solve, and how it serves each of the six stakeholders. Include a stakeholder scorecard with a 1–5 rating and a reason for each, an average score, and your advice: one thing the business does very well and one thing it could do better.

LOOK FOR	WHAT IT MEANS
Research	Real facts from an interview, visit or reliable sources, with the sources named.
Story	The business's beginning, its main problems and how it solved them are clearly told.
Scorecard	All six stakeholders are rated with honest, specific reasons; the average is correctly calculated.
Fairness	The report shows both strengths and weaknesses and avoids unfair guesses.
Advice	Sensible, kind and specific advice that would help the business serve its stakeholders better.

UNIT 5

WORKERS, OWNERS AND FAIR RULES

A business needs both **capital**, the money, tools, machines and buildings that owners risk, and **labor**, the time, skill and strength of workers. Owners and workers need each other, and Scripture tells both to deal honestly: owners must pay promised wages on time, and workers must work heartily. In this unit you will see this partnership in Andrew Carnegie's steel mills and in Jesus' parable of the workers in the vineyard.

Then you will study rules that helped, taught as history: the Factory Acts that Lord Shaftesbury fought for, Lewis Hine's photographs and the laws that brought most children out of mills and into school, fire codes and workers' compensation, the Pure Food and Drug Act, honest weights and measures, and the antitrust law that broke up Standard Oil. You will also study a rule that went badly wrong, the Roman emperor Diocletian's order fixing prices, so you can see what good rules have in common. Good rules work like a fair referee: they protect honest dealing, safety and children, while leaving people free to work, trade, build and give.

PREREQUISITES

- Knows the six stakeholders (Unit 4)
- Knows supply, demand and competition (Unit 3)
- Can calculate hours and weekly totals

MASTERY CHECKLIST

- ☐ I can explain how capital and labor need each other, using Carnegie's steel and the parable of the vineyard.
- ☐ I can tell how Lord Shaftesbury, Lewis Hine and child-labor laws brought most children out of factories and into school.
- ☐ I can explain how fire codes, workers' compensation and the Pure Food and Drug Act made work and food safer, and what they cost.
- ☐ I can explain why honest weights, measures and antitrust laws protect markets, and why Diocletian's price edict failed.
- ☐ I can explain what makes a good rule: like a fair referee, not too few rules and not too many.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Library of Congress: National Child Labor Committee photographs by Lewis Hine**: Free. Search the Library of Congress website for "National Child Labor Committee" to find more than 5,000 of Lewis Hine's photographs with his own captions. A parent should choose the pictures to view together; some show hard and sad conditions. Fits Lesson 5.2.
- **Andrew Carnegie, "Wealth" (1889), often called "The Gospel of Wealth"**: Free on the Carnegie Corporation's website. Carnegie's short essay arguing that rich men should give away their fortunes during their lives. Read a few paragraphs aloud with Lesson 5.1 and discuss. Ages 11 and up with a parent.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

5.1 Capital and Labor Need Each Other

2 sessions of 45 minutes

5.2 Children Belong in School: Lord Shaftesbury, Lewis Hine and Child-Labor Laws

2 sessions of 45 minutes

5.3 Safe Work and Safe Food: Fire Codes, Workers' Compensation and the Pure Food and Drug Act

2 sessions of 45 minutes

5.4 Keeping Markets Honest: Just Weights, Standard Oil and When Rules Go Wrong

2 sessions of 45 minutes

UNIT 5 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What is capital and what is labor? Why does a steel mill need both?

2. **5 pts**

In the parable of the workers in the vineyard, how did the owner keep his contract? What else did he do?

3. **5 pts**

A worker moves 30 beans a minute by hand and 90 a minute with a cup. How many times more productive is the worker with the cup? What does this show about capital?

4. **5 pts**

Name two things the Factory Act of 1833 required.

5. (5 pts)

How did Lewis Hine help end most child labor in America?

6. (5 pts)

A mill child worked 12 hours a day, 6 days a week. After a new law, he could work only 9 hours a day and had 2 hours of school. How many fewer work hours did he have each week, and how many school hours did he gain?

7. (5 pts)

What did the Pure Food and Drug Act of 1906 forbid? How did Harvey Wiley's Poison Squad help?

8. (5 pts)

Name two fire-safety rules adopted after the Triangle Shirtwaist fire, and explain what workers' compensation does.

9. (5 pts)

Name one thing Standard Oil did well for customers and one unfair method that led to its breakup in 1911.

10. (5 pts)

What would happen if a law said bread could be sold for no more than half of what it costs a baker to make it? Use Diocletian's edict as an example.

ANSWER KEY

1. Capital is tools, machines, buildings and money used to produce; labor is the work and skill of people. A mill needs furnaces and machines (capital) and workers to run them (labor); neither can make steel alone.
2. He paid every worker exactly the penny (a day's wage) they had agreed to, on the same day. He was also generous, paying the latecomers the same full wage.
3. $90 \div 30 = 3$ times. Better tools (capital) make labor more productive.
4. Any two: no children under nine in textile mills; children 9–13 limited to nine hours a day; two hours of school a day for them; inspectors to enforce the law.
5. He photographed working children across the country and recorded their names, ages and hours. His pictures showed the public the truth and helped persuade states and Congress to pass child-labor and school laws.
6. Before: 72 hours. After: 54 hours. 18 fewer hours of work and 12 hours of school gained each week.
7. Selling adulterated or falsely labeled food and drugs across state lines. Wiley's volunteers ate measured preservatives under medical watch, and his careful records gave evidence that persuaded lawmakers.
8. Any two: exit doors that open outward and stay unlocked, fire escapes, sprinklers, fire drills. Workers' compensation pays an injured worker's medical bills and part of his wages without a lawsuit, paid for by employers.
9. Well: cut waste and made kerosene cheap. Unfair: secret railroad rebates, squeezing out or buying out rivals to control most of the refining business.
10. Bakers would stop making and selling bread, or sell it secretly, and shelves would empty: a shortage. Diocletian's edict of AD 301 set prices too low, goods vanished from the markets and the edict was soon ignored.

PORTFOLIO PIECE: A FAIR-RULES REPORT

Choose one rule from this unit (the Factory Act of 1833, the child-labor laws, the Pure Food and Drug Act, fire codes, workers' compensation, weights and measures, the Sherman Act, or Diocletian's price edict). Write a one-to-two-page report with four headings: The problem (what was going wrong and who was harmed), The rule (what it required and who enforced it), The results (what got better or worse, with at least one number or date), and The cost (who paid and how). Finish with your judgment: was this a fair referee, too few rules or too many? Add one picture or drawing with a caption.

LOOK FOR	WHAT IT MEANS
Accuracy	Dates, names and facts are correct and come from the lessons or reliable sources.
Balance	The report fairly describes both the benefits and the costs of the rule.
Reasoning	The final judgment is supported with clear reasons and uses the idea of a fair referee.
Presentation	Four clear headings, a captioned picture or drawing, and neat, complete sentences.

5.1 CAPITAL AND LABOR NEED EACH OTHER

OBJECTIVES

- Define capital and labor and explain why each needs the other.
- Tell the story of Andrew Carnegie, from bobbin boy to steel maker to giver of libraries, including what his workers faced.
- Show with a timed experiment how tools (capital) make labor more productive, and write a fair work agreement.

Warm-up. Time yourself moving 100 dried beans from one bowl to another using only your fingers. Then time it again using a large spoon. Which was faster? How many times faster? The spoon is a tiny piece of capital.

WATCH

Man of Steel: Andrew Carnegie | The Gilded Age

American Experience | PBS • 1:17

<https://www.youtube.com/watch?v=vmbRtjN0gAk>

WHEN TO WATCH

After the story of Carnegie, before the big idea.

Note: A short clip from PBS's *American Experience*.

KEY TERMS

capital

The tools, machines, buildings and money used to produce goods and services; also called capital goods.

wage

The pay a worker earns for his labor, usually by the hour, day or week.

labor

The work, time, skill and effort that people give to produce goods and services.

contract

An agreement between two or more people that each promises to keep, such as work for a set wage.

productivity

How much a worker produces in a given time. Better tools and skills raise productivity.

CORE IDEAS

The story. In 1848 a poor Scottish weaver's family sailed to America and settled near Pittsburgh. Their twelve-year-old son, Andrew Carnegie, went to work in a cotton mill as a bobbin boy for \$1.20 a week. Then he became a telegraph messenger boy, learned to send messages by ear, and was hired by the Pennsylvania Railroad, where he rose quickly. He saved and invested his money. In 1875 he opened a great steel works near Pittsburgh using the new Bessemer process, which blew air through melted iron to make strong steel quickly. Carnegie kept buying the best machines and hiring skilled managers, and his company made steel more cheaply than anyone. The price of steel rails fell year after year, and steel built America's railroads, bridges and skyscrapers. In 1901 he sold his company for \$480 million and spent the rest of his life giving his fortune away, including money for more than 2,500 public libraries.

How they figured it out. Carnegie's mills needed huge amounts of **capital**: furnaces, rolling mills, railroads and coal mines, bought with money he and his partners risked. They also needed thousands of workers, whose **labor** ran the furnaces and rolled the steel. Neither could produce steel without the other. A worker with a shovel can move a little earth; the same worker running a steam shovel can move a mountain. That is why better capital raises **productivity**, and over time higher productivity let wages rise too. But the partnership was not always fair. Many steelworkers worked twelve-hour shifts, often seven days a week, in great heat and danger. Carnegie wrote that rich men should use their wealth for the good of others, yet his managers pushed hard to keep wages low and hours long. Both the gifts and the hardships are part of the true story.

The big idea. Capital and labor need each other, and each deserves honest dealing. Jesus told a parable about a landowner who hired workers for his vineyard at different hours, each agreeing to "a penny a day" (a denarius, a day's wage). At evening he paid every one, and when some complained, he said, "Friend, I do thee no wrong: didst not thou agree with me for a penny?" (Matthew 20:13). The owner

kept his **contract** exactly, and was generous besides. The Bible also commands owners to pay wages on time: “At his day thou shalt give him his hire” (Deuteronomy 24:15), and it warns against holding back wages by fraud (James 5:4). And it tells workers to work “heartily, as to the Lord” (Colossians 3:23).

In business today. Every business combines capital and labor. A bakery needs ovens and bakers; a trucking company needs trucks and drivers; a software company needs computers and programmers. Owners risk their savings to buy capital; workers give their skill and time. When both keep their promises, both prosper. Workers can also become owners, as Carnegie did, by saving and investing their own capital.

PICTURE STUDY



Iron and Coal, William Bell Scott, 1855–1860 · Oil on canvas · Wallington Hall, Northumberland (National Trust)

Image: [Wikimedia Commons](#), public domain

William Bell Scott painted this picture for the hall of Wallington, a country house in Northumberland, England, as the last of a series on the history of the region. It celebrates the work of Newcastle upon Tyne, a city of coal, iron, ships and railways, in the 1850s.

Look closely

- Find the three men swinging hammers. How do they work together?
- Find all the machines and capital goods you can: the train, the bridge, ships, cranes, chimneys. Who paid for them?
- Find the girl in the front of the picture. What is she holding, and why do you think the painter put her there?
- Find something that tells you about the dangers or hardships of this work.

Talk about it

1. Which parts of this picture show capital, and which show labor? Could either produce iron without the other?
2. How does the painter make the workers look: proud, tired, strong, small? Why do you think he chose that?

3. If you could ask one of these workers a question, what would it be?

PROJECT

Capital at Work and a Fair Work Agreement

You will measure how much capital (better tools) raises the productivity of labor, and then write and keep a fair work agreement with a parent, the way the vineyard owner did.

You will need

- 200 dried beans, two bowls, a spoon, a measuring cup and a timer
- A real household job that could earn pay (washing the car, weeding a bed, sorting recycling)
- Ledger notebook, pen, and a parent as the employer

Steps

1. **Labor only.** Move beans from one bowl to another with your fingers for 1 minute. Count the beans moved. Do it three times and find the average.
2. **Labor plus a little capital.** Repeat with a spoon. Then repeat with a measuring cup. Record the averages.
3. Make a table and a bar graph: Tool, Beans per minute. How many times more productive was each tool than bare hands?
4. Discuss: who would pay for the tools in a real business? Why would an owner buy them? How could the worker share in the gain?
5. **The agreement.** With a parent, choose a real job. Write a short contract together: the job, how well it must be done (a quality standard), the time it should take, the pay, and when the pay will be given. Both of you sign it.
6. Do the job. The parent checks the work against the standard and pays exactly as promised and on time. Record the work and the pay in your ledger.
7. Write a paragraph: How did both of you keep your promises? Was the agreement fair to both sides? What would you change next time?

Tips

- A good contract is specific. “Wash the car” is vague; “Wash and rinse the outside of the car, including the wheels, in 45 minutes” is clear.

- Parents: pay exactly on time, as Deuteronomy 24:15 commands. The lesson is in the promise kept.

Check your work

- ☐ I can explain capital and labor and give an example of each.
- ☐ My table shows how tools raised productivity.
- ☐ I wrote, signed and kept a fair work agreement.

LEDGER NOTEBOOK

1. Draw two workers: one with a shovel and one at the controls of a steam shovel. Label the capital and the labor in each, and estimate how much more the second can move.
2. Make a timeline of Andrew Carnegie's life: 1835 born in Scotland, 1848 bobbin boy, telegraph boy, railroad, 1875 steel works, 1889 "Wealth," 1901 sale of his company, libraries.
3. Copy your work agreement into your ledger and record the date it was paid.

From history. Andrew Carnegie wrote in his 1889 essay that "the man who dies thus rich dies disgraced." He gave money for libraries, concert halls such as Carnegie Hall in New York, church organs, schools and a foundation for world peace. Many towns in America still have a "Carnegie library."

COMMON MISTAKES

- Thinking owners and workers are enemies. They need each other, though each side must deal honestly and fairly.
- Thinking capital means only money. Capital includes the tools, machines and buildings that money buys.
- Thinking a wage agreement can be changed by one side after the work is done. A contract binds both sides.

Make it a game • Paper and Hands. One of you owns the paper, which is capital. The other has the labor, folding paper boats. Try each alone for a minute and see that neither makes boats. Then work together and write a fair agreement on how to split the boats and the wage. Explain what Carnegie's story shows about workers and owners.

Scripture. “But he answered one of them, and said, Friend, I do thee no wrong: didst not thou agree with me for a penny?” (Matthew 20:13, KJV)

In the parable, the owner kept his agreement exactly and was also generous to the latecomers. Owners and workers both honor God by keeping their word.

5.2 CHILDREN BELONG IN SCHOOL: LORD SHAFTESBURY, LEWIS HINE AND CHILD-LABOR LAWS

OBJECTIVES

- Describe children's work in early factories and mills, and how it differed from helping on a family farm.
- Tell how Lord Shaftesbury led the Factory Acts in Britain and how Lewis Hine's photographs helped end most child labor in America.
- Explain what child-labor laws fixed, how they worked and what they cost.

Warm-up. Write down every hour of your day yesterday: sleep, school, meals, chores, play. Add up the hours of school and of work. Now imagine a ten-year-old in a cotton mill in 1830 who worked from about six in the morning until seven at night. How many hours is that?

WATCH

History Hook: The Factory Act

The National Archives UK • 9:57

<https://www.youtube.com/watch?v=dDAwRL5x5BE>

WHEN TO WATCH

After reading about Lord Shaftesbury and the Factory Act. Do the activity with the presenter: look at the old factory record and answer her questions.

Note: From The National Archives of the United Kingdom, which holds the original documents.

BACKUP VIDEO

Lord Shaftesbury - Everyone A Child Should Know

10ofthose • 2:38

<https://www.youtube.com/watch?v=BOdceccw8ls>

Optional, a short reading about Lord Shaftesbury from a Christian children's book.

KEY TERMS

child labor

Children working long hours for wages, especially in factories, mines and mills, in place of school.

inspector

An official who visits workplaces to check that the law is being obeyed.

compulsory education

A law requiring children to attend school until a certain age.

Factory Acts

Laws passed in Britain from 1833 onward that limited the ages and hours of children and young people in factories and required inspectors.

reformer

A person who works to correct a wrong in society, usually by persuading people and changing laws.

CORE IDEAS

The story. Children have always helped their families, carrying water, minding animals and helping at harvest. But in the early factories of Britain, from the late 1700s, many children, some only six or seven years old, worked twelve or more hours a day tending spinning machines, often for very little pay and with no time for school. Lord Ashley, who later became the Earl of Shaftesbury, was an English nobleman and a devout evangelical Christian. He believed every child was made in God's image. In 1833 he took up the cause in Parliament, and that year the **Factory Act** became law: in textile mills, no child under nine could be employed, children from nine to thirteen could work no more than nine hours a day and must have two hours of school each day, and **inspectors** were appointed to enforce the law. Shaftesbury kept working for decades, and in 1847 the Ten Hours Act limited the workday of young people and women in textile mills to ten hours.

How they figured it out. In America, the same problem lasted into the 1900s. In 1908 the National Child Labor Committee hired Lewis Hine, a schoolteacher who had learned photography, to travel the country with his heavy camera. He photographed children in cotton mills, canneries, mines, glass factories and city streets, and he carefully wrote down their names, ages and hours. Mill owners often did not want him inside, so he sometimes said he was there to photograph the machines. His

pictures and records showed the public what words alone had not. One by one, the states passed laws that set a minimum age for factory work and required children to attend school; by 1918 every state had a **compulsory education** law. In 1938 Congress passed the Fair Labor Standards Act, which limited child labor across the nation and set a standard work week, which reached 40 hours by 1940, with extra “overtime” pay for longer hours.

The big idea. These laws fixed a real problem: children were losing their health and their schooling in long, unsafe factory days. They worked by setting clear limits (ages and hours), requiring school, and sending inspectors to check. They also had costs. Some poor families lost a child’s wages and had to find other ways to get by, and mill owners had to hire adult workers instead. Many owners argued against the laws at first. But as machines grew more productive and adult wages rose, families could afford to keep children in school, and educated children grew up to be more skillful, productive workers. This is a rule that served as a **fair referee**: it protected those who could not protect themselves.

In business today. In the United States, young teens may still work at many safe jobs with limits on their hours during the school year, and children may help in family businesses and on family farms. A paper route, babysitting or a lemonade stand teaches diligence and responsibility. The law draws the line at long hours and dangerous work that would take the place of school. Good business owners follow the rules gladly, because children are not simply small workers; they are persons to be trained up in the way they should go.

PICTURE STUDY



A Little Spinner in the Mollahan Mills, Newberry, South Carolina, Lewis Hine, 1908 · Photograph · Library of Congress, National Child Labor Committee collection

Image: [Wikimedia Commons](#), public domain

Lewis Hine took this photograph in a cotton mill in 1908 for the National Child Labor Committee. He wrote a caption for every picture with the place, the date and what he learned about the child's age and work. His photographs were printed in pamphlets and shown at meetings to persuade Americans to change the laws.

Look closely

- Find the child. How tall is she compared with the machine?
- Follow the long row of bobbins down the aisle. How many can you count? Each one had to be watched.
- Look at the floor, the windows and the light. What would it be like to work here all day?
- Look at the child's face and posture. What do you think Hine wanted people to feel?

Talk about it

1. Why do you think a photograph persuaded people more than a written report?

2. How is this child's work different from helping on a family farm or doing chores at home?
3. Hine wrote down names, ages and hours for every photograph. Why were honest records important to his work?

PROJECT

Hours and Schooling: Then and Now

You will compare a mill child's week in 1830 with the limits set by the Factory Act of 1833 and with your own week, using a table and a graph. Then you will make a small photo essay about honest work in your own community.

You will need

- Ledger notebook, graph paper and colored pencils
- A calculator
- Optional: a camera or phone used with a parent

Steps

1. **1830.** Suppose a ten-year-old mill worker worked from 6:00 a.m. to 7:00 p.m., with one hour off for meals, six days a week. Calculate the hours worked each day and each week.
2. **After 1833.** A ten-year-old could work no more than 9 hours a day and must have 2 hours of school. Calculate the work hours and school hours for a six-day week.
3. **Your week.** Using your warm-up, calculate your hours of school, chores and paid work in a week.
4. Make a table with three rows (1830, after 1833, me) and columns for work hours and school hours. Then make a double bar graph.
5. Write three sentences: What changed between 1830 and 1833? What did the law cost families and mill owners? What did children gain?
6. **Photo essay (optional).** With a parent, ask permission to photograph three adults at honest work in your community: a baker, a mechanic, a farmer, a librarian. Write a caption for each, as Hine did: name (if they agree), place, date and what the job involves. Print or draw them in your notebook.
7. Write a short letter as if to Lord Shaftesbury or Lewis Hine, telling what their work means for you.

Tips

- Always ask before photographing anyone, and never photograph children who are not your family without a parent's permission.
- In your captions, show the dignity of the work, as Hine did in his later photographs of the builders of the Empire State Building.

Check your work

- ☐ I can compare work and school hours before and after the Factory Act of 1833.
- ☐ I can explain what child-labor laws fixed, how they worked and what they cost.
- ☐ I can tell how Lord Shaftesbury and Lewis Hine helped bring children into school.

LEDGER NOTEBOOK

1. Copy your table and double bar graph of work and school hours.
2. Make a timeline: 1833 Factory Act, 1847 Ten Hours Act, 1904 National Child Labor Committee, 1908 Hine begins photographing, 1918 every state requires school, 1938 Fair Labor Standards Act.
3. Draw a balance scale with "What the law protected" on one side and "What the law cost" on the other. List at least two things on each side.

From history. Lord Shaftesbury also helped pass laws keeping women, girls and young boys out of underground coal mines (1842), worked to stop the use of small boys as chimney sweeps, and led the Ragged Schools Union, which gave free schooling to the poorest children of London. When he died in 1885, crowds of working people lined the streets for his funeral.

COMMON MISTAKES

- Thinking all work by children is bad. Chores, family farms and small jobs within safe limits teach diligence; the laws targeted long hours in factories and dangerous work in place of school.
- Thinking one law fixed everything at once. Change came step by step over a century, through reformers, laws, inspectors and rising wages.
- Forgetting the costs. Good history tells what a law cost as well as what it gained.

Make it a game • A Day on the Clock. Draw a large circle for a day and divide it into hours. Color one half for a mill child's long day before the Factory Acts, and a second for your own day with school. Your parent asks who helped change it: Lord Shaftesbury, Lewis Hine's photographs, the inspectors. Answer, then explain compulsory education.

5.3 SAFE WORK AND SAFE FOOD: FIRE CODES, WORKERS' COMPENSATION AND THE PURE FOOD AND DRUG ACT

OBJECTIVES

- Explain how the Triangle Shirtwaist fire of 1911 led to fire codes and workplace safety laws, and how workers' compensation works.
- Tell how Harvey Wiley and his "Poison Squad" helped bring about the Pure Food and Drug Act of 1906.
- Audit food labels and home fire safety, and weigh the benefits and costs of safety rules.

Warm-up. Pick up any packaged food in your kitchen. Find the ingredients, the net weight and the name and address of the company that made it. Why do you think the law requires each of these on the package?

WATCH

Chapter 1 | The Poison Squad | American Experience | PBS

American Experience | PBS • 9:11

<https://www.youtube.com/watch?v=euBoKIm1v6Q>

WHEN TO WATCH

After the story of the Poison Squad, before the label inspection.

Note: From PBS's *American Experience*. It includes old newspaper cartoons warning about poisoned food.

KEY TERMS

fire code

Rules for buildings, such as exits that open outward, fire escapes, sprinklers and fire drills, so that people can escape a fire.

workers' compensation

A system, paid for by employers, that pays an injured worker's medical bills and part of his wages, without his having to sue.

adulterated

Made impure or unsafe by adding harmful or cheaper substances.

label

Printed information on a package that tells what is inside, how much, and who made it.

regulation

A rule made under a law, usually enforced by inspectors.

CORE IDEAS

The story. In the late 1800s, many American foods and medicines were not what their labels claimed. Some milk was watered down and colored with chalk, some “honey” was mostly corn syrup, some canned foods were preserved with harmful chemicals, and some medicines contained hidden drugs. Harvey Washington Wiley, chief chemist of the U.S. Department of Agriculture, decided to test the preservatives scientifically. Beginning in 1902, a group of young men volunteered to eat their meals at a special table in his laboratory, with measured amounts of common preservatives added, while doctors watched their health. Newspapers called them the “Poison Squad.” Then, in 1906, a novel about the filthy conditions in Chicago’s meatpacking plants shocked readers. That same year Congress passed the **Pure Food and Drug Act** and the Meat Inspection Act. Five years later, on March 25, 1911, a fire broke out in the Triangle Shirtwaist Company in New York City. Exits were locked or blocked, and 146 workers, mostly young women, lost their lives.

How they figured it out. Wiley did not simply complain; he measured. His careful records of the Poison Squad showed the effects of the preservatives and persuaded lawmakers. The new law forbade selling **adulterated** or falsely **labeled** food and drugs across state lines, and it required that certain dangerous drugs be listed on the label. Some businesses fought it, but others supported it, including the food maker H. J. Heinz, whose company had already built its name on pure ingredients and glass jars that let customers see the food. After the Triangle fire, New York set up a commission that visited hundreds of factories. It recommended dozens of new laws: doors that open outward and are never locked during work, fire escapes, sprinklers in tall buildings and fire drills. In 1911 Wisconsin passed the first lasting state **workers’ compensation** law, and within ten years most states had one.

The big idea. These rules fixed real problems. Customers cannot test every can of food themselves, and a worker cannot inspect the fire exits of every building he works in. Clear rules, honest labels and inspectors protect people from dangers they cannot see. The rules also had costs: factories had to buy sprinklers and fire escapes, food makers had to change their recipes and labels, and taxpayers had to pay inspectors. Workers' compensation helped both sides: injured workers got help quickly, and employers avoided long lawsuits, while having a reason to make work safer. The Bible taught this idea long ago: "When thou buildest a new house, then thou shalt make a battlement for thy roof" (Deuteronomy 22:8). An owner is responsible for the safety of those who come under his roof.

In business today. Every food package in a store carries a label with ingredients and net weight; restaurants are inspected; buildings have marked exits and fire alarms; and businesses carry workers' compensation insurance. Honest companies treat safety rules not as a nuisance but as part of serving their workers and customers. Good rules are specific, are based on evidence, like Wiley's, and are enforced fairly.

PICTURE STUDY



Harvey Wiley's "Poison Squad" at Their Table, U.S. Department of Agriculture photographer, about 1903

· Photograph · U.S. Food and Drug Administration history office

Image: [Wikimedia Commons](#), public domain

This photograph shows Dr. Harvey Wiley's volunteers, the "Poison Squad," at their special dining table in the Department of Agriculture in Washington, D.C. Every bite they ate was weighed and recorded, and doctors checked their health regularly.

Look closely

- Count the men. Which one do you think is Dr. Wiley, the scientist in charge? Why?
- Look at how they are dressed. Do they look like soldiers, students or office workers?
- Look at the table settings. Does this look like an ordinary meal?

Talk about it

1. Why did Wiley need careful records instead of just his opinion?
2. Would you have volunteered for the Poison Squad? Why or why not?
3. Which stakeholders were protected by the Pure Food and Drug Act? Which had to pay costs?

Safety first. Do not move or open electrical panels, gas lines or smoke detectors yourself; a parent tests the alarms. During the fire drill, walk, do not run, and never use a real flame or smoke.

PROJECT

The Label and Safety Inspection

You will become a food inspector and a fire inspector for your own home. You will check labels against the contents, and plan and time a family fire drill, recording everything as an inspector would.

You will need

- Five packaged foods from your kitchen
- A kitchen scale that reads in grams
- Ledger notebook, pencil, a timer and a floor plan of your home (drawn by you)

Steps

1. **Labels.** Rule a table: Food, Net weight on label, Ingredients listed (yes/no), Company name and address (yes/no), Date code.
2. Fill in the table for five foods. For two unopened items with a clear package, weigh them, subtract an estimate for the packaging (weigh an empty package of the same kind if you have one), and compare with the label's net weight.
3. Read one ingredients list carefully. Ingredients are listed from most to least by weight. What is the first ingredient? Does that surprise you?
4. **Fire safety.** Draw a floor plan of your home. Mark each bedroom, every door and window, and two ways out of each room. Mark where the smoke alarms are.
5. Ask a parent to test the smoke alarms. Record the date and result.
6. Choose a family meeting place outside. Hold a fire drill: a parent sounds a signal, and everyone walks to the meeting place. Time it. Hold it again and try to improve the time safely.
7. Write an inspector's report: what you found, anything that needs fixing, and one sentence on why rules about labels and exits protect people who cannot check everything themselves.

Tips

- Net weight means the weight of the food without the package.

- Most fire-safety experts say a family should know two ways out of every room and practice a drill at least twice a year.

Check your work

- ☐ I can explain what the Pure Food and Drug Act required and why.
- ☐ I can explain how fire codes and workers' compensation protect workers.
- ☐ My inspector's report includes a label table, a floor plan with two exits per room, and a timed drill.

LEDGER NOTEBOOK

1. Copy your label table and circle anything that did not match the package.
2. Draw your home's floor plan with escape routes in red and the meeting place marked with a star.
3. Make a two-column chart for the Pure Food and Drug Act: "What it protected" and "What it cost," with at least two items in each.

From history. Harvey Wiley left government in 1912 and went to work for *Good Housekeeping* magazine, where for nearly twenty years he directed a laboratory that tested foods and household products and wrote about pure food for the magazine's readers.

COMMON MISTAKES

- Thinking safety rules only cost businesses. Honest businesses also gain when customers can trust what they buy, and when workers are safe and healthy.
- Thinking the 1906 law created the modern FDA all at once. The agency grew from Wiley's bureau and received the name Food and Drug Administration in 1930.
- Thinking a rule is good just because it is about safety. Good rules are based on evidence and are clear enough to obey and enforce.

Make it a game · Safety Inspector's Hunt. Set a three-minute timer and hunt the house for safety and honesty: a smoke detector, an exit route, an ingredient label, a warning label. For each find, say the rule it comes from, such as fire codes after the Triangle Shirtwaist fire, workers' compensation, or Harvey Wiley's pure food law. Score one point per correct explanation.

Scripture. “When thou buildest a new house, then thou shalt make a battlement for thy roof, that thou bring not blood upon thine house, if any man fall from thence.” (Deuteronomy 22:8, KJV)

In Israel, people used flat roofs like porches, so God required a low wall around the edge. A building’s owner was responsible for the safety of those who came into it, which is the idea behind every fire code.

5.4 KEEPING MARKETS HONEST: JUST WEIGHTS, STANDARD OIL AND WHEN RULES GO WRONG

OBJECTIVES

- Explain why honest weights and measures are the foundation of every market, from Leviticus to today's inspectors.
- Tell how Standard Oil made kerosene cheap but used secret railroad rebates to crush rivals, and why it was broken up in 1911 under the Sherman Act.
- Explain why Diocletian's Edict on Maximum Prices (AD 301) failed, and name what good rules have in common.

Warm-up. Put 20 nickels on your kitchen scale. U.S. nickels are made to weigh 5 grams each. What should the scale read? What does it read? Is your scale honest?

WATCH

John D. Rockefeller - First Billionaire

Decades TV Network • 2:24

<https://www.youtube.com/watch?v=poYLnPheYNw>

WHEN TO WATCH

After the story of Standard Oil, before the big idea.

BACKUP VIDEO

Discussing Weights & Measures

Orange County Historical Museum • 4:00

<https://www.youtube.com/watch?v=6yRJawZVO7k>

Before the weights-and-measures inspection.

KEY TERMS

weights and measures

Agreed standards for weight, length and volume (pounds, gallons, grams, liters) so that buyers and sellers measure the same way.

rebate

Money paid back to a buyer after a sale. Standard Oil's secret railroad rebates gave it lower shipping costs than its rivals.

antitrust law

A law against monopolies and agreements that unfairly restrain competition. The first U.S. one was the Sherman Antitrust Act of 1890.

price control

A law that sets the highest (or lowest) price that may be charged for something.

shortage

When buyers want more than sellers offer at the price allowed.

CORE IDEAS

The story. Every market rests on honest measures. God told Israel, “Just balances, just weights, a just ephah, and a just hin, shall ye have” (Leviticus 19:36). The U.S. Constitution gives Congress the power to “fix the Standard of Weights and Measures,” and today state and county inspectors test the scales in grocery stores and the pumps at gas stations. In 1870 John D. Rockefeller, a careful bookkeeper from Cleveland, Ohio, founded the Standard Oil Company to refine crude oil into kerosene, which families burned in lamps. He cut waste everywhere: Standard made its own barrels, used leftover by-products, and refined oil more cheaply than anyone, so the price of kerosene fell and poor families could light their homes at night. But Rockefeller also made secret deals with railroads to get **rebates** on his shipments that his rivals did not get, and used his size to buy out or squeeze out competitors. By about 1880 Standard Oil controlled roughly nine of every ten barrels of oil refined in America.

How they figured it out. Many Americans worried that giant combinations like Standard Oil could crush competition. In 1890 Congress passed the **Sherman Antitrust Act**, named for Senator John Sherman, which made it illegal to monopolize trade or to make agreements that restrain trade. A journalist named Ida Tarbell, whose father had been an independent oil producer, spent years studying Standard Oil’s records and published a careful history of its methods in 1904. In 1911 the U.S. Supreme Court ruled that Standard Oil had broken the law and ordered it split into 34 separate companies, which then had to compete. Long before, a Roman emperor had tried a very different kind of rule. Around AD 300, prices across the Roman Empire were rising fast, largely because emperors had debased the silver coins. In AD 301 Emperor Diocletian issued an **Edict on Maximum Prices** that set the highest

legal price for more than a thousand goods and services, from wheat to shoes to a teacher's pay, with harsh punishments for breaking it. A Christian writer of the time, Lactantius, reported that goods vanished from the markets, because sellers would not sell below their costs. The edict was soon ignored.

The big idea. Good rules protect honest dealing and keep any one player from cheating or abusing power: honest weights, laws against fraud, and antitrust laws that stop secret deals to crush rivals or fix prices. They work like a **fair referee**, who does not decide who wins but makes sure everyone plays by the same rules. Bad rules try to overrule the market itself. Diocletian's **price controls** set prices below what it cost to produce goods, so producers stopped bringing them to market, and the result was a **shortage**. The deeper cause, the debased coins, was never fixed. Too few rules invite fraud; too many or badly designed rules empty the shelves.

In business today. Inspectors still put a seal on every honest gas pump and grocery scale. Antitrust laws still forbid competitors from secretly agreeing on prices. And the companies that grew from Standard Oil still compete with one another. Rockefeller himself, a devout Baptist who gave a tenth of his income from his first job onward, later gave away hundreds of millions of dollars to found universities and medical research. Like the other great businesses you have studied, his story has both great good and real wrongs in it.

PICTURE STUDY



Woman Holding a Balance, Johannes Vermeer, about 1664 · Oil on canvas · National Gallery of Art, Washington, D.C.

Image: [Wikimedia Commons](#), public domain

Johannes Vermeer painted quiet scenes of Dutch homes in the city of Delft. Here a woman holds a jeweler's balance up to the light. Its pans are empty: she is waiting for it to come to rest so she can be sure it is true before she weighs anything.

Look closely

- Look closely at the balance. Are the pans empty or full? Why would she check it first?
- Find the pearls and gold on the table. What might she be about to weigh?
- Look at the painting on the wall behind her. It shows the Last Judgment, when all things are weighed by God. Why might Vermeer have put it there?
- Notice the light from the window. Where does it fall?

Talk about it

1. How is checking the balance before weighing like a weights-and-measures inspector testing a gas pump?
2. What would happen to trust in a market if scales were secretly false?

3. Proverbs says “a just weight is his delight.” How does this painting show that idea?

PROJECT

The Weights-and-Measures Inspector and the Price-Control Game

You will inspect the measuring tools in your kitchen using coins as standard weights, then play a market game twice, once freely and once with a price control, and record what happens.

You will need

- 40 nickels (each 5.0 grams) and a kitchen scale
- A liquid measuring cup and water
- Small treats or paper “goods” to trade, play money, and 3 or more players
- Ledger notebook

Steps

1. **Scale test.** Weigh 10, 20, 30 and 40 nickels. Record what the scale reads and what it should read (50, 100, 150 and 200 grams). Calculate the error for each.
2. **Cup test.** One cup of water weighs about 237 grams. Fill your measuring cup to 1 cup, pour it into a container on the scale and record the weight. Is the cup honest?
3. Write an inspector’s certificate for each tool: “Tested on (date). Result: honest / not honest.”
4. **Free market round.** Two sellers each have 5 treats; buyers have play money. Sellers set prices; buyers buy. Record prices and how many treats were sold.
5. **Price-control round.** A “Diocletian” announces a maximum price far below what sellers charged. Sellers now get only that price, and they may choose to sell or to keep their treats for themselves. Record what happens: how many treats were offered, how many buyers went without.
6. Compare the rounds in a table. Did the price control help buyers or hurt them?
7. Write a paragraph comparing two rules: honest weights (a fair referee) and Diocletian’s price edict (overruling the market). Which helped trade, and why?

Tips

- A small error of 1 or 2 grams is normal for a kitchen scale. Inspectors allow a small “tolerance.”
- In the price-control round, sellers should act like real sellers: if the price is too low to be worth it, they may keep the goods.

Check your work

- ☐ I can test a scale against standard weights and record the error.
- ☐ I can explain what the Sherman Act forbade and why Standard Oil was broken up.
- ☐ I can explain why Diocletian’s price edict caused shortages.

LEDGER NOTEBOOK

1. Copy your scale-test table and your inspector’s certificates.
2. Draw a two-sided chart for Standard Oil: “What it did well” and “What it did wrong,” with at least two items in each.
3. Draw a referee’s whistle and list three rules that act like a fair referee in a market, and one rule that tries to play the game itself.

From history. Pieces of Diocletian’s price edict, carved in stone, have been found in many towns of the old Roman Empire, especially in Greece and Turkey. They list prices for things like a pound of pork, a pair of soldier’s boots and a scribe’s pay for a hundred lines of writing.

COMMON MISTAKES

- Thinking Standard Oil was broken up for being big or successful. It was broken up for unfair methods, such as secret rebates and squeezing out rivals, that restrained trade.
- Thinking a law setting low prices always helps buyers. If the price is below the cost of making a thing, sellers stop selling it and buyers go without.
- Thinking honest weights are a small matter. Without them, no buyer could trust any seller, and trade would slow to a crawl.

Make it a game • Catch the Short Weight. Your parent plays a shopkeeper and sells you one cup of rice, but secretly scoops a little short. You are the inspector with a measuring cup or kitchen scale. Catch the cheat and say why honest weights come first in Leviticus and in markets today. Swap, and cheat quietly. Name why Standard Oil’s rebates were unfair.

Scripture. “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)

God cares about the scale in the corner store. Honest weights and measures are the first and simplest rule of a fair market, and they please Him.

UNIT 5

WORKERS, OWNERS AND FAIR RULES

A business needs both **capital**, the money, tools, machines and buildings that owners risk, and **labor**, the time, skill and strength of workers. Owners and workers need each other, and Scripture tells both to deal honestly: owners must pay promised wages on time, and workers must work heartily. In this unit you will see this partnership in Andrew Carnegie's steel mills and in Jesus' parable of the workers in the vineyard.

Then you will study rules that helped, taught as history: the Factory Acts that Lord Shaftesbury fought for, Lewis Hine's photographs and the laws that brought most children out of mills and into school, fire codes and workers' compensation, the Pure Food and Drug Act, honest weights and measures, and the antitrust law that broke up Standard Oil. You will also study a rule that went badly wrong, the Roman emperor Diocletian's order fixing prices, so you can see what good rules have in common. Good rules work like a fair referee: they protect honest dealing, safety and children, while leaving people free to work, trade, build and give.

PREREQUISITES

- Knows the six stakeholders (Unit 4)
- Knows supply, demand and competition (Unit 3)
- Can calculate hours and weekly totals

MASTERY CHECKLIST

- ☐ I can explain how capital and labor need each other, using Carnegie's steel and the parable of the vineyard.
- ☐ I can tell how Lord Shaftesbury, Lewis Hine and child-labor laws brought most children out of factories and into school.
- ☐ I can explain how fire codes, workers' compensation and the Pure Food and Drug Act made work and food safer, and what they cost.
- ☐ I can explain why honest weights, measures and antitrust laws protect markets, and why Diocletian's price edict failed.
- ☐ I can explain what makes a good rule: like a fair referee, not too few rules and not too many.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Library of Congress: National Child Labor Committee photographs by Lewis Hine**: Free. Search the Library of Congress website for "National Child Labor Committee" to find more than 5,000 of Lewis Hine's photographs with his own captions. A parent should choose the pictures to view together; some show hard and sad conditions. Fits Lesson 5.2.
- **Andrew Carnegie, "Wealth" (1889), often called "The Gospel of Wealth"**: Free on the Carnegie Corporation's website. Carnegie's short essay arguing that rich men should give away their fortunes during their lives. Read a few paragraphs aloud with Lesson 5.1 and discuss. Ages 11 and up with a parent.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

5.1 Capital and Labor Need Each Other

2 sessions of 45 minutes

5.2 Children Belong in School: Lord Shaftesbury, Lewis Hine and Child-Labor Laws

2 sessions of 45 minutes

5.3 Safe Work and Safe Food: Fire Codes, Workers' Compensation and the Pure Food and Drug Act

2 sessions of 45 minutes

5.4 Keeping Markets Honest: Just Weights, Standard Oil and When Rules Go Wrong

2 sessions of 45 minutes

UNIT 5 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What is capital and what is labor? Why does a steel mill need both?

2. **5 pts**

In the parable of the workers in the vineyard, how did the owner keep his contract? What else did he do?

3. **5 pts**

A worker moves 30 beans a minute by hand and 90 a minute with a cup. How many times more productive is the worker with the cup? What does this show about capital?

4. **5 pts**

Name two things the Factory Act of 1833 required.

5. (5 pts)

How did Lewis Hine help end most child labor in America?

6. (5 pts)

A mill child worked 12 hours a day, 6 days a week. After a new law, he could work only 9 hours a day and had 2 hours of school. How many fewer work hours did he have each week, and how many school hours did he gain?

7. (5 pts)

What did the Pure Food and Drug Act of 1906 forbid? How did Harvey Wiley's Poison Squad help?

8. (5 pts)

Name two fire-safety rules adopted after the Triangle Shirtwaist fire, and explain what workers' compensation does.

9. (5 pts)

Name one thing Standard Oil did well for customers and one unfair method that led to its breakup in 1911.

10. (5 pts)

What would happen if a law said bread could be sold for no more than half of what it costs a baker to make it? Use Diocletian's edict as an example.

ANSWER KEY

1. Capital is tools, machines, buildings and money used to produce; labor is the work and skill of people. A mill needs furnaces and machines (capital) and workers to run them (labor); neither can make steel alone.
2. He paid every worker exactly the penny (a day's wage) they had agreed to, on the same day. He was also generous, paying the latecomers the same full wage.
3. $90 \div 30 = 3$ times. Better tools (capital) make labor more productive.
4. Any two: no children under nine in textile mills; children 9–13 limited to nine hours a day; two hours of school a day for them; inspectors to enforce the law.
5. He photographed working children across the country and recorded their names, ages and hours. His pictures showed the public the truth and helped persuade states and Congress to pass child-labor and school laws.
6. Before: 72 hours. After: 54 hours. 18 fewer hours of work and 12 hours of school gained each week.
7. Selling adulterated or falsely labeled food and drugs across state lines. Wiley's volunteers ate measured preservatives under medical watch, and his careful records gave evidence that persuaded lawmakers.
8. Any two: exit doors that open outward and stay unlocked, fire escapes, sprinklers, fire drills. Workers' compensation pays an injured worker's medical bills and part of his wages without a lawsuit, paid for by employers.
9. Well: cut waste and made kerosene cheap. Unfair: secret railroad rebates, squeezing out or buying out rivals to control most of the refining business.
10. Bakers would stop making and selling bread, or sell it secretly, and shelves would empty: a shortage. Diocletian's edict of AD 301 set prices too low, goods vanished from the markets and the edict was soon ignored.

PORTFOLIO PIECE: A FAIR-RULES REPORT

Choose one rule from this unit (the Factory Act of 1833, the child-labor laws, the Pure Food and Drug Act, fire codes, workers' compensation, weights and measures, the Sherman Act, or Diocletian's price edict). Write a one-to-two-page report with four headings: The problem (what was going wrong and who was harmed), The rule (what it required and who enforced it), The results (what got better or worse, with at least one number or date), and The cost (who paid and how). Finish with your judgment: was this a fair referee, too few rules or too many? Add one picture or drawing with a caption.

LOOK FOR	WHAT IT MEANS
Accuracy	Dates, names and facts are correct and come from the lessons or reliable sources.
Balance	The report fairly describes both the benefits and the costs of the rule.
Reasoning	The final judgment is supported with clear reasons and uses the idea of a fair referee.
Presentation	Four clear headings, a captioned picture or drawing, and neat, complete sentences.

ENTREPRENEURSHIP AND SALES

Every business begins with a person who sees a need and decides to do something about it, risking time, money and a good name. That person is an **entrepreneur**. In this unit you will follow James Cash Penney as he opens a small store in a Wyoming mining town and names it for the Golden Rule, and the inventors at 3M who turned a “failed” glue and a slipping hymnal bookmark into the sticky note, by testing prototypes and listening to customers.

Then you will learn to sell honestly, as John Wanamaker did when he put a fixed price tag on every item and promised customers their money back, and you will learn how to set a price that covers your costs, find your break-even point and make a short, truthful pitch. By the end of the unit you will have a one-page plan for a small business of your own.

PREREQUISITES

- Knows supply, demand and competition (Unit 3)
- Knows the six stakeholders (Unit 4)
- Can multiply and divide money amounts and work with simple percents

MASTERY CHECKLIST

- ☐ I can explain what an entrepreneur does and name the risks and rewards of starting a business.
- ☐ I can test an idea with a prototype and customer feedback and improve it.
- ☐ I can explain why one fair price, honest advertising and a money-back guarantee build trust, and spot a misleading ad.
- ☐ I can calculate cost per unit, profit per unit and the break-even point, and give a short, honest sales pitch.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Junior Achievement (JA) BizTown and student programs:** Many communities have Junior Achievement programs that let students run a model town or a small business, often through schools and homeschool groups. Check your local JA chapter. Ages 9–14.
- ***Lemonade in Winter*, by Emily Jenkins (Random House):** Ages 5–9, but a quick, funny read for older students too. A brother and sister sell lemonade on a freezing day and learn about costs, pricing and profit. Good for discussing Lesson 6.4 with younger siblings.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

6.1 The Entrepreneur: Seeing a Need and Taking a Risk	2 sessions of 45 minutes
6.2 Testing an Idea: Prototypes and Customer Feedback	2 sessions of 45 minutes
6.3 Honest Selling: Wanamaker's Price Tags and Money-Back Guarantee	2 sessions of 45 minutes
6.4 Pricing and the Pitch: Cost, Value and Break-Even	2 sessions of 45 minutes

UNIT 6 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

- 5 pts**
What is an entrepreneur? Name one risk and one reward of starting a business.
- 5 pts**
What need did J. C. Penney see in Kemmerer, Wyoming, and how did he meet it?
- 5 pts**
How did Penney grow from one store to hundreds?

4. (5 pts)

Why did 3M's first test market for sticky notes fail, and what did the company do next?

5. (5 pts)

Eight testers chose between two cookies: 6 chose A and 2 chose B. What fraction and percent chose A? Why is this better evidence than asking one friend?

6. (5 pts)

Name three things John Wanamaker did to make selling honest and fair.

7. (5 pts)

An ad says, "The most amazing bike ever!" and another says, "Steel frame, 21 speeds, 24-inch wheels, \$189." Which statements can be checked? Which is more useful to a buyer?

8. (5 pts)

A bookmark business has fixed costs of \$6. Each bookmark costs \$0.20 to make and sells for \$1.00. What is the profit per unit and the break-even point?

9. (5 pts)

What would happen to Woolworth's profit if the factory raised the cost of an item he sold for 5¢ from 3¢ to 6¢? What could he do?

10. (5 pts)

Write a four-part honest pitch for a product of your choice.

ANSWER KEY

1. A person who starts a business, risking loss in hope of profit. Risk: losing savings, time or reputation. Reward: profit, serving customers, building something lasting.
2. Miners' families often paid high prices on credit at company stores. Penney sold honest goods for cash at one low, fair price.
3. He trained his best clerks to manage new stores and let each manager buy a share of his store, so managers worked like owners.
4. Shoppers did not understand the product from the package and few bought it. 3M gave free samples in Boise so people could try them, and many then said they would buy.
5. $6/8 = 3/4 = 75\%$. Many people asked the same question give a fairer picture than one person's opinion.
6. Fixed price tags (one price for everyone), a money-back guarantee, and plain, truthful advertising.
7. The second ad's facts (frame, speeds, wheel size, price) can be checked; "most amazing ever" cannot. The second is more useful.
8. Profit per unit = $\$1.00 - \$0.20 = \$0.80$. Break-even = $\$6 \div \$0.80 = 7.5$, so 8 bookmarks.
9. He would lose 1¢ on every sale instead of earning 2¢. He could find a cheaper supplier, buy in larger amounts, drop the item, or move it to the 10¢ counter.
10. Answers vary. It should include a need, the product, the price and a promise or guarantee, all true.

PORTFOLIO PIECE: MY ONE-PAGE BUSINESS PLAN

Write a one-page plan for a small business you could really run with a parent's help. Include: the need and your customers; your product or service and what you learned from testing it; your fixed costs, variable cost per item, price and profit per unit; your break-even point and how you will reach it; how you will sell honestly (price tag, guarantee, honest ad); and the risks and how you will reduce them. Attach your survey tally, your break-even graph and your honest ad. You may use this plan for the bonus Unit 9.

LOOK FOR	WHAT IT MEANS
The need	A real need and real customers, found by listening and testing.
The numbers	Fixed costs, variable costs, price, profit per unit and break-even are correct and clearly shown.
Honest selling	A truthful ad, a price tag and a guarantee that a parent has checked.
Risks	At least three honest risks with sensible ways to reduce them, including safety.
Presentation	Fits on one page, neat and well organized, with the attachments.

6.1 THE ENTREPRENEUR: SEEING A NEED AND TAKING A RISK

OBJECTIVES

- Define entrepreneur, risk and reward, and explain why profit is the reward for meeting a need well.
- Tell how J. C. Penney opened his Golden Rule store in Kemmerer, Wyoming, in 1902 and grew it by making his managers partners.
- Find real needs in your own community and weigh the risks of meeting one.

Warm-up. Walk through your home and make a list of five small problems or annoyances: something that is always lost, a job no one likes, something that breaks. For each, ask: would anyone pay to have this solved?

WATCH

J.C. Penney's Golden Rule - Life in America

Recollection Road • 8:08

<https://www.youtube.com/watch?v=QkQkOlHduAk>

WHEN TO WATCH

After the story, before the need-finding walk.

BACKUP VIDEO

Biz Kid\$: Introducing Entrepreneurs - Captioned and Described

Described and Captioned Media Program • 4:08

<https://www.youtube.com/watch?v=TTzeGN9zrRg>

Optional, before the risk ledger.

KEY TERMS

entrepreneur

A person who starts a business, taking the risk of loss in hope of the reward of profit.

risk

The chance of losing money, time or reputation.

reward

What an entrepreneur hopes to gain: profit, the satisfaction of serving customers, and the growth of the business.

investment

Money or time put into a business now in hope of a return later.

partner

A co-owner of a business who shares its profits, losses and decisions.

CORE IDEAS

The story. James Cash Penney grew up on a Missouri farm, the son of a Baptist preacher. His father made him buy his own clothes from the age of eight, so he learned early to earn and save. As a young man he clerked in a dry-goods store, then moved west for his health and went to work for two merchants who ran small stores they called Golden Rule stores. In 1902 they offered him a one-third share in a new store in Kemmerer, Wyoming, a mining town with only about a thousand people. Penney put in \$500 of his own savings and borrowed \$1,500 more. He, his wife and their baby lived in the attic over the store, and he kept it open from early morning until late at night, six days a week.

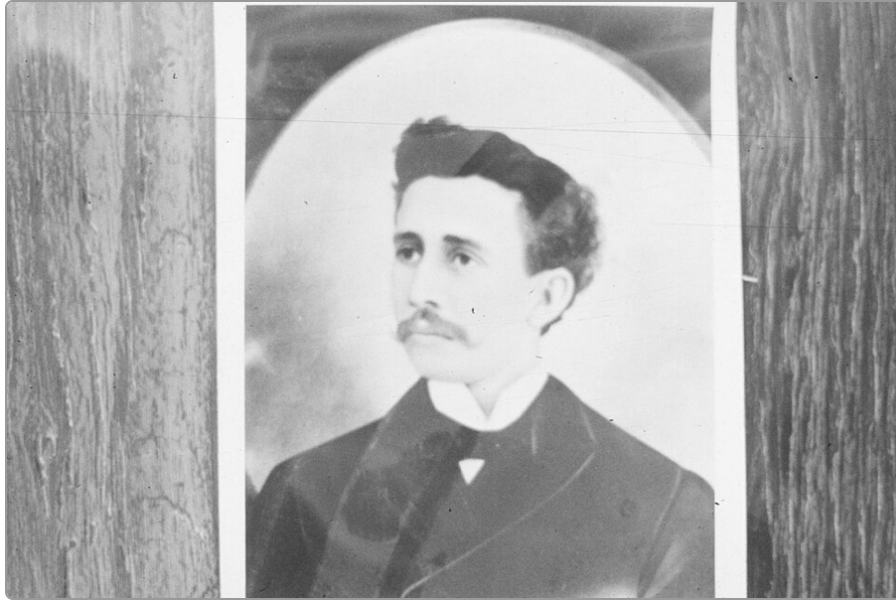
How they figured it out. Many mining towns had a company store, owned by the mine, that sold on credit at high prices, so miners often fell into debt to their own employers. Penney saw a need: honest goods at fair prices. He sold for cash only, with one low price for everyone, and he bought carefully so he could keep his prices low. People told him a cash-only store would fail in a town used to credit, but miners' families came, and the store made money in its first year. Penney then found a way to grow: he trained his best clerks to manage new stores and let each manager buy a share of the store he ran, so every manager worked like an owner. By 1912 there were 34 stores; by the late 1920s, more than a thousand. Later, when the stock market crashed in 1929, Penney lost most of his personal fortune, and he worked to rebuild it in his late fifties and sixties.

The big idea. An **entrepreneur** sees a need that others have missed, gathers the money, people and goods to meet it, and takes the **risk** that it will fail. If customers value what he offers more than it costs him to provide it, he earns a **profit**, his **reward**. If not, he takes a loss. Profit is not something taken from customers; in a

free and honest trade, it is a sign that the business is creating value. Every entrepreneur should count the cost before he starts, and should be ready to work hard and to fail and try again.

In business today. Entrepreneurs start bakeries, repair shops, farms, software companies and family businesses every day. Most begin small, as Penney did, with savings and long hours. Many fail in the first few years, so wise entrepreneurs start with a small test, keep their costs low, and listen closely to customers. And the best, like Penney, treat customers, workers and partners the way they themselves want to be treated.

PICTURE STUDY



James Cash Penney as a Young Merchant, Unknown photographer, 1902 · Photograph (a copy of an old portrait) · J. C. Penney Papers, Southern Methodist University (copy at the University of Colorado Boulder Libraries)

Image: [Wikimedia Commons](#), public domain

This portrait of J. C. Penney is dated 1902, the year he risked his savings on the Golden Rule store in Kemmerer, Wyoming. The picture is a copy of an old photograph, which is why you can see the board it is mounted on.

Look closely

- Look at Penney's clothes. How would a young storekeeper in a mining town want to look to his customers?
- Look at his face. What qualities do you think customers saw in him?
- Notice the oval shape and the board behind it. What does that tell you about how old the photograph is?

Talk about it

1. Penney put all his savings and a borrowed \$1,500 into one store. What would you need to know before taking a risk like that?
2. Why do you think he named his stores for the Golden Rule?
3. If you could ask the young Penney one question about starting a business, what would it be?

PROJECT

The Need-Finding Walk and a Risk Ledger

Entrepreneurs start by noticing problems. You will gather twenty real needs from your home, family and neighborhood, choose the most promising, and make a risk ledger: what you would put in, what could go wrong and what you hope to gain.

You will need

- Ledger notebook and pencil
- A parent to walk with you and to help you ask neighbors you know
- Sticky notes

Steps

1. With a parent, take a walk around your home and neighborhood, or think about your church, grandparents and friends. Write one need or problem on each sticky note. Aim for twenty.
2. Ask at least three adults you know: "What is a small job or problem you wish someone would help you with?" Add their answers.
3. Sort the notes into goods (something to make) and services (something to do).
4. Score each idea from 1 to 5 on three questions: How many people have this need? Could I do it well? Could I do it safely with a parent's help? Add the scores.
5. Choose the top idea. In your ledger, make a risk ledger with three columns: What I would invest (money, time, materials), What could go wrong, What I hope to gain.
6. For each thing that could go wrong, write one way to make the risk smaller (start small, test first, ask a parent, use materials we already have).
7. Write a paragraph: How would you follow the Golden Rule in this business?

Tips

- The best ideas usually come from listening, not from guessing what people want.

- Small and safe beats big and risky for a first business.

Check your work

- ☐ I can explain what an entrepreneur does and how profit rewards meeting a need.
- ☐ I found at least twenty needs and scored them fairly.
- ☐ My risk ledger lists investments, risks and ways to reduce them.

LEDGER NOTEBOOK

1. Draw the front of the first Golden Rule store in Kemmerer as you imagine it, with a sign that tells customers what makes it different.
2. Make a timeline of J. C. Penney's business: 1902 Kemmerer, 1912 thirty-four stores, 1913 the J. C. Penney Company, 1929 the crash, rebuilding.
3. Copy your top three ideas with their scores, and circle the winner.

From history. J. C. Penney called his company's managers "associates" and asked them to live by a written creed, "The Penney Idea," adopted in 1913, which began with serving the public "to its complete satisfaction." He lived to be 95 and went to the office until shortly before he died in 1971.

COMMON MISTAKES

- Thinking an entrepreneur just needs a clever idea. He also needs customers, careful planning, hard work and a willingness to risk loss.
- Thinking profit means cheating someone. In an honest trade, profit shows that the business made something customers valued more than it cost.
- Starting too big. Most wise entrepreneurs start with a small test.

Make it a game • Spot the Need. Take a three-minute walk through your home or yard and write down five needs people have, such as a sticky drawer or a lost sock. Pick one and describe a business that meets it. On a Risk Ledger line, write what you would risk and what the reward could be. J. C. Penney started his store with a need.

Scripture. "Therefore all things whatsoever ye would that men should do to you, do ye even so to them: for this is the law and the prophets." (Matthew 7:12, KJV)

This is the Golden Rule that gave Penney's first stores their name. A business that treats every customer, worker and partner as it would want to be treated earns trust, and trust is the foundation of every lasting business.

6.2 TESTING AN IDEA: PROTOTYPES AND CUSTOMER FEEDBACK

OBJECTIVES

- Explain what a prototype is and why entrepreneurs test small before they build big.
- Tell how 3M turned a weak glue and a slipping hymnal bookmark into the sticky note through testing and customer feedback.
- Make two prototypes, gather feedback from real people with a simple survey, tally the results and improve the product.

Warm-up. Fold a paper airplane, fly it three times and measure the distance. Change one thing (the nose, the wings) and fly it three more times. Which was better? You have just tested two prototypes.

WATCH

Chance Discoveries: Post-it Notes

[NBC News Learn](#) · 3:02

<https://www.youtube.com/watch?v=bvalMbOdseU>

WHEN TO WATCH

After the story of the sticky note, before making your prototypes.

BACKUP VIDEO

Design Steps 5 and 6: Create and Test a Prototype

[Teach Engineering](#) · 3:35

<https://www.youtube.com/watch?v=tmi7RRQiP-s>

Before you build your prototypes.

KEY TERMS

prototype

An early, simple version of a product made to test an idea before making many.

feedback

What customers or testers tell you about a product: what they like, dislike and would change.

survey

A set of questions asked of many people in the same way so the answers can be counted and compared.

test market

Selling or giving out a new product in a small area first to see how customers respond.

iteration

One round of making, testing and improving. Good products go through many iterations.

CORE IDEAS

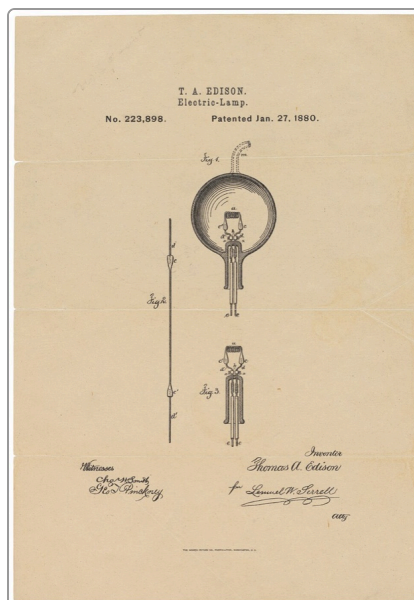
The story. In 1968 a chemist named Spencer Silver, working at the 3M company in St. Paul, Minnesota, was trying to make a very strong glue. Instead he made a weak one: it stuck, but it peeled off easily and could be stuck again. No one could think what it was good for. Years later another 3M scientist, Art Fry, was singing in his church choir. The paper slips he used to mark the hymns kept falling out of his hymnal. He remembered Silver's glue and thought: what if a bookmark could stick lightly to the page and peel off without tearing it?

How they figured it out. Fry made **prototypes**: small notes with a thin strip of the glue along one edge. He and his co-workers began using them around the office to leave each other messages on reports, and they kept asking for more. That was useful **feedback**. But when 3M first tried selling the notes in a **test market** in four cities in 1977, few people bought them, because shoppers did not understand them from the package. Instead of giving up, 3M changed its method. In 1978, in Boise, Idaho, it gave free samples to offices so people could try them, and a large share of those who tried the notes said they would buy them. The product, named Post-it Notes, went on sale across the United States in 1980.

The big idea. Wise entrepreneurs do not risk everything on a guess. They make a cheap **prototype**, put it in front of real customers, listen carefully, count the results and improve it. Each round is an **iteration**. A **survey** asks the same questions of many people so you can count and compare their answers, instead of trusting one friend's opinion. Feedback is a gift even when it is disappointing: the failed test market taught 3M that people needed to *try* the product, not just see it.

In business today. Restaurants test new dishes as weekly specials; app makers release a test version to a few users; carmakers build clay models and test prototypes for months; bakeries hand out free samples. Testing small saves money and builds a better product. “Without counsel purposes are disappointed: but in the multitude of counsellors they are established” (Proverbs 15:22).

PICTURE STUDY



Thomas Edison's Electric Lamp, Patent Drawing, Thomas A. Edison (inventor); U.S. Patent Office drawing, 1880 · Ink drawing for U.S. Patent No. 223,898 · U.S. National Archives

Image: [Wikimedia Commons](#), public domain

Thomas Edison and his team at Menlo Park, New Jersey, built and tested many prototype lamps, trying thousands of materials for the glowing filament, before they found a carbon filament that would burn for many hours. This drawing is part of the patent Edison received in January 1880 for his electric lamp.

Look closely

- Find the filament, the thin glowing part. What shape is it?
- Find the numbers and letters on the drawing. What are they for?
- Look at how simple and clear the drawing is. Why would a patent office want a drawing like this?

Talk about it

1. Edison's team tested thousands of filaments. How is that like Art Fry testing his sticky notes?
2. Why is it cheaper to test a prototype than to build a factory first?
3. What would you want to know from customers before selling a new kind of lamp?

PROJECT

Two Prototypes and a Customer Survey

You will make two versions of a simple product, test them with at least eight people you know, count their answers and make an improved third version.

You will need

- Materials for a simple product: bookmarks (card stock, ribbon, markers), greeting cards, or a simple snack such as two kinds of granola bars or cookies
- Index cards for survey forms and a pencil
- Ledger notebook

Steps

1. Choose a product and make two different prototypes, A and B (for example, a bookmark with a ribbon and one with a paper clip; or cookies with two different recipes). Make enough for your testers.
2. Write a short survey with four questions: Which do you like better, A or B? What do you like most about it? What would you change? Would you pay ___ for it (yes / no / maybe)?
3. With a parent, give the survey to at least eight people you know: family, neighbors, church friends. Let them try both versions. Do not tell them which one you prefer.
4. Tally the answers in your ledger: votes for A and B, yes/no/maybe for the price, and the most common suggestions.
5. Make a bar graph of the results.
6. Make version C, using the best ideas from the feedback. Test it with three more people and record the results.
7. Write a paragraph: What surprised you? What did you change, and why? Would you sell this product?

Tips

- Ask, then listen. Do not argue with a tester or explain why he is wrong.

- If several people say the same thing, take it seriously; if only one person says something, note it but weigh it lightly.

Check your work

- ☐ I can explain what a prototype is and why testing small is wise.
- ☐ My survey tally and bar graph are complete and correct.
- ☐ I made an improved version based on real feedback.

LEDGER NOTEBOOK

1. Draw prototypes A, B and C side by side and label what changed each time.
2. Copy your survey tally and bar graph.
3. Draw a circle diagram of iteration: Make → Test → Listen → Improve → Make again.

From history. 3M began in 1902 as the Minnesota Mining and Manufacturing Company, trying to mine a mineral for grinding wheels. That first venture went badly, and the company survived by making sandpaper and later invented masking tape (1925) after one of its workers watched painters struggle at an auto body shop. Listening to customers is an old habit at 3M.

COMMON MISTAKES

- Asking only your best friend or your mother. One kind opinion is not a survey; ask many people and count the answers.
- Building the final product first. A prototype should be quick and cheap.
- Ignoring feedback you do not like. Disappointing results often teach the most.

Make it a game • Bookmark Prototypes. In five minutes, build two bookmark prototypes from paper, tape and a clip, each meant to stay on a page like the 3M hymnal marker. Your parent tests both and gives feedback: keeps on the page, comes off cleanly, feels good. Improve the better one in a second round. Say why testing small beats building big.

Scripture. “Without counsel purposes are disappointed: but in the multitude of counsellors they are established.” (Proverbs 15:22, KJV)

A plan tested only in your own head often fails. Asking many people for honest advice, as a survey does, is an old and wise way to make a plan succeed.

6.3 HONEST SELLING: WANAMAKER'S PRICE TAGS AND MONEY-BACK GUARANTEE

OBJECTIVES

- Tell how John Wanamaker made the fixed price tag and the money-back guarantee famous in his Philadelphia store.
- Explain how one fair price, truthful advertising and a guarantee build trust between seller and customer.
- Tell the difference between honest persuasion and deception in advertising, and write an honest ad.

Warm-up. Read Proverbs 20:14 aloud: “It is naught, it is naught, saith the buyer: but when he is gone his way, then he boasteth.” Act it out with a parent: you are a buyer pretending a basket of apples is poor so you can pay less. What is dishonest about it?

WATCH

Wanamaker's Price Tags Made In PA

Historical Society of Pennsylvania • 2:30

<https://www.youtube.com/watch?v=0YABsq4IAAg>

WHEN TO WATCH

After the story of Wanamaker, before the honest-ad workshop.

Note: A local television segment with the Historical Society of Pennsylvania. Skip the few seconds of advertising at the start.

KEY TERMS

haggling

Bargaining back and forth over the price of each item, with the price different for each customer.

money-back guarantee

A promise that a customer who is not satisfied may return the item for a full refund.

fixed price

One marked price that is the same for every customer; also called the one-price system.

advertising

Paid messages that tell people about a product or business and try to persuade them to buy.

deceptive advertising

Advertising that lies or leaves a false impression about a product, its price or its results.

CORE IDEAS

The story. In the 1800s, most American stores did not mark prices. A customer and a clerk haggled over every item, and the price depended on how clever, rich or tired the customer seemed. Shoppers who were poor, shy or new in town often paid more. John Wanamaker grew up in Philadelphia, the son of a brickmaker, and as a young man he started a Sunday school in a poor neighborhood that grew to thousands of students. In 1861 he opened a men's clothing store, and in 1876 he moved into a huge old railroad freight station, which he called the Grand Depot, one of the first great department stores in America.

How they figured it out. Wanamaker believed that if everyone is equal before God, everyone should be equal before a price. Some Quaker merchants and a few other stores had used fixed prices before him, but Wanamaker made the idea famous. He put a **price tag** on every item, so every customer paid the same price. He offered a **money-back guarantee**: a customer who was not satisfied could bring the item back and get a full refund. And he wrote his newspaper **advertisements** in plain, truthful language, telling customers exactly what an item was and what it cost. Rivals said customers would take advantage of the guarantee, and some did, but far more customers came because they trusted the store. Clerks no longer had to be skilled hagglers, so the store could hire and train many more of them.

The big idea. Honest selling builds **trust**, and trust brings customers back. A fixed price treats every customer fairly. A guarantee shows that the seller believes in his goods and will make things right. Honest advertising persuades by telling the truth: what the product is, what it does and what it costs. **Deceptive advertising** may win a sale once but loses customers forever. In 1914 Congress created the Federal Trade Commission, which today has the job of stopping false and deceptive advertising. But the first guard against dishonest selling is the seller's own conscience.

In business today. Nearly every store now has price tags, and most offer returns, because customers expect them. Online stores show prices and reviews and offer refunds. Some things are still bargained over, such as cars, houses and items at a

yard sale, and bargaining honestly is fine. What Scripture forbids is lying, whether by the buyer who says “It is naught” or by the seller who hides a flaw. An honest pitch tells the good points of a product cheerfully and its limits plainly.

PICTURE STUDY



Wanamaker's, New York: Two Buildings, Illustration from a Wanamaker store guidebook, 1905 · Printed illustration · *Souvenir Guide Book of the Wanamaker Store in New York City* (1905)

Image: [Wikimedia Commons](#), public domain

John Wanamaker's business grew so large that in 1896 he bought a famous department store in New York City, built by the merchant A. T. Stewart, who had also used one fixed price for every customer. Wanamaker later added the tall new building beside it. This drawing comes from a guidebook the store gave to its customers in 1905.

Look closely

- Read the caption. How many acres of floor space did the two buildings have?
- Count the floors of the taller building. How many clerks and customers do you think it held?
- Find the streetcars, carriages and people. How did customers get to the store?
- Look at the flags and the size of the buildings. What did Wanamaker want customers to feel?

Talk about it

1. How could one fixed price help a store this large train thousands of clerks?
2. Why would a store give customers a guidebook like this one?

3. Would you rather shop in a huge store like this or a small shop? Why?

PROJECT

The Honest Ad Workshop

You will study real advertisements and sort honest persuasion from tricks, then make price tags, a guarantee card and an honest ad for the product you tested in Lesson 6.2.

You will need

- Five or more printed advertisements from newspapers, magazines, mailers or store flyers (chosen by a parent)
- Index cards for price tags and a guarantee card
- Paper and markers for an ad
- Ledger notebook

Steps

1. **Ad inspection.** For each ad, record in a table: the product, the price (shown or hidden?), the main claim, any fine print, and whether any word or picture might leave a false impression.
2. Circle words that are vague and cannot be checked (“amazing,” “best ever”) and underline facts that can be checked (size, price, ingredients).
3. Give each ad an honesty score from 1 to 5 and write one sentence explaining it.
4. **Haggling versus one price.** Role-play with a parent: sell the same item to three “customers” by haggling, then by a fixed price tag. Record the prices each paid. Which way was fairer? Which was faster?
5. Make a price tag for your product from Lesson 6.2 with the item, size and price.
6. Write a guarantee card in your own words, such as: “If you are not happy with your bookmark, return it within a week for your money back.”
7. Make an honest ad: a headline, a picture, three true facts about the product, the price, and one honest limit (for example, “Not waterproof”). Have a parent check that every word is true.

Tips

- A good ad answers what it is, why it is good, how much it costs and where to get it.
- You may be cheerful and enthusiastic in an ad. You may not say anything you cannot back up.

Check your work

- ☐ I can explain why Wanamaker's fixed price and guarantee built trust.
- ☐ I can find vague claims, checkable facts and possible tricks in real ads.
- ☐ My ad, price tag and guarantee card are true in every word.

LEDGER NOTEBOOK

1. Copy your ad-inspection table with honesty scores.
2. Draw a Wanamaker price tag from 1880 and a modern shelf tag with a unit price. Label what each tells the customer.
3. Write a short dialogue between a haggling buyer who says "It is naught" and an honest seller with a price tag.

From history. Wanamaker's store in Philadelphia, rebuilt in granite and opened in 1911, held one of the largest pipe organs in the world and a great bronze eagle in its court. "Meet me at the Eagle" became a Philadelphia saying. The building still stands in the center of Philadelphia.

COMMON MISTAKES

- Thinking all advertising is lying. Honest advertising gives customers useful information and helps good businesses grow.
- Thinking a money-back guarantee loses money. It costs something, but it brings more trust and more customers.
- Thinking bargaining is always wrong. Honest bargaining is fine; lying about the goods or the price is not.

Make it a game • Prove the Claim. Choose a household item and write three ad claims about it. Your parent tests each claim, such as strong, lasts forever or works everywhere. A claim that fails the test is deceptive advertising and loses you a point. Then write a one-line price tag and guarantee, as Wanamaker did. Highest honest score wins.

Scripture. “It is naught, it is naught, saith the buyer: but when he is gone his way, then he boasteth.” (Proverbs 20:14, KJV)

Solomon describes a buyer who lies to get a lower price and then brags about his bargain. Dishonesty in trade can come from buyers as well as sellers; God asks both to tell the truth.

6.4 PRICING AND THE PITCH: COST, VALUE AND BREAK-EVEN

OBJECTIVES

- Explain fixed costs, variable costs, price, value and profit per unit.
- Tell how F. W. Woolworth built a business around five- and ten-cent prices by controlling his costs.
- Calculate the break-even point for a small business and give a short, honest sales pitch.

Warm-up. You want to sell lemonade. A pitcher costs \$8 and a sign costs \$4. Each cup of lemonade costs you 15¢ to make. If you charge 50¢ a cup, how many cups must you sell before you have made back the \$12? Try to work it out before the lesson.

WATCH

Break even analysis

[The Finance Storyteller](#) · 3:34

<https://www.youtube.com/watch?v=r8Blz5l-aDc>

WHEN TO WATCH

After the big idea, before you draw your own break-even graph.

BACKUP VIDEO

Price Your Items To Sell! Tip #4 for Youth Entrepreneurs

[Kids Markets](#) · 2:31

<https://www.youtube.com/watch?v=NLMDM8jq7JI>

Before choosing your price.

KEY TERMS

fixed cost

A cost that stays the same no matter how many you sell, such as a pitcher, a sign or rent.

variable cost

A cost for each item you make, such as the lemons, sugar and cup for one cup of lemonade.

profit per unit

The price of one item minus its variable cost.

break-even point

The number of items you must sell so that your total sales equal your total costs: $\text{fixed costs} \div \text{profit per unit}$.

value

How much a product is worth to a customer; a customer buys only when the value to him is greater than the price.

pitch

A short, clear explanation of a product to a possible customer.

CORE IDEAS

The story. In 1878 Frank Winfield Woolworth was a poorly paid clerk in a store in Watertown, New York. The store set up a table of odds and ends, all priced at five cents, and they sold out fast. Woolworth borrowed \$300 from his employer to buy goods and opened his own “Great Five Cent Store” in Utica, New York, in February 1879. It failed within months: the shop was on a poor street and he could not find enough good items to sell for a nickel. That June he tried again in Lancaster, Pennsylvania, and this time it worked. He soon added ten-cent items, and his “five-and-ten” stores spread across America and to Britain.

How they figured it out. When every price is five or ten cents, you cannot raise the price to cover your costs. So Woolworth worked on the costs. He bought in huge quantities straight from factories, at home and abroad, to get low prices; he displayed goods on open counters so customers could pick them up without a clerk fetching them; he paid cash and kept careful books; and he dropped items that did not sell. He found that a low price brought so many customers that a small profit on each item added up to a large profit overall. In 1913 the company finished the Woolworth Building in New York, then the tallest building in the world, and paid for it in cash.

The big idea. To price a product wisely, first know your costs. **Fixed costs** stay the same however many you sell; **variable costs** come with each item. Your **profit per unit** is the price minus the variable cost. Your **break-even point** is the number you must sell to cover your fixed costs: $\text{fixed costs} \div \text{profit per unit}$. For the warm-up lemonade stand: profit per cup = $50¢ - 15¢ = 35¢$; break-even = $\$12.00 \div \$0.35 \approx 34.3$, so you must sell 35 cups before you make any profit. A price must also be lower than

the **value** to the customer, or he will not buy. A good price lies between your cost and the customer's value.

In business today. Every business, from a bakery to an airline, studies its costs, its break-even point and what customers will pay. A **pitch** is how you tell a customer about your product. A good, honest pitch is short: the need (“Tired of losing your place in a book?”), the product (“This bookmark clips on and never falls out”), the price (“\$1.50”) and the promise (“If it breaks in a month, I’ll replace it”). “The thoughts of the diligent tend only to plenteousness” (Proverbs 21:5): careful planning of prices and costs is part of diligence.

PICTURE STUDY



The Woolworth Building, New York, The Pictorial News Company, about 1913 · Photograph · Library of Congress, Prints and Photographs Division
Image: [Wikimedia Commons](#), public domain

When the Woolworth Building opened in 1913, it was the tallest building in the world, 792 feet high. People called it the “Cathedral of Commerce” because of its pointed Gothic decoration. It was paid for in cash, with the profits from millions of nickel and dime sales.

Look closely

- Find the very top of the tower. How many stories tall do you think it is?
- Look at the decorations near the top. Why might people have called it a “cathedral”?
- Compare it with the buildings around it. How much taller is it?

Talk about it

1. How could nickels and dimes add up to a skyscraper? Explain with the idea of a small profit on a very large number of sales.
2. Why might Woolworth have wanted to pay cash instead of borrowing to build it?
3. What does a building like this tell people about a business?

PROJECT

Price It and Pitch It

You will find the real costs of the product you tested in Lessons 6.2 and 6.3, choose a price, calculate your break-even point and practice an honest one-minute pitch.

You will need

- Receipts or prices for the materials of your product (ask a parent)
- A calculator, graph paper and the ledger notebook
- A timer

Steps

1. List every fixed cost (tools, a sign, a table cover) and add them up.
2. List every variable cost for one item. For example, if a pack of 50 sheets of card stock costs \$5.00 and each bookmark uses one sheet, the card stock costs \$0.10 per bookmark. Add up the variable cost per item.
3. Ask five people you know what they would be willing to pay. Write down each answer and find the average. This is an estimate of value.
4. Choose a price between your variable cost and the customers' value. Calculate profit per unit (price – variable cost).
5. Calculate your break-even point (fixed costs ÷ profit per unit). Round up to a whole number.
6. Make a break-even graph: number sold across, dollars up. Draw a flat line for fixed costs, a line for total costs, and a line for total sales. Mark where sales cross total costs.
7. Write a one-minute pitch with the need, the product, the price and your promise. Practice it with a timer and give it to your family. Ask them: was every word true?

Tips

- Do not forget small costs like tape, ribbon or cups. Small costs add up.
- If your break-even point is too high, find ways to lower costs or reconsider the price.

Check your work

- ☐ I can separate fixed and variable costs and calculate profit per unit.
- ☐ I can calculate a break-even point and show it on a graph.
- ☐ I gave an honest, one-minute pitch with a need, product, price and promise.

LEDGER NOTEBOOK

1. Copy your cost table with fixed costs, variable costs per item, price and profit per unit.
2. Copy your break-even graph and label the break-even point.
3. Write your pitch on one page, and underline each fact a customer could check.

From history. F. W. Woolworth's first store in Utica failed, and so did several of his early branch stores. He learned to choose busy streets and to watch every cost. By the time he died in 1919, his company had more than a thousand stores.

COMMON MISTAKES

- Forgetting fixed costs. You have not made a profit until you have earned back the pitcher and the sign.
- Setting a price just by guessing. Start from your costs and the customer's value.
- Dividing the wrong way. Break-even = fixed costs ÷ profit per unit, not the other way around.

Make it a game • Break-Even Duel. Your parent invents three businesses with fixed cost, variable cost per item, and price. For each one you have forty-five seconds to figure the profit per unit and how many items must sell to break even. Then give a thirty-second pitch for the best business, telling the value to customers. Beat your own time.

Scripture. "The thoughts of the diligent tend only to plenteousness; but of every one that is hasty only to want." (Proverbs 21:5, KJV)

A business that counts its costs carefully before setting a price is diligent; one that rushes ahead without counting often ends in loss.

UNIT 6

ENTREPRENEURSHIP AND SALES

Every business begins with a person who sees a need and decides to do something about it, risking time, money and a good name. That person is an **entrepreneur**. In this unit you will follow James Cash Penney as he opens a small store in a Wyoming mining town and names it for the Golden Rule, and the inventors at 3M who turned a “failed” glue and a slipping hymnal bookmark into the sticky note, by testing prototypes and listening to customers.

Then you will learn to sell honestly, as John Wanamaker did when he put a fixed price tag on every item and promised customers their money back, and you will learn how to set a price that covers your costs, find your break-even point and make a short, truthful pitch. By the end of the unit you will have a one-page plan for a small business of your own.

PREREQUISITES

- Knows supply, demand and competition (Unit 3)
- Knows the six stakeholders (Unit 4)
- Can multiply and divide money amounts and work with simple percents

MASTERY CHECKLIST

- ☐ I can explain what an entrepreneur does and name the risks and rewards of starting a business.
- ☐ I can test an idea with a prototype and customer feedback and improve it.
- ☐ I can explain why one fair price, honest advertising and a money-back guarantee build trust, and spot a misleading ad.
- ☐ I can calculate cost per unit, profit per unit and the break-even point, and give a short, honest sales pitch.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Junior Achievement (JA) BizTown and student programs:** Many communities have Junior Achievement programs that let students run a model town or a small business, often through schools and homeschool groups. Check your local JA chapter. Ages 9–14.
- ***Lemonade in Winter*, by Emily Jenkins (Random House):** Ages 5–9, but a quick, funny read for older students too. A brother and sister sell lemonade on a freezing day and learn about costs, pricing and profit. Good for discussing Lesson 6.4 with younger siblings.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

6.1 The Entrepreneur: Seeing a Need and Taking a Risk	2 sessions of 45 minutes
6.2 Testing an Idea: Prototypes and Customer Feedback	2 sessions of 45 minutes
6.3 Honest Selling: Wanamaker's Price Tags and Money-Back Guarantee	2 sessions of 45 minutes
6.4 Pricing and the Pitch: Cost, Value and Break-Even	2 sessions of 45 minutes

UNIT 6 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

- 5 pts**
What is an entrepreneur? Name one risk and one reward of starting a business.
- 5 pts**
What need did J. C. Penney see in Kemmerer, Wyoming, and how did he meet it?
- 5 pts**
How did Penney grow from one store to hundreds?

4. (5 pts)

Why did 3M's first test market for sticky notes fail, and what did the company do next?

5. (5 pts)

Eight testers chose between two cookies: 6 chose A and 2 chose B. What fraction and percent chose A? Why is this better evidence than asking one friend?

6. (5 pts)

Name three things John Wanamaker did to make selling honest and fair.

7. (5 pts)

An ad says, "The most amazing bike ever!" and another says, "Steel frame, 21 speeds, 24-inch wheels, \$189." Which statements can be checked? Which is more useful to a buyer?

8. (5 pts)

A bookmark business has fixed costs of \$6. Each bookmark costs \$0.20 to make and sells for \$1.00. What is the profit per unit and the break-even point?

9. (5 pts)

What would happen to Woolworth's profit if the factory raised the cost of an item he sold for 5¢ from 3¢ to 6¢? What could he do?

10. (5 pts)

Write a four-part honest pitch for a product of your choice.

ANSWER KEY

1. A person who starts a business, risking loss in hope of profit. Risk: losing savings, time or reputation. Reward: profit, serving customers, building something lasting.
2. Miners' families often paid high prices on credit at company stores. Penney sold honest goods for cash at one low, fair price.
3. He trained his best clerks to manage new stores and let each manager buy a share of his store, so managers worked like owners.
4. Shoppers did not understand the product from the package and few bought it. 3M gave free samples in Boise so people could try them, and many then said they would buy.
5. $6/8 = 3/4 = 75\%$. Many people asked the same question give a fairer picture than one person's opinion.
6. Fixed price tags (one price for everyone), a money-back guarantee, and plain, truthful advertising.
7. The second ad's facts (frame, speeds, wheel size, price) can be checked; "most amazing ever" cannot. The second is more useful.
8. Profit per unit = $\$1.00 - \$0.20 = \$0.80$. Break-even = $\$6 \div \$0.80 = 7.5$, so 8 bookmarks.
9. He would lose 1¢ on every sale instead of earning 2¢. He could find a cheaper supplier, buy in larger amounts, drop the item, or move it to the 10¢ counter.
10. Answers vary. It should include a need, the product, the price and a promise or guarantee, all true.

PORTFOLIO PIECE: MY ONE-PAGE BUSINESS PLAN

Write a one-page plan for a small business you could really run with a parent's help. Include: the need and your customers; your product or service and what you learned from testing it; your fixed costs, variable cost per item, price and profit per unit; your break-even point and how you will reach it; how you will sell honestly (price tag, guarantee, honest ad); and the risks and how you will reduce them. Attach your survey tally, your break-even graph and your honest ad. You may use this plan for the bonus Unit 9.

LOOK FOR	WHAT IT MEANS
The need	A real need and real customers, found by listening and testing.
The numbers	Fixed costs, variable costs, price, profit per unit and break-even are correct and clearly shown.
Honest selling	A truthful ad, a price tag and a guarantee that a parent has checked.
Risks	At least three honest risks with sensible ways to reduce them, including safety.
Presentation	Fits on one page, neat and well organized, with the attachments.

BOOKKEEPING AND ACCOUNTING

A business that does not keep honest records is like a ship without a map. In this unit you will learn the system that merchants have used for more than five hundred years: **double-entry bookkeeping**, first explained in print by the Franciscan friar and mathematician Luca Pacioli in Venice in 1494. You will learn to record every transaction twice, so that the books check themselves.

Then you will learn to read the two most important reports in business. The **income statement** shows whether a business made a profit over a period of time, and Josiah Wedgwood used his to find out which of his wares were losing money. The **balance sheet** shows what a business owns and owes at one moment, as Jakob Fugger's accountant showed in his counting room. Last, you will meet the Dutch cloth inspectors in Rembrandt's famous painting and the old English tally sticks, and learn why honest books and audits matter: "Be thou diligent to know the state of thy flocks" (Proverbs 27:23).

PREREQUISITES

- Can add and subtract money amounts in columns
- Knows revenue, cost and profit from Unit 6
- Has kept simple ledger pages in earlier units

MASTERY CHECKLIST

- ☐ I can tell how Luca Pacioli's *Su* of 1494 spread double-entry *m* bookkeeping, and record *m* transactions in a two-sided journal. *a*
- ☐ I can prepare a simple income statement: revenue – expenses = profit.
- ☐ I can prepare a simple balance sheet and show that assets = liabilities + owner's equity.
- ☐ I can explain why audits and honest books matter, and check a ledger against receipts.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Free spreadsheet: Google Sheets or LibreOffice Calc:** LibreOffice is free to download (Google Sheets is free online with a parent's account). A spreadsheet adds up columns for you. Try copying your Lesson 7.2 income statement into one after you have done it by hand. Ages 10 and up with a parent.
- **Next Gen Personal Finance (NGPF) arcade and activities:** Free. A nonprofit with short money activities and games for students. Teachers and parents can browse the free activities; choose ones on budgeting and records. Ages 11 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

7.1 Pacioli and Double-Entry Bookkeeping	2 sessions of 45 minutes
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7.2 The Income Statement: Revenue, Expenses and Profit	2 sessions of 45 minutes
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7.3 The Balance Sheet: Assets, Liabilities and Owner's Equity
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2 sessions of 45 minutes

7.4 Honest Books: The Drapers' Guild Syndics, Audits and Tally Sticks
--

2 sessions of 45 minutes

UNIT 7 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

Who was Luca Pacioli, and what did his book of 1494 do for bookkeeping?

2. **5 pts**

You buy \$12 of supplies with cash. Which account receives (is debited) and which gives (is credited)?

3. **5 pts**

Why does double-entry bookkeeping help catch mistakes?

4. (5 pts)

A lemonade stand had revenue of \$64 and expenses of \$22. What was its profit, and what was its profit margin?

5. (5 pts)

What did Josiah Wedgwood discover when he studied his costs in 1772?

6. (5 pts)

A business has \$50 in cash, \$30 of supplies and a \$20 table, and it owes \$40 on a loan. What are its total assets and its owner's equity? Show that the balance sheet balances.

7. (5 pts)

What is the difference between an income statement and a balance sheet?

8. (5 pts)

What was the Fuggerei, and what does it tell us about Jakob Fugger?

9. (5 pts)

What is an audit, and where does the word "auditor" come from?

10. (5 pts)

What would happen in a shop where one person took in all the cash, recorded it and never had anyone check the books? Name two internal controls that would help.

ANSWER KEY

1. A Franciscan friar and mathematician whose *Summa de arithmetica*, printed in Venice in 1494, clearly explained the Venetian method of double-entry bookkeeping, so it spread across Europe.
2. Supplies receives (debit) \$12; Cash gives (credit) \$12.
3. Every transaction is written twice, on opposite sides, so the totals of the two sides must be equal. If they are not, there is a mistake to find.
4. Profit = $\$64 - \$22 = \$42$. Margin = $\$42 \div \$64 \times 100 \approx 66\%$.
5. Some costs stayed the same whether he made few or many pieces; some vases had been sold for less than they cost; making larger batches lowered the cost per piece; and a clerk had been stealing. He changed prices, made longer runs and kept better accounts.
6. Assets = $\$50 + \$30 + \$20 = \$100$. Equity = $\$100 - \$40 = \$60$. $\$100 = \$40 + \$60$.
7. An income statement shows revenue, expenses and profit over a period of time; a balance sheet shows assets, liabilities and owner's equity at one moment.
8. A walled neighborhood of homes in Augsburg, begun in 1516, for poor working families, at a rent of one guilder a year. It shows that he used part of his fortune to help his community, and it still houses families today.
9. An independent check of a business's books against receipts and other evidence. From the Latin *audire*, to hear, because accounts were read aloud to be checked.
10. Mistakes and theft could go unnoticed for a long time, and the owner would not know the truth about the business. Controls: two people count the cash, receipts for every payment, separate the person who handles cash from the person who records it, regular audits.

PORTFOLIO PIECE: A MONTH OF BOOKS

Keep the books for one month for a real activity: your allowance and spending, a small business, a family yard sale, or the bonus business in Unit 9. Keep a journal of every transaction with receipts in an envelope. At the end of the month, prepare an income statement for the month and a balance sheet for the last day, and have a parent audit your books against the receipts. Write a half-page report: what the numbers show, what surprised you, and one change you will make next month.

LOOK FOR	WHAT IT MEANS
Journal	Every transaction dated and recorded neatly, with a receipt or note for each.
Income statement	Revenue, expenses and profit or loss for the month, correctly added.
Balance sheet	Assets, liabilities and owner's equity on the last day, and the sheet balances.
Audit	A parent's audit is attached, and any errors found were corrected honestly.
Report	A thoughtful half-page explaining what the numbers mean and what will change.

7.1 PACIOLI AND DOUBLE-ENTRY BOOKKEEPING

OBJECTIVES

- Tell how Luca Pacioli's *Summa de arithmetica* (Venice, 1494) taught merchants the Venetian method of bookkeeping.
- Explain the rule of double entry: every transaction is recorded twice, in two accounts, so the two sides always balance.
- Record a week of transactions in a journal and post them to accounts that balance.

Warm-up. Empty your pockets or a coin purse and count the money. Then try to remember every time money came in or went out this past week. Can you explain exactly how you ended up with this amount? If not, what do you wish you had written down?

WATCH

The Birth of Modern Business | Luca-Pacioli's 'Summa de Arithmetica' | Christie's

Christie's • 2:12

<https://www.youtube.com/watch?v=qGEOHCXLJrI>

WHEN TO WATCH

After the story of Pacioli, before the week of double entry.

BACKUP VIDEO

DOUBLE-ENTRY ACCOUNTING: Explained in (Almost) 2 Minutes!

Accounting Stuff • 3:30

<https://www.youtube.com/watch?v=cjO8qHM5Wjg>

Before posting your journal entries to the ledger.

KEY TERMS

bookkeeping

Recording every money transaction of a business, in order, in its books.

transaction

Any event that changes a business's money or property, such as a sale, a purchase or a loan.

journal

A daybook in which every transaction is written down in order by date.

ledger

A book with a separate page, or account, for each kind of thing a business tracks (cash, supplies, sales).

double entry

The method of recording each transaction in two accounts, once as a debit and once as a credit, so that the totals always balance.

debit / credit

The two sides of every entry. For a young bookkeeper: one account receives (debit) and another gives (credit).

CORE IDEAS

The story. Luca Pacioli was born about 1447 in the small Italian town of Sansepolcro. As a young man he worked as a tutor for the sons of a rich Venetian merchant, and he watched how merchants kept their books. He became a Franciscan friar and a famous teacher of mathematics, and he was a friend of Leonardo da Vinci, who drew the illustrations for one of his later books. In 1494, in Venice, he published a huge book called *Summa de arithmetica, geometria, proportioni et proportionalita*, a summary of all the mathematics of his day. One short part of it explained, step by step, how Venetian merchants kept their accounts. Because the new printing presses made hundreds of copies, Pacioli's explanation spread across Europe and was translated and copied for centuries.

How they figured it out. Pacioli did not invent double-entry bookkeeping. Italian merchants in Genoa, Florence and Venice had used it since the 1300s, including the Medici bankers you met in Unit 4. Pacioli's gift was to explain it clearly so anyone could learn it. He said a merchant needed three things: cash or credit, a good bookkeeper, and a good system. He described three books: a **memorandum** for rough notes, a **journal** where each transaction was written neatly in order, and a **ledger** with a page for each account. Each journal entry was posted to two ledger accounts, one on the left side (debit) and one on the right (credit). At the end, the totals of all the left sides had to equal the totals of all the right sides. If they did not, there was a mistake to be found.

The big idea. Every **transaction** has two sides: something is received and something is given. When you buy lemons for \$5 in cash, your supplies go up by \$5 and your cash goes down by \$5. In **double entry**, you record both: Supplies receives \$5 (a

debit), and Cash gives \$5 (a credit). Because every entry is written twice, once on each side, the two sides of the books must always come out equal. That is a built-in check: if they do not balance, you know you have made a mistake. It also shows where every dollar came from and where it went.

In business today. Every business, church and charity in the world still uses double-entry bookkeeping, though most use computer programs that post both sides automatically. Bookkeepers and accountants are among the most trusted people in any business. The habit you are building, writing down every transaction neatly and checking that it balances, is exactly what Pacioli taught. “Let all things be done decently and in order” (1 Corinthians 14:40).

PICTURE STUDY



Portrait of Luca Pacioli, Attributed to Jacopo de' Barbari, about 1495 · Oil on panel · Museo di Capodimonte, Naples

Image: [Wikimedia Commons](#), public domain

This portrait was painted about a year after Pacioli's *Summa* was printed. It shows him teaching geometry from the ancient Greek mathematician Euclid. The large book on the table may be his own *Summa*. The young man behind him has never been identified for certain.

Look closely

- Find Pacioli. What is he doing with his hands?
- Find the large book and the slate. What is written or drawn on them?
- Look at the glass shape hanging in the air. How many faces can you count? What do you see reflected in it?
- Find the instruments on the table: a compass, a pen, a wooden shape. What would a mathematician use each for?

Talk about it

1. Why would a mathematician care about merchants' books?
2. Pacioli is painted as a teacher. Why does it matter that he explained bookkeeping clearly enough for others to learn?

3. What does the careful, orderly painting tell you about how Pacioli saw his work?

PROJECT

A Week of Double Entry

You will keep a merchant's books for a small pretend (or real) business for one week: a journal of transactions and ledger accounts that must balance.

You will need

- Ledger notebook ruled into columns
- A pencil, an eraser and a calculator
- Optional: real receipts from a family purchase

Steps

1. Set up four ledger accounts, each on its own half-page with a line down the middle: **Cash, Supplies, Sales, Owner**. Label the left side "Receives (debit)" and the right side "Gives (credit)."
2. Rule a journal page with columns: Date, What happened, Receives (debit), Gives (credit), Amount.
3. Record these transactions in the journal: Day 1, you put \$20 of your own money into the business (Cash receives, Owner gives, \$20). Day 2, you buy supplies for \$8 in cash (Supplies receives, Cash gives). Day 3, you sell bookmarks for \$6 cash (Cash receives, Sales gives). Day 4, you buy more supplies for \$3 cash. Day 5, you sell \$9 more.
4. Post each journal entry to the two ledger accounts it names: once on the left side of one account and once on the right side of the other.
5. Add up all the left sides of all four accounts. Add up all the right sides. They must be equal. If they are not, find the mistake.
6. Find the balance of Cash (left total – right total). Count: does it match the money you would really have?
7. Write two sentences: What would happen if you wrote each transaction only once? How does double entry help you catch mistakes?

Tips

- Always ask two questions for every transaction: "What did the business receive?" and "What did it give?"

- Write neatly and never erase a mistake in a real ledger; draw one line through it and write the correction, so the record stays honest.

Check your work

- ☐ I can explain why each transaction is recorded twice.
- ☐ My journal and ledger accounts are complete, and the left and right totals are equal.
- ☐ My Cash balance matches the money I would really have.

LEDGER NOTEBOOK

1. Copy your four ledger accounts and the final check that the totals balance.
2. Draw Pacioli's three books (memorandum, journal, ledger) and write what goes in each.
3. Make a timeline: 1300s Italian merchants use double entry; 1397 Medici Bank; 1494 Pacioli's *Summa*; today, computer bookkeeping.

From history. Pacioli wrote that a merchant should begin his books “in the name of God,” with the date and a cross at the top of the page, as many Italian merchants did. Some of their ledgers still survive in Italian archives, with the words “In the name of God and of profit” at the top.

COMMON MISTAKES

- Thinking Pacioli invented double entry. He explained a system merchants already used, and printing made his explanation famous.
- Recording only one side of a transaction. Every transaction has two sides: something received and something given.
- Thinking “credit” always means good and “debit” always means bad. They are simply the two sides of an entry.

Make it a game • Two Sides Balance. Draw two columns, debit and credit. Your parent calls six small transactions, such as buy supplies with cash. You record each one twice, in two accounts, then check that both sides total the same. Race a two-minute clock. A mismatch means search for the lost entry. Pacioli's 1494 rule is the umpire.

7.2 THE INCOME STATEMENT: REVENUE, EXPENSES AND PROFIT

OBJECTIVES

- Define revenue, expenses and profit, and prepare a simple income statement.
- Tell how Josiah Wedgwood studied his costs in 1772 and discovered which wares were losing money.
- Calculate a profit margin as a percent and use it to compare two products.

Warm-up. A bake sale took in \$85 selling cookies. The flour, sugar, butter and chocolate chips cost \$32, and the paper bags cost \$4. How much profit did it make? What fraction of the money taken in was profit?

WATCH

The INCOME STATEMENT for BEGINNERS

Accounting Stuff • 5:09

<https://www.youtube.com/watch?v=0--AvwZabIQ>

WHEN TO WATCH

After the big idea, before preparing your income statement.

Note: Written for older students and beginners in accounting; watch together and pause after each part of the statement.

KEY TERMS

revenue

All the money a business takes in from sales during a period of time; also called sales.

profit (net income)

Revenue minus expenses. If expenses are greater than revenue, the result is a loss.

expenses

All the costs of running the business during that period: materials, wages, rent, supplies.

income statement

A report that shows a business's revenue, expenses and profit or loss over a period such as a month or a year; also called a profit and loss statement.

profit margin

Profit as a percent of revenue: $\text{profit} \div \text{revenue} \times 100$.

CORE IDEAS

The story. In 1772 a slump hit England's trade. Josiah Wedgwood's beautiful vases, which had sold so well, piled up in his warehouses, and orders fell. Wedgwood wrote worried letters to his partner Thomas Bentley. He had always known his pottery was fine; now he needed to know whether it was *profitable*, and which pieces were making money and which were losing it.

How they figured it out. Wedgwood sat down with his books and worked out, piece by piece, what each kind of ware really cost to make: the clay, the wages of every worker who touched it, the fuel for the kilns, the molds, and the share of rent, clerks and selling that each piece should bear. He discovered that some of his costs, like rent, clerks' wages and models, went on whether he made few vases or many, while others rose with every piece. He found that some of his expensive vases had been sold for less than they cost, and that making larger batches of each design lowered the cost of each piece. While checking his records he also found that one of his clerks had been stealing from him and that his bookkeeping had failed to catch it. Wedgwood changed his prices, made longer runs of his best sellers, and kept much more careful accounts afterward.

The big idea. An **income statement** answers the question "Did we make money?" for a period of time. It lists **revenue** (all the money from sales), then subtracts **expenses** (all the costs), to find **profit**: $\text{revenue} - \text{expenses} = \text{profit}$. If the answer is negative, it is a loss. The **profit margin** tells how much of each dollar of sales is profit. In the warm-up, $\text{profit} = \$85 - \$36 = \$49$, and the margin is $\$49 \div \$85 \times 100 \approx 58\%$. Two products can both sell well, but one may have a much smaller margin, which is exactly what Wedgwood discovered.

In business today. Every business prepares income statements, usually every month and every year. Owners use them to decide what to sell more of and what to stop selling, and banks read them before lending. Many families make a simple one for a garage sale or a fundraiser. "In all labour there is profit" (Proverbs 14:23), but you only know how much when you count.

PICTURE STUDY



The Moneychanger and His Wife, Marinus van Reymerswaele, 1539 · Oil on panel · Museo del Prado, Madrid

Image: [Wikimedia Commons](#), public domain

Marinus van Reymerswaele painted several versions of this scene, following the earlier painting by Quentin Matsys you saw in Lesson 2.3. The Prado Museum calls this one “The Tax Collector and His Wife, known as The Moneychanger and His Wife.” Here the husband counts the coins while the wife keeps the account book. Reymerswaele sometimes painted moneychangers to warn against greed, so look closely at their faces as well as their work.

Look closely

- Find the account book. Who is turning its pages, and what might be written in it?
- Find the coins and the small box of weights. What job is being done before the amount is written down?
- Look at the papers and objects on the shelf behind them. What might they be?
- Compare this painting with the Matsys painting from Lesson 2.3. What is the same? What is different?

Talk about it

1. Why would a moneychanger write every transaction in a book?

2. The wife is paying close attention to the book. Why is it wise for more than one person to watch the accounts?
3. If this moneychanger made an income statement for one week, what would his revenue and expenses be?

PROJECT

An Income Statement for a Real Event

You will prepare an income statement for a real or planned family event, such as a bake sale, a yard sale, a lemonade stand or the products you priced in Unit 6, and compare the profit margins of two products, as Wedgwood did.

You will need

- Receipts, prices and sales records from a real event (or the sample numbers below)
- Ledger notebook, calculator and ruler
- Optional: a free spreadsheet

Steps

1. If you have no real event yet, use this sample: Cookies sold: 60 at \$0.75. Brownies sold: 30 at \$1.50. Ingredients for cookies: \$14.00. Ingredients for brownies: \$21.00. Paper bags: \$3.00. Sign and tablecloth: \$5.00.
2. Write the heading: “Income Statement for ___ (the event), (date).”
3. List the revenue lines and add them: Cookie sales, Brownie sales, Total revenue.
4. List the expense lines and add them: Ingredients, Bags, Sign and tablecloth, Total expenses.
5. Subtract to find the profit: Total revenue – Total expenses.
6. Calculate the profit margin: $\text{Profit} \div \text{Total revenue} \times 100$. Round to the nearest whole percent.
7. **Wedgwood’s question.** Work out the profit for each product separately (sales minus its own ingredients). Which product earned more profit per dollar of sales? Which would you make more of next time?
8. Write two sentences explaining what the income statement told you that you would not have known by just counting the cash box.

Tips

- Line up the decimal points in your columns so the dollars and cents add correctly.

- Shared costs (like the sign) belong to the whole event; do not forget them when you find the total profit.

Check your work

- ☐ I can prepare an income statement with revenue, expenses and profit.
- ☐ I can calculate a profit margin as a percent.
- ☐ I can use profit per product to decide what to make more of.

LEDGER NOTEBOOK

1. Copy your finished income statement neatly with a title and date.
2. Draw a bar graph comparing the revenue and the profit of each product.
3. Write a short letter from Josiah Wedgwood to Thomas Bentley in 1772 explaining what he discovered in his books.

From history. Historians who have studied Wedgwood's letters say he was one of the first manufacturers to study the cost of each product carefully. He wrote to Bentley that some of his expenses "move like clockwork" whether the factory made much or little. Today we call these overhead or fixed costs.

COMMON MISTAKES

- Thinking revenue is the same as profit. Revenue is all the money taken in; profit is what is left after expenses.
- Forgetting small or shared expenses, like bags, signs or rent.
- Thinking a product that sells a lot must be profitable. A best seller with a tiny margin may earn less than a slower seller with a big margin.

Make it a game • Which Ware Loses?. Your parent lists four pretend products with price, number sold and cost to make. You have three minutes to build an income statement and find which one loses money, as Wedgwood found in 1772. Total the revenue, expenses and profit for each. Calculate the profit margin of your best item.

Scripture. "In all labour there is profit: but the talk of the lips tendeth only to penury." (Proverbs 14:23, KJV)

Honest work bears fruit, while mere talk leads to poverty. An income statement replaces talk with facts: it shows exactly what the labor of a business has earned.

7.3 THE BALANCE SHEET: ASSETS, LIABILITIES AND OWNER'S EQUITY

OBJECTIVES

- Define assets, liabilities and owner's equity, and explain the balance-sheet equation.
- Tell how Jakob Fugger of Augsburg built a great trading and banking house with careful accounts, and founded the Fuggerei.
- Prepare a balance sheet for a small business and show that it balances.

Warm-up. Make a quick list of everything you own that has some value: money, a bicycle, books, games. Now list anything you owe to someone (money borrowed from a sibling, a library fine). Which list is longer?

WATCH

The BALANCE SHEET for BEGINNERS (Full Example).

Accounting Stuff • 6:58

<https://www.youtube.com/watch?v=CMv1zlZhb4Q>

WHEN TO WATCH

After the big idea, before the two balance sheets.

Note: Written for older students; stop after the basic balance sheet if the detailed one is too much.

KEY TERMS

asset

Anything of value that a business owns: cash, supplies, equipment, buildings, and money others owe it.

liability

Anything a business owes to others, such as a loan or an unpaid bill.

owner's equity

The part of the business that truly belongs to the owners: assets minus liabilities.

balance sheet

A report that lists a business's assets, liabilities and owner's equity at one moment in time.

net worth

For a person or family, assets minus liabilities: the same idea as owner's equity.

CORE IDEAS

The story. Jakob Fugger was born in 1459 in Augsburg, in southern Germany, into a family of weavers who had become cloth merchants. As a young man he was sent to Venice to learn trade at the great German merchants' house there, and he learned the Italian method of double-entry bookkeeping. Back home, he made the Fugger company one of the richest businesses in Europe: it traded cloth and spices, ran silver and copper mines in the Alps and Hungary, and lent money to emperors and popes. In 1516 he began building the Fuggerei in Augsburg, a walled neighborhood of small homes for poor working families who had fallen on hard times. The rent was one Rhenish guilder a year, and the residents were asked to say daily prayers for the founder and his family.

How they figured it out. With branches in many cities and goods, mines and loans everywhere, how could Fugger know what his company was really worth? His chief accountant, Matthäus Schwarz, kept the books in the Italian way and gathered reports from every branch. From time to time the company drew up a great list: everything it owned, including cash, goods, mines, buildings and the money others owed it, and everything it owed to others. The difference showed what the company was truly worth to its owners. A famous little painting from 1517 shows Jakob Fugger in his counting room with Schwarz, beside a cabinet with drawers labeled for the branch cities: Rome, Venice, Lisbon, Antwerp, Nuremberg, Innsbruck, Kraków, Buda and Milan.

The big idea. A **balance sheet** is a snapshot of a business at one moment. It has three parts. **Assets** are everything the business owns. **Liabilities** are everything it owes. **Owner's equity** is what is left over for the owners. The rule is always: *assets = liabilities + owner's equity*. For example, a lemonade stand has \$20 in cash, \$5 of supplies and an \$8 pitcher: \$33 in assets. The owner borrowed \$10 from Mom, a liability. So owner's equity is $\$33 - \$10 = \$23$, and $\$33 = \$10 + \$23$. The income statement shows how a business did over time; the balance sheet shows where it stands now.

In business today. Banks read a company's balance sheet before lending to it; owners use it to see whether the business is growing stronger or sinking into debt. Families can make one too: their assets minus their debts is their **net worth**. But a balance sheet counts only things with a price. Jesus warned, "a man's life consisteth not in the abundance of the things which he possesseth" (Luke 12:15). The Fuggerei, still standing and still housing families after five hundred years, at a rent of less than one euro a year, may be the Fugger fortune's most lasting asset.

PICTURE STUDY



*Jakob Fugger in His Counting Room with His Accountant Matthäus Schwarz, Probably Narziss Renner, for Matthäus Schwarz's *Book of Clothes*, 1517 · Watercolor on parchment · Herzog Anton Ulrich Museum, Braunschweig*

Image: [Wikimedia Commons](#), public domain

Matthäus Schwarz was Jakob Fugger's chief accountant for many years. He kept a book of paintings showing the clothes he wore at different times in his life, and this page shows him at work with his master in the counting room in Augsburg.

Look closely

- Find Jakob Fugger and Matthäus Schwarz. Who is writing, and who is giving instructions?
- Read the labels on the cabinet drawers. How many city names can you find?
- Find the open ledger. What do you think is being recorded in it?
- Look at the clothes of each man. How do they show who is the master and who is the accountant?

Talk about it

1. Why would a company with branches in so many cities need very careful books?
2. Which of the things in this room would be listed as assets on the Fugger balance sheet?

3. Why might an accountant be one of the most trusted people in a business?

PROJECT

Two Balance Sheets

You will make a balance sheet for a small business at the start and end of a busy day, and a simple personal balance sheet of your own, and show that each one balances.

You will need

- Ledger notebook, ruler and calculator
- Your income statement from Lesson 7.2 (or the sample below)

Steps

1. **Morning balance sheet.** A bake-sale table starts the day with: Cash \$10 (for making change), Baked goods worth \$35 at cost, Tablecloth and sign \$5. The owner borrowed \$15 from a parent for ingredients. Rule a page with two columns: Assets on the left; Liabilities and Owner's Equity on the right.
2. List and add the assets. List the liability. Calculate owner's equity (assets – liabilities). Check that both sides are equal.
3. **Evening balance sheet.** During the day, all the baked goods sold for \$80 cash. At the end of the day, the owner repaid the \$15 loan. Make a new balance sheet: what are the assets now? The liabilities? The owner's equity?
4. Compare the morning and evening owner's equity. How much did it grow? Compare that with the profit on an income statement for the day.
5. **My balance sheet.** With a parent's help, list your own assets (cash, savings, and a fair used price for a few things you own) and any liabilities. Calculate your net worth.
6. Write two sentences: What is the difference between an income statement and a balance sheet? What things of great value can never appear on a balance sheet?

Tips

- A fair value for something you own is what someone would really pay for it used, not what it cost new.

- If your balance sheet does not balance, check your addition first, then check whether you left out a liability.

Check your work

- ☐ I can explain assets, liabilities and owner's equity.
- ☐ My balance sheets balance: assets = liabilities + owner's equity.
- ☐ I can explain how profit makes owner's equity grow.

LEDGER NOTEBOOK

1. Copy your morning and evening balance sheets side by side.
2. Draw a balance scale with assets on one pan and liabilities plus owner's equity on the other, perfectly level.
3. Draw the Fuggerei's gate and write a sentence about what the rent of one guilder a year teaches about generosity.

From history. The Fuggerei in Augsburg is the oldest social housing complex still in use in the world. Its rent is still the equivalent of one Rhenish guilder, now 88 euro cents a year, and residents are still asked to pray daily for the Fugger family. It survived damage in the Second World War and was rebuilt.

COMMON MISTAKES

- Mixing up the income statement and the balance sheet. The income statement covers a period of time; the balance sheet is a snapshot of one moment.
- Forgetting liabilities. Money you borrowed is not all yours, even while it is in your cash box.
- Valuing used things at their price when new.

Make it a game • Keep the Scale Level. Put paper slips of assets on the left of a mat and liabilities plus owner's equity on the right. Your parent calls a change, such as buy a table with cash or borrow five dollars, and you move slips so both sides still balance. Ten right moves wins. Then tell how Jakob Fugger used careful accounts.

Scripture. "Take heed, and beware of covetousness: for a man's life consisteth not in the abundance of the things which he possesseth." (Luke 12:15, KJV)

A balance sheet can show what a business owns, but not what a life is worth. Jesus warns us not to measure ourselves by our possessions.

7.4 HONEST BOOKS: THE DRAPERS' GUILD SYNDICS, AUDITS AND TALLY STICKS

OBJECTIVES

- Explain what an audit is and why businesses, churches and governments have their books checked by someone else.
- Describe the work of the syndics of the Amsterdam Drapers' Guild and the English Exchequer's tally sticks.
- Audit a ledger against receipts, find errors, and practice two-person cash counts.

Warm-up. Ask a parent to count a small pile of coins and write the total on a slip of paper without showing you. Then count it yourself and write your total. Compare. Did you agree? If not, how would you find out who was right?

WATCH

What does an auditor do?

The Audit Office, New Zealand • 3:01

<https://www.youtube.com/watch?v=nJalOuj-r2w>

WHEN TO WATCH

After the story, before the family audit.

BACKUP VIDEO

What is an Audit?

IFAC • 3:58

<https://www.youtube.com/watch?v=OSbS9rxcfmY>

Optional, after the family audit.

KEY TERMS

audit

A careful check of a business's books and records by someone independent, to make sure they are complete and true.

auditor

The person who does an audit. The word comes from the Latin *audire*, "to hear," because accounts were once read aloud to be checked.

receipt

A written record of a sale or payment, used as proof that a transaction really happened.

internal control

A habit or rule that prevents mistakes and theft, such as having two people count cash.

tally stick

A stick notched to record a payment and split in half lengthwise, so that each party kept a matching half.

syndic

An official chosen to inspect and manage the affairs of a guild or group.

CORE IDEAS

The story. In 1662 the Dutch painter Rembrandt van Rijn was asked to paint the five **syndics**, or sample officials, of the Drapers' Guild of Amsterdam and their servant. Each year the guild chose a few respected members to inspect the cloth woven and dyed in the city. They compared each piece with official samples and marked cloth of good quality with lead seals, so buyers everywhere could trust Amsterdam cloth. In Rembrandt's painting they sit around a table with a large book, looking up as if someone has just come into the room. Centuries earlier, in England, the king's treasury, called the Exchequer, kept its accounts with **tally sticks**: a payment was recorded by cutting notches in a hazel stick, and then the stick was split lengthwise, so the payer and the treasury each kept a half. The two halves had to fit exactly, so neither side could cheat.

How they figured it out. People have long known that even honest people make mistakes, and that money tempts some to steal. So wise businesses and governments learned to have their accounts checked by someone else. In medieval England, officials read their accounts aloud to the king's examiners, who "heard" them; that is where our word **auditor** comes from. The Exchequer got its name from the checkered cloth on which officials counted with counters, like a giant abacus. Today an **audit** is done by an independent accountant who checks samples of the records against **receipts** and bank statements, counts the cash and the goods, and reports whether the books are true. Businesses also use **internal controls**: two people count the cash, one person writes checks and a different person records them, and every payment needs a receipt.

The big idea. Honest books protect everyone: the owners, who need to know the truth about their business; the workers, whose jobs depend on it; the lenders and

investors, who trust the numbers; and the customers and community. Auditing is not an insult to an honest bookkeeper; it protects him from suspicion. The apostle Paul, when he carried a large gift of money from the churches to Jerusalem, made sure other trusted men traveled with him, so that everything was done honestly “not only in the sight of the Lord, but also in the sight of men” (2 Corinthians 8:21). And Solomon advised, “Be thou diligent to know the state of thy flocks, and look well to thy herds” (Proverbs 27:23): know your accounts yourself.

In business today. Large companies whose shares are sold to the public must publish audited reports each year. Churches and charities often have a committee review their books. Small businesses reconcile their bank statements each month. When books are not honest, as in some famous company frauds, investors and workers can lose everything. The simple habits you are learning, a receipt for everything, two people counting the cash, and books that balance, are what keep a business trustworthy.

PICTURE STUDY



The Syndics of the Drapers' Guild, Rembrandt van Rijn, 1662 · Oil on canvas · Rijksmuseum, Amsterdam

Image: [Wikimedia Commons](#), public domain

The Drapers' Guild of Amsterdam chose sample officials each year to check the quality of dyed cloth. Rembrandt painted the officials of 1662 for the guild's hall, where it hung for many years. Look closely: they seem to have been interrupted in the middle of their work.

Look closely

- Count the people. Which one is the servant? How can you tell?
- Find the large book on the table. What might be written in it?
- Look at their faces and eyes. Where are they looking? What might have interrupted them?
- Look at the carpet on the table. Why might cloth inspectors choose such a fine carpet?

Talk about it

1. Why would buyers trust cloth that these men had inspected and sealed?
2. How is the work of these inspectors like the work of an auditor today?
3. Would you like to be checked by inspectors like these if you sold cloth? Why might an honest weaver be glad of them?

PROJECT

The Family Audit and the Tally Sticks

A parent will prepare a ledger page with a few hidden mistakes, and you will audit it against the receipts. Then you will practice two-person cash counts and make a set of tally sticks to record a loan.

You will need

- A parent-prepared ledger page of ten transactions with matching receipts (real or written on slips), with two or three planted errors
- A coin jar or cash box
- Craft sticks (wide ones), a marker or a nail file for notches
- Ledger notebook

Steps

1. **The audit.** Check every line of the ledger against its receipt: date, amount and description. Put a ✓ by each correct line and circle any line that does not match.
2. Re-add the columns yourself. Does the total in the ledger match your total?
3. Write an auditor's report: how many lines you checked, the errors you found, and the correct totals.
4. **Two-person count.** With a parent, each count the cash box separately and write your totals without showing each other. Compare. If they differ, count together until you agree. Record the count with both signatures.
5. **Tally sticks.** Record a pretend loan of \$15 from a parent to you. Hold two craft sticks side by side and draw one notch across both for each dollar. Each of you keeps one stick. When the loan is repaid, put the sticks together: do they match?
6. Write a paragraph: Which internal control would you use for your own business, and why?

Tips

- Auditors check carefully but kindly. Finding an error is the goal, not finding someone to blame.

- Keep every receipt for your bonus business in Unit 9 in one envelope, labeled by month.

Check your work

- ☐ I can explain what an audit is and why honest books matter.
- ☐ I found the planted errors and wrote an auditor's report with correct totals.
- ☐ I can explain how tally sticks and two-person counts prevent cheating.

LEDGER NOTEBOOK

1. Copy your auditor's report with the errors circled and corrected.
2. Draw a split tally stick with notches and label the "stock" and the "foil."
3. Sketch the five syndics around their table and label the book, the carpet and the servant.

From history. The English Exchequer used tally sticks for more than six hundred years, until 1826. In 1834 workmen were told to burn the old sticks in a furnace under the Houses of Parliament. The fire spread, and most of the old Palace of Westminster burned down. The half of a tally kept by the lender was called the "stock," which is one source of our word for a share in a company.

COMMON MISTAKES

- Thinking an audit means someone is accused of stealing. Audits are routine checks that protect honest people.
- Thinking one careful person does not need anyone to check his work. Everyone makes mistakes; a second pair of eyes catches them.
- Throwing away receipts. Without receipts, no one can prove what really happened.

Make it a game • Find the Error. Your parent writes a small ledger with receipts and hides one error. You are the auditor. Find the mismatch, name what was wrong, and say why someone other than the keeper checks. Then make a tally stick: notch a paper strip, tear it in two, and show that the matching halves prove a debt.

Scripture. “Be thou diligent to know the state of thy flocks, and look well to thy herds.” (Proverbs 27:23, KJV)

A shepherd who never counted his sheep would not know when one was lost. A wise owner looks at his books often and carefully, and welcomes others who help him see the truth.

BOOKKEEPING AND ACCOUNTING

A business that does not keep honest records is like a ship without a map. In this unit you will learn the system that merchants have used for more than five hundred years: **double-entry bookkeeping**, first explained in print by the Franciscan friar and mathematician Luca Pacioli in Venice in 1494. You will learn to record every transaction twice, so that the books check themselves.

Then you will learn to read the two most important reports in business. The **income statement** shows whether a business made a profit over a period of time, and Josiah Wedgwood used his to find out which of his wares were losing money. The **balance sheet** shows what a business owns and owes at one moment, as Jakob Fugger's accountant showed in his counting room. Last, you will meet the Dutch cloth inspectors in Rembrandt's famous painting and the old English tally sticks, and learn why honest books and audits matter: "Be thou diligent to know the state of thy flocks" (Proverbs 27:23).

PREREQUISITES

- Can add and subtract money amounts in columns
- Knows revenue, cost and profit from Unit 6
- Has kept simple ledger pages in earlier units

MASTERY CHECKLIST

- ☐ I can tell how Luca Pacioli's *Su* of 1494 spread double-entry *m* bookkeeping, and record *m* transactions in a two-sided journal. *a*
- ☐ I can prepare a simple income statement: revenue – expenses = profit.
- ☐ I can prepare a simple balance sheet and show that assets = liabilities + owner's equity.
- ☐ I can explain why audits and honest books matter, and check a ledger against receipts.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Free spreadsheet: Google Sheets or LibreOffice Calc:** LibreOffice is free to download (Google Sheets is free online with a parent's account). A spreadsheet adds up columns for you. Try copying your Lesson 7.2 income statement into one after you have done it by hand. Ages 10 and up with a parent.
- **Next Gen Personal Finance (NGPF) arcade and activities:** Free. A nonprofit with short money activities and games for students. Teachers and parents can browse the free activities; choose ones on budgeting and records. Ages 11 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

7.1 Pacioli and Double-Entry Bookkeeping 2 sessions of 45 minutes

7.2 The Income Statement: Revenue, Expenses and Profit 2 sessions of 45 minutes

7.3 The Balance Sheet: Assets, Liabilities and Owner's Equity

2 sessions of 45 minutes

7.4 Honest Books: The Drapers' Guild Syndics, Audits and Tally Sticks

2 sessions of 45 minutes

UNIT 7 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

Who was Luca Pacioli, and what did his book of 1494 do for bookkeeping?

2. **5 pts**

You buy \$12 of supplies with cash. Which account receives (is debited) and which gives (is credited)?

3. **5 pts**

Why does double-entry bookkeeping help catch mistakes?

4. (5 pts)

A lemonade stand had revenue of \$64 and expenses of \$22. What was its profit, and what was its profit margin?

5. (5 pts)

What did Josiah Wedgwood discover when he studied his costs in 1772?

6. (5 pts)

A business has \$50 in cash, \$30 of supplies and a \$20 table, and it owes \$40 on a loan. What are its total assets and its owner's equity? Show that the balance sheet balances.

7. (5 pts)

What is the difference between an income statement and a balance sheet?

8. (5 pts)

What was the Fuggerei, and what does it tell us about Jakob Fugger?

9. (5 pts)

What is an audit, and where does the word "auditor" come from?

10. (5 pts)

What would happen in a shop where one person took in all the cash, recorded it and never had anyone check the books? Name two internal controls that would help.

ANSWER KEY

1. A Franciscan friar and mathematician whose *Summa de arithmetica*, printed in Venice in 1494, clearly explained the Venetian method of double-entry bookkeeping, so it spread across Europe.
2. Supplies receives (debit) \$12; Cash gives (credit) \$12.
3. Every transaction is written twice, on opposite sides, so the totals of the two sides must be equal. If they are not, there is a mistake to find.
4. Profit = $\$64 - \$22 = \$42$. Margin = $\$42 \div \$64 \times 100 \approx 66\%$.
5. Some costs stayed the same whether he made few or many pieces; some vases had been sold for less than they cost; making larger batches lowered the cost per piece; and a clerk had been stealing. He changed prices, made longer runs and kept better accounts.
6. Assets = $\$50 + \$30 + \$20 = \$100$. Equity = $\$100 - \$40 = \$60$. $\$100 = \$40 + \$60$.
7. An income statement shows revenue, expenses and profit over a period of time; a balance sheet shows assets, liabilities and owner's equity at one moment.
8. A walled neighborhood of homes in Augsburg, begun in 1516, for poor working families, at a rent of one guilder a year. It shows that he used part of his fortune to help his community, and it still houses families today.
9. An independent check of a business's books against receipts and other evidence. From the Latin *audire*, to hear, because accounts were read aloud to be checked.
10. Mistakes and theft could go unnoticed for a long time, and the owner would not know the truth about the business. Controls: two people count the cash, receipts for every payment, separate the person who handles cash from the person who records it, regular audits.

PORTFOLIO PIECE: A MONTH OF BOOKS

Keep the books for one month for a real activity: your allowance and spending, a small business, a family yard sale, or the bonus business in Unit 9. Keep a journal of every transaction with receipts in an envelope. At the end of the month, prepare an income statement for the month and a balance sheet for the last day, and have a parent audit your books against the receipts. Write a half-page report: what the numbers show, what surprised you, and one change you will make next month.

LOOK FOR	WHAT IT MEANS
Journal	Every transaction dated and recorded neatly, with a receipt or note for each.
Income statement	Revenue, expenses and profit or loss for the month, correctly added.
Balance sheet	Assets, liabilities and owner's equity on the last day, and the sheet balances.
Audit	A parent's audit is attached, and any errors found were corrected honestly.
Report	A thoughtful half-page explaining what the numbers mean and what will change.

SAVING, INVESTING AND GIVING

Earning money is only half of the story; the other half is what you do with it. In this unit you will learn to make a **budget** with three jars, Give, Save and Spend, as Joseph planned for seven years of plenty and seven of famine. You will see how **interest** makes savings grow, and how compound growth turned Benjamin Franklin's gift of £1,000 each to Boston and Philadelphia into a fund that helped young tradesmen for two hundred years.

Then you will visit the buttonwood tree on Wall Street where New York's stockbrokers signed their agreement in 1792, and learn how stocks and bonds work, why higher rewards come with higher risks, and why the wise "give a portion to seven, and also to eight." Last, you will learn the true cost of borrowing, John Wesley's rule, "gain all you can, save all you can, give all you can," and you will hold a **family market day** to show and sell what you have made this year.

PREREQUISITES

- Can calculate percents of money amounts
- Knows profit, income statements and balance sheets (Units 6 and 7)
- Knows what a bank does (Unit 2)

MASTERY CHECKLIST

- ☐ I can make a budget with Give, Save and Spend, and track it for a month.
- ☐ I can calculate simple and compound interest and explain why compound growth is powerful over time.
- ☐ I can explain what stocks and bonds are, how the Buttonwood Agreement began the New York Stock Exchange, and why diversification lowers risk.
- ☐ I can calculate the cost of a loan and explain why the borrower is servant to the lender.
- ☐ I can explain why giving is part of wise money management, and I took part in a family market day.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **The Way to Wealth, by Benjamin Franklin (1758)**: Free on Project Gutenberg. A short speech by “Father Abraham” made up of Poor Richard’s sayings on work, thrift and debt, such as “Diligence is the mother of good luck.” Read a page aloud with Lessons 8.1 and 8.4 and copy three sayings into your ledger notebook. Ages 9 and up.
- **John Wesley, “The Use of Money” (Sermon 50)**: Free. Wesley’s sermon on gaining, saving and giving all you can. Parents may read the three main headings and a few paragraphs aloud with Lesson 8.4. Ages 11 and up with a parent.
- **Federal Reserve Bank of St. Louis: Econ Lowdown personal finance lessons**: Free. Short lessons on budgeting, saving, interest and credit from a Federal Reserve bank. Fits the whole unit. Ages 10 and up.
- **Pay Day (family board game, Winning Moves)**: Ages 8 and up, 2–4 players. A month of bills, mail, deals and paydays. A light, cheerful way to practice budgeting and see the cost of borrowing. Fits Lessons 8.1 and 8.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

8.1 Budgets and the Three Jars: Joseph’s Seven Years

2 sessions of 45 minutes

8.2 Interest and Compound Growth: The Talents and Franklin’s 200-Year Gift

2 sessions of 45 minutes

8.3 Stocks, Bonds and the Buttonwood Tree

2 sessions of 45 minutes

8.4 Debt, Giving and the Family Market Day

2 sessions of 45 minutes

UNIT 8 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What three things did Joseph do that every good budget does?

2. 5 pts

Sam earns \$30 this month. He gives 10%, saves 20% and spends the rest. How much goes in each jar?

3. 5 pts

\$200 is saved at 5% simple interest. How much will there be after 4 years? How much with compound interest (round to the cent)?

4. 5 pts

Use the rule of 72: about how long does it take money to double at 8% a year?

5. 5 pts

What did Benjamin Franklin leave to Boston and Philadelphia, and how was it meant to grow?

6. 5 pts

What is the difference between a stock and a bond? Which is usually riskier?

7. 5 pts

What was the Buttonwood Agreement?

8. 5 pts

What would happen to an investor who put all his savings in one company that failed? How does Ecclesiastes 11:2 advise him?

9. 5 pts

You borrow \$50 and pay \$5 a month plus \$1 interest each month until it is repaid. How many months does it take and what is the total cost?

10. 5 pts

What are John Wesley's three rules for the use of money? Why did Jesus praise the poor widow?

ANSWER KEY

1. He planned ahead before the good years ended, set aside a fixed share (one fifth) of every harvest, and kept careful records.
2. Give \$3, Save \$6, Spend \$21.
3. Simple: $\$200 + 4 \times \$10 = \$240$. Compound: $200 \times 1.05 \times 1.05 \times 1.05 \times 1.05 \approx \$243.10$.
4. $72 \div 8 = 9$ years.
5. £1,000 each, to be lent at 5% interest to young married tradesmen; repaid loans with interest would be lent again, so the fund would grow by compound interest for 200 years.
6. A stock is part ownership of a company; a bond is a loan to a company or government that pays interest. Stocks are usually riskier but can grow more.
7. A short agreement signed by 24 New York brokers on May 17, 1792, by tradition under a buttonwood tree on Wall Street, to trade with each other at a set commission; it was the start of the New York Stock Exchange.
8. He would lose everything. Solomon advises spreading what you have among many (“a portion to seven, and also to eight”), which is diversification.
9. $50 \div 5 = 10$ months. Total paid = $\$50 + 10 \times \$1 = \$60$, so the loan cost \$10 extra.
10. Gain all you can, save all you can, give all you can. Jesus praised the widow because she gave all she had out of her poverty, which was more than the rich gave out of their plenty.

PORTFOLIO PIECE: MY MARKET DAY AND MONEY PLAN

Put together a record of your family market day: your price list with costs, your ledger of every sale, your income statement, a photograph or drawing of your booth, and a note about what you gave and to whom. Add a one-page money plan for the coming year: your expected income, your Give, Save and Spend percentages, one saving goal with how long it will take (with a small compound-interest table if the money will earn interest), and your own rule about borrowing.

LOOK FOR	WHAT IT MEANS
Market-day records	Price list, complete ledger and a correct income statement for the day.
Honesty	Prices cover costs and are truthfully labeled; the cash count matches the ledger.
Money plan	A realistic budget with percentages, a saving goal with a timeline and a sensible borrowing rule.
Giving	A planned gift carried out, with a short note about why.

8.1 BUDGETS AND THE THREE JARS: JOSEPH'S SEVEN YEARS

OBJECTIVES

- Tell how Joseph planned for seven years of plenty and seven years of famine in Egypt.
- Make a budget that divides income among giving, saving and spending, and tell needs from wants.
- Track a real budget for a month and compare the plan with what actually happened.

Warm-up. If you were given \$20 right now, write down exactly what you would do with it. Then look at your list: how much would you give, how much would you save, and how much would you spend? Did you plan for all three?

WATCH

Financial Literacy—Making a Budget | Learn how to create a budget

Learn Bright • 5:26

<https://www.youtube.com/watch?v=cYGiipJOiLg>

WHEN TO WATCH

After the story of Joseph, before you set up your three jars.

BACKUP VIDEO

Budgeting 101: A Roadmap to Financial Success

Federal Reserve Bank of St. Louis • 8:19

<https://www.youtube.com/watch?v=2ONGaT7YD80>

Optional, for parents and older students: how a grown-up family budget works.

KEY TERMS

budget

A plan for how to divide your income among giving, saving and spending before the money is gone.

income

Money that comes in, from work, gifts or an allowance.

needs and wants

Needs are things required to live and work (food, shelter, clothing); wants are things we would like but can live without.

emergency fund

Savings set aside for unexpected needs, such as a car repair or a lost job.

tithe

A tenth of one's income given to God's work, as Abraham and Jacob gave.

CORE IDEAS

The story. Joseph, the son of Jacob, was sold by his jealous brothers to traders who carried him to Egypt, where he served in an officer's household and was later thrown into prison. But God gave him wisdom to explain Pharaoh's dreams: seven fat cows and seven thin cows, seven full ears of grain and seven thin ones. Seven years of great plenty were coming, Joseph said, and then seven years of famine. He advised Pharaoh to appoint officers to "take up the fifth part of the land of Egypt in the seven plentiful years" and store it in the cities, "that the land perish not through the famine" (Genesis 41:34-36). Pharaoh put Joseph in charge. When the famine came, Egypt had bread, and people from other lands, including Joseph's own brothers, came to buy grain.

How they figured it out. Joseph did three things every good budget does. He **planned ahead**, before the good years ended. He set a **fixed share**: one fifth, or 20 percent, of every harvest, so saving happened automatically and was not left to chance. And he **kept careful records**: Genesis says he gathered so much grain that he stopped counting it, "for it was without number," but the storehouses were organized city by city. Many centuries later, a sixteen-year-old named John D. Rockefeller bought a small notebook he called Ledger A when he took his first job in 1855, and wrote down every cent he earned, spent, saved and gave to his church and to the poor.

The big idea. A **budget** is a plan that tells your money where to go before it is gone. A simple and wise budget for a young person uses three jars: **Give**, **Save** and **Spend**. Many Christian families begin by giving a tenth, a **tithe**, then set a share for saving, as Joseph did, and spend the rest carefully, putting **needs** before **wants**. For example, with \$20 of income: give 10% (\$2), save 20% (\$4) and spend 70% (\$14). Your family may choose different shares; the habit of choosing ahead is what matters. "Go to the

ant, thou sluggard; consider her ways, and be wise” (Proverbs 6:6): the ant gathers in summer for the winter.

In business today. Every business makes a budget for the coming year: expected revenue, planned expenses, money set aside for new equipment and for hard times. Families budget for groceries, rent or a mortgage, savings and giving, and they keep an **emergency fund** for the unexpected, their own seven years of plenty. Governments, churches and schools all make budgets too. A budget is not a cage; it is a plan that lets you choose what matters most.

PICTURE STUDY



Joseph, Overseer of Pharaoh's Granaries, Lawrence Alma-Tadema, 1874 · Oil on panel · Dahesh Museum of Art, New York

Image: [Wikimedia Commons](#), public domain

Lawrence Alma-Tadema, a Dutch-born painter who worked in London, studied Egyptian objects in the British Museum to paint ancient rooms as accurately as he could. Here he imagines Joseph at work as Pharaoh's chief steward, hearing a report on the stores of grain.

Look closely

- Find Joseph. How does the painter show that he is in charge?
- Find the scribe. What is he doing, and why would Joseph need him?
- Look at the writing and pictures on the walls. What might they record?
- Find the grain. Where is it, and how much do you think is stored?

Talk about it

1. Why did Joseph need scribes and written records to manage the grain?
2. Joseph saved one fifth of every harvest. What would you save one fifth of, and for what “lean years”?
3. How did Joseph's plan help people outside Egypt too?

PROJECT

My Three-Jar Budget

You will make a real budget for your own income (allowance, gifts or earnings) for one month, set up Give, Save and Spend jars, track every dollar for four weeks, and compare the plan with what really happened.

You will need

- Three jars or envelopes labeled Give, Save and Spend
- Your real income for a month (or \$40 of play money if you have no income yet)
- Ledger notebook, pencil and calculator

Steps

1. With a parent, write down the income you expect this month and where it will come from.
2. Choose your percentages for Give, Save and Spend (for example 10%, 20% and 70%). Calculate the dollar amount for each jar.
3. Choose a purpose for each jar: whom you will give to, what you are saving for (and how many weeks it will take), and a short list of needs and wants for spending.
4. Each time money comes in, divide it into the jars right away, the way Joseph took up his fifth at every harvest.
5. Rule a ledger page with columns: Date, Description, Give, Save, Spend, and a running balance for each jar. Record every dollar in and out for four weeks.
6. At the end of the month, compare your plan with what actually happened. Make a bar graph of planned and actual amounts for each jar.
7. Write a paragraph: Did you stick to your plan? What surprised you? What will you change next month?

Tips

- Divide the money the moment you receive it. Saving what is left over usually means saving nothing.

- Wants are not bad. A budget simply makes sure needs, giving and saving come first.

Check your work

- ☐ I can make a budget with Give, Save and Spend and calculate each share.
- ☐ My ledger tracks every dollar for four weeks.
- ☐ I can compare my plan with what happened and explain what I will change.

LEDGER NOTEBOOK

1. Draw your three jars and label each with its percent, dollar amount and purpose.
2. Copy your planned-versus-actual bar graph.
3. Draw Joseph's storehouses filling for seven years and emptying for seven, and write how much one fifth of a harvest of 100 bushels would be.

From history. John D. Rockefeller kept his Ledger A all his life and sometimes showed it to young people. In it, the boy who would become the richest man in America recorded small gifts to his church, to the poor and to missions from his very first wages.

COMMON MISTAKES

- Saving only what is left over at the end of the month. Wise savers set aside their share first.
- Treating every want as a need. A new game is a want; lunch is a need.
- Making a budget and never looking at it again. A budget works only if you track it and adjust it.

Make it a game • Joseph's Jars. Use three cups: giving, saving and spending. Play three plenty years where you earn ten beans a year and divide them among the cups. Then three lean years where you earn only two and must live from the saving cup. Count what is left. Tell how Joseph prepared for famine, and what is a need compared to a want.

Scripture. “And let them gather all the food of those good years that come, and lay up corn under the hand of Pharaoh, and let them keep food in the cities.” (Genesis 41:35, KJV)

Joseph's plan was simple: in good years, set aside a fixed share for the hard years to come. That is still the heart of every wise budget.

8.2 INTEREST AND COMPOUND GROWTH: THE TALENTS AND FRANKLIN'S 200-YEAR GIFT

OBJECTIVES

- Explain interest, and calculate simple and compound interest year by year.
- Tell the parable of the talents and the story of Benjamin Franklin's gift to Boston and Philadelphia.
- Build a compound-interest table and graph, and use the rule of 72.

Warm-up. Would you rather have \$1,000 today, or one penny today that doubles every day for 30 days? Guess first. Then double a penny on a calculator ten times. How much do you have after ten days?

WATCH

Financial Literacy—Calculating Interest | Learn an easy way to calculate interest

Learn Bright • 5:40

<https://www.youtube.com/watch?v=t0HjVmgNGE4>

WHEN TO WATCH

After the story of Franklin's gift, before the compound-interest table.

BACKUP VIDEO

Compound Interest Explained for Kids

MoneyMoments • 2:28

<https://www.youtube.com/watch?v=qxltazxfaSk>

Before the compound column of your table.

KEY TERMS

interest

Money paid for the use of money. A saver earns interest from a bank; a borrower pays interest to a lender.

principal

The original amount of money saved or borrowed.

interest rate

The interest for one year as a percent of the principal, such as 5% a year.

simple interest

Interest earned only on the original principal.

compound interest

Interest earned on the principal and also on interest already earned, so the money grows faster and faster.

rule of 72

A shortcut: $72 \div \text{the yearly interest rate} \approx \text{the number of years for money to double}$.

CORE IDEAS

The story. Jesus told of a master who, before a long journey, gave his servants talents, large sums of silver, “to every man according to his several ability” (Matthew 25:15). Two of the servants traded with the money and doubled it. The third buried his talent in the ground. The master praised the faithful servants and rebuked the third: at the very least, he said, “Thou oughtest therefore to have put my money to the exchangers, and then at my coming I should have received mine own with usury” (Matthew 25:27). “Usury” here simply means interest. Many centuries later, Benjamin Franklin, who had begun life as a poor printer’s apprentice in Boston, wrote his will. He died in 1790, and he left £1,000 each to the cities of Boston and Philadelphia, with careful instructions.

How they figured it out. Franklin wanted to help young tradesmen as he had once been helped. Each city was to lend his money, at 5% interest, to young married craftsmen who had finished their apprenticeships, to help them set up shop. As they repaid their loans with interest, the money would be lent again, and again. Franklin calculated that after 100 years each fund would grow to about £131,000. Then part would be spent on public works, and the rest lent for another 100 years. Real life was harder than his arithmetic: some borrowers did not repay, fewer young men served apprenticeships, and the cities spent some of the money along the way. Still, after the first century Boston used part of its fund, with matching money from Andrew Carnegie, to start a school for training young people in the trades, and when the second century ended in 1990, both cities still had millions of dollars to give to good causes.

The big idea. Interest is the price paid for using money. With **simple interest**, \$100 at 5% earns \$5 every year: after 10 years, \$150. With **compound interest**, the interest

itself earns interest: after 1 year you have \$105; after 2 years \$110.25; after 10 years about \$162.89; after 20 years about \$265.33. Franklin's numbers check out: £1,000 at 5% compounded for 100 years grows to about £131,500. The longer you wait, the faster it grows, because the growth is built on growth. The **rule of 72** estimates doubling time: at 6%, money doubles in about $72 \div 6 = 12$ years.

In business today. Banks pay interest on savings and charge interest on loans; the difference helps pay for the bank's work. Businesses compare the interest they could earn by saving with the profit they could earn by investing in new equipment. For a young saver, the most powerful thing on your side is **time**. Small amounts saved early and left to grow can become large. And compound interest works the other way too: debt left unpaid grows in the same way, which you will learn about in Lesson 8.4. "He that gathereth by labour shall increase" (Proverbs 13:11).

PICTURE STUDY



Benjamin Franklin, Joseph-Siffred Duplessis, about 1785 · Oil on canvas · National Portrait Gallery, Smithsonian Institution, Washington, D.C.

Image: [Wikimedia Commons](#), public domain

The French painter Joseph-Siffred Duplessis painted Franklin when he was living in France as the American minister, in his late seventies. Franklin chose to be painted in a plain coat, not in silks or a powdered wig. He had begun as a runaway printer's apprentice and became a printer, publisher, scientist, inventor and statesman.

Look closely

- Look at Franklin's clothes. What do they tell you about how he wanted to be seen?
- Look at his face and eyes. What kind of man do you think he was?
- Notice what is not in the picture: no wig, no jewels, no fancy background. Why might Franklin have liked that?

Talk about it

1. Franklin wrote that "time is money." How does compound interest show that idea?
2. Why do you think Franklin chose to help young tradesmen rather than give his money to the rich?

3. If you could leave a gift that would keep helping people for 200 years, whom would you help?

PROJECT

The Compound-Interest Table

You will build a table and a graph showing \$100 growing at 5% a year, with simple and with compound interest, and test Franklin's 200-year plan with your own numbers.

You will need

- A calculator, or a free spreadsheet with a parent
- Graph paper, a ruler and two colored pencils
- Ledger notebook

Steps

1. Rule a table with columns: Year, Simple interest balance, Compound interest balance. Start at Year 0 with \$100 in both columns.
2. **Simple.** Add \$5 each year to the simple column, for 20 years.
3. **Compound.** Each year, multiply the compound balance by 1.05 and round to the nearest cent. Fill in 20 years. (Check: Year 10 $\approx$ \$162.89; Year 20 $\approx$ \$265.33.)
4. Graph both columns on the same graph: years across, dollars up, one color for each. Where do the lines begin to separate?
5. **Rule of 72.** At 5%, about how many years does it take to double? Find the year in your table where the compound balance first passes \$200. Was the rule of 72 close?
6. **Franklin's test.** On a calculator, start with 1,000 and multiply by 1.05 one hundred times (or use the x^y key: $1.05^{100} \times 1,000$). Do you get about 131,500?
7. Write a paragraph: Why did Franklin's funds grow less than his calculation? What does the parable of the talents teach about using what we are given?

Tips

- In a spreadsheet, type 100 in cell B2 and $=B2*1.05$ in B3, then copy it down. The spreadsheet does the multiplying.
- Keep all the cents in your compound column, or your answers will drift.

Check your work

- ☐ I can calculate simple and compound interest for several years.
- ☐ My table and graph show the difference between simple and compound growth.
- ☐ I can use the rule of 72 to estimate doubling time.

LEDGER NOTEBOOK

1. Copy your compound-interest graph and label where the two lines split apart.
2. Make a timeline of Franklin's gift: 1790 Franklin dies; 1890s first century ends; 1990 second century ends.
3. Draw the three servants from the parable and write what each did with his talents.

From history. Franklin's own sayings in *Poor Richard's Almanack* and *The Way to Wealth* include "A penny saved is twopence clear" and "Industry pays debts, while despair increaseth them." The Boston school begun with his fund is today the Benjamin Franklin Cummings Institute of Technology.

COMMON MISTAKES

- Adding the same interest each year for compound growth. Compound interest grows because each year's interest is calculated on a larger balance.
- Thinking interest is only good. When you borrow, compound interest works against you.
- Forgetting that real results can differ from the arithmetic, as Franklin's funds did. Plans need faithful managers.

Make it a game • Compound Race. Start with one hundred pretend dollars at ten percent for three years. Race your parent: you compute simple interest, they compute compound. Write the year-by-year table and compare totals. Then guess how many years money doubles using the rule of 72 and tell the parable of the talents.

Scripture. "Wealth gotten by vanity shall be diminished: but he that gathereth by labour shall increase." (Proverbs 13:11, KJV)

Get-rich-quick schemes tend to vanish, but steady, patient saving and honest work grow over time, like compound interest.

8.3 STOCKS, BONDS AND THE BUTTONWOOD TREE

OBJECTIVES

- Explain what a share of stock and a bond are, and how each can pay its owner.
- Tell how the Dutch East India Company sold the first public shares in 1602 and how the Buttonwood Agreement of 1792 began the New York Stock Exchange.
- Explain risk, reward and diversification with a practice portfolio and a dice experiment.

Warm-up. Your friend wants to start a lemonade stand and needs \$20 for supplies.

Option A: you lend her \$20, and she promises to pay you back \$22 next month.

Option B: you give her \$20 and become a half-owner, getting half of whatever profit she makes. Which would you choose? Why?

WATCH

Capital Markets - Stock Market Game, Ep. 1

Federal Reserve Bank of St. Louis • 5:33

<https://www.youtube.com/watch?v=n7st0D0HUAQ>

WHEN TO WATCH

After the big idea, before the diversification dice.

BACKUP VIDEO

17th May 1792: The Buttonwood Agreement establishes the New York Stock Exchange

HistoryPod • 2:30

<https://www.youtube.com/watch?v=lyIYBXCeU5I>

After the story of the Buttonwood Agreement.

KEY TERMS

stock (share)

A small piece of ownership in a company. Shareholders may receive part of the profits, called dividends, and the share's price can rise or fall.

bond

A loan to a company or government, which promises to pay interest and repay the amount on a set date.

stock exchange

A market where buyers and sellers trade shares of companies.

risk and reward

The rule that investments that may earn more usually also carry a greater chance of losing money.

diversification

Spreading money among many different investments so that one failure does not ruin you.

CORE IDEAS

The story. In 1602 merchants of the Netherlands formed the Dutch East India Company to send ships to Asia for spices. One voyage could take years, and ships were often lost to storms. So the company did something new: it sold **shares** to anyone who wanted to buy, from rich merchants to maidservants, and those shares could be bought and sold in Amsterdam, where the world's first stock exchange grew up. Almost two hundred years later, in New York, men who bought and sold government bonds and bank shares gathered on Wall Street. On May 17, 1792, twenty-four of these brokers signed a short agreement, by tradition under a buttonwood (sycamore) tree at 68 Wall Street, promising to trade with each other and to charge the same commission. The **Buttonwood Agreement** was the beginning of what became the New York Stock Exchange.

How they figured it out. Big projects like a voyage to Asia, a canal or a railroad cost more than any one person could pay and carried great risk. Selling shares let many people each own a small piece, so that the profits and the risk were spread among them. Buyers who wanted a steadier return could instead buy **bonds**: loans that promised fixed interest. In 1790 the new U.S. government, under Treasury Secretary Alexander Hamilton, had issued bonds to pay off its war debts, and these were among the first things traded on Wall Street. Brokers needed rules to trust each other, so the Buttonwood brokers wrote them down. In 1817 they moved indoors and formed the New York Stock and Exchange Board.

The big idea. A **stock** makes you a part-owner. If the company does well, you may receive dividends and your share may rise in price; if it does badly, your share may fall, and if it fails you can lose everything you paid. A **bond** makes you a lender. It usually pays steady interest and is safer, but it rarely grows as much. This is the rule

of **risk and reward**. The wise way to lower risk is **diversification**: spreading your money among many companies and kinds of investments. Solomon gave this advice three thousand years ago: “Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth” (Ecclesiastes 11:2).

In business today. Thousands of companies sell shares on stock exchanges, and millions of families own them, often through retirement savings and funds that hold small pieces of many companies at once. Companies use the money from shares and bonds to build factories, stores and research labs, creating jobs. Investing is for the long term, with money you will not need soon. It is not a game of chance and not a way to grow wealthy overnight; quick trading, hot tips and schemes that promise sure profits often lead to loss. For now, you will practice only with pretend money.

PICTURE STUDY



The New York Stock Exchange on Broad Street, A. Loeffler, about 1904 · Photograph · Library of Congress, Prints and Photographs Division
Image: [Wikimedia Commons](#), public domain

The New York Stock Exchange moved into this marble building at 18 Broad Street, just around the corner from Wall Street, in 1903, a little more than a hundred years after the Buttonwood Agreement. Inside, on the trading floor, brokers bought and sold shares of companies for their customers.

Look closely

- Count the tall columns on the front of the Stock Exchange. Why might the builders have made it look like an ancient temple?
- Look up at the carving in the triangle above the columns. What do you think it shows?
- Find the tall buildings around it. What kinds of businesses might work near a stock exchange?
- Look at the street. Do you see people, carriages or automobiles?

Talk about it

1. Why would brokers want to trade in one building instead of under a tree?
2. How is this grand building different from the buttonwood tree of 1792? What stayed the same?

3. Why do people need to trust a stock exchange?

Safety first. This project uses pretend money only. Students do not open accounts or buy real shares. Any real investing is a decision for parents.

PROJECT

A Practice Portfolio and the Diversification Dice

You will see diversification at work with a dice experiment, then track a pretend \$1,000 portfolio of five companies whose products you know, for four weeks.

You will need

- Two dice and the ledger notebook
- A calculator
- Share prices from a newspaper's business section or a financial website, looked up with a parent

Steps

1. **One basket.** Imagine you put \$100 in one company. Roll one die for the year: 1 = the company fails (\$0); 2 = \$80; 3 = \$100; 4 = \$110; 5 = \$120; 6 = \$150. Roll ten times (ten pretend investors) and record each result.
2. **Many baskets.** Now imagine \$20 in each of five companies. For each investor, roll five times, using the same scale but with \$20 (1 = \$0, 2 = \$16, 3 = \$20, 4 = \$22, 5 = \$24, 6 = \$30) and add the five results. Do this for ten investors.
3. Compare the two groups in a table: lowest result, highest result, and how many investors lost money. Which group had fewer terrible results?
4. **Practice portfolio.** With a parent, choose five well-known companies whose products your family uses. Look up each share price and "buy" \$200 worth of each with pretend money. Record the number of shares ($\text{price} \div \$200$, rounded down) and any cash left over.
5. Once a week for four weeks, record each share price and calculate the value of your portfolio.
6. Make a line graph of your portfolio's total value each week.
7. Write a paragraph: Which company rose and which fell? Did diversification help? What does Ecclesiastes 11:2 mean for an investor?

Tips

- Prices go up and down every day. Four weeks is far too short to judge a company; real investors think in years.

- Remember that a share is part ownership of a real business with real workers and customers. Ask what the business makes and whether it serves its stakeholders well.

Check your work

- ☐ I can explain the difference between a stock and a bond.
- ☐ I can tell the story of the Buttonwood Agreement of 1792.
- ☐ My dice table shows how diversification lowers the chance of a terrible loss.

LEDGER NOTEBOOK

1. Draw a two-column chart: “Stock: I am an owner” and “Bond: I am a lender.” List how each pays and what the risks are.
2. Copy your dice-experiment table and circle the group with fewer big losses.
3. Draw the buttonwood tree on Wall Street with the 24 brokers, and write the date: May 17, 1792.

From history. The original Buttonwood Agreement was only two sentences long. The brokers met outdoors or in coffee houses, especially the Tontine Coffee House, until they moved into rented rooms in 1817. The New York Stock Exchange’s building at 11 Wall Street opened in 1903.

COMMON MISTAKES

- Thinking a stock is a loan. A stock is ownership; a bond is a loan.
- Thinking investing is a game of luck. Investing buys a share in real businesses for the long term; a game of chance produces nothing at all.
- Putting all your eggs in one basket. Even a good company can fail; spreading out lowers the risk.

Make it a game • Dice and Diversification. Pretend you own three companies and a bond, each with ten beans. Roll a die for each company every round: 1 or 2 loses two beans, 3 or 4 gains one, 5 or 6 gains three. The bond steadily gains one. Play six rounds, once with all beans in one company and once spread. Compare. Name the risk.

Scripture. “Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth.” (Ecclesiastes 11:2, KJV)

Solomon advised spreading out what you have because no one knows the future. Investors call this diversification, and it is still the first rule of wise investing.

8.4 DEBT, GIVING AND THE FAMILY MARKET DAY

OBJECTIVES

- Calculate the cost of borrowing and explain why “the borrower is servant to the lender.”
- Explain John Wesley’s rule, “gain all you can, save all you can, give all you can,” and the widow’s two mites.
- Plan and hold a family market day with honest prices, a ledger and a gift.

Warm-up. You want a \$60 game. You can save \$10 a week and buy it in 6 weeks, or borrow \$60 now and repay \$10 a week plus \$2 interest each week. How many weeks will it take to repay the loan, and how much will the game really cost you?

WATCH

Financial Literacy—Borrowing vs. Saving. | **Learn the difference to help you choose**

Learn Bright • 5:48

<https://www.youtube.com/watch?v=c9VFbAJRSv0>

WHEN TO WATCH

After the big idea, before you plan your market day.

KEY TERMS

debt

Money owed to someone else.

loan

Money borrowed that must be repaid, usually with interest.

credit card

A card that lets a person borrow to buy things now and pay later; unpaid balances are charged interest, often at a high rate.

generosity

Giving freely and cheerfully to others, especially to those in need and to God’s work.

stewardship

Managing what belongs to someone else, as we manage the money and gifts that belong to God.

CORE IDEAS

The story. John Wesley was an English preacher of the 1700s who traveled thousands of miles on horseback, preaching to miners, farmers and factory workers. In 1760 he published a sermon called “The Use of Money,” built on three rules: **gain all you can**, by honest and diligent work that does not harm yourself or your neighbor; **save all you can**, by not wasting money on luxuries and show; and **give all you can**. Wesley lived by his own rules: as his income from his books rose, he kept his own living costs plain and gave away the rest. Jesus once watched people putting money into the temple treasury. Rich men put in much, but a poor widow put in two small coins, called mites, and Jesus said she had given more than all of them, for “she of her want did cast in all that she had” (Mark 12:44).

How they figured it out. People have always faced the temptation to spend more than they have. Benjamin Franklin warned in *The Way to Wealth*: “He that goes a borrowing goes a sorrowing.” Borrowing is not always wrong; families borrow to buy a home, and businesses borrow to buy equipment that will earn more than the loan costs. But every loan has a cost, the **interest**, and a debt that is not paid off grows by compound interest, just as savings do. Many **credit cards** charge high interest on unpaid balances, so a purchase that is not paid off quickly can end up costing far more than its price. The wise ask before borrowing: Is this a need? Will it last longer than the loan? Can I repay it on time? Could I save for it instead?

The big idea. “The rich ruleth over the poor, and the borrower is servant to the lender” (Proverbs 22:7). A person in debt has promised part of his future work to someone else. So the wise save first and borrow rarely and carefully. In the warm-up, saving gets you the game for \$60 in 6 weeks; borrowing costs \$60 plus 6 weeks $\times$ \$2 = \$72. But the purpose of gaining and saving is not to pile up riches. Paul wrote that a man should “labour, working with his hands the thing which is good, that he may have to give to him that needeth” (Ephesians 4:28), and “God loveth a cheerful giver” (2 Corinthians 9:7). **Generosity** is part of good **stewardship**: everything we have belongs to God.

In business today. Businesses borrow carefully, comparing the cost of a loan with the profit it will help them earn. Families use budgets to stay out of debt for things they want, and many give regularly to their church and to people in need. This week you will put the whole year together at a **family market day**: you will make or gather goods, price them honestly, keep a ledger, sell to family and friends, and give part of what you earn.

PICTURE STUDY



The Widow's Mite, James Tissot, 1886–1894 · Opaque watercolor over graphite on paper · Brooklyn Museum, New York

Image: [Wikimedia Commons](#), public domain

The French artist James Tissot spent years traveling in the Holy Land and painted hundreds of pictures of the life of Christ, trying to show the clothes, buildings and customs of the time as accurately as he could. This one shows the widow giving her two mites.

Look closely

- Find the widow. How is she dressed compared with the others?
- Look at the men sitting along the walls. What are they doing? Are they watching her?
- Look at the stone walls, columns and light. Where in Jerusalem is this?
- Look for the place where people put their gifts. Can you find it?

Talk about it

1. Why did Jesus say the widow gave more than the rich men?
2. Wesley said, “give all you can.” How is that like and unlike what the widow did?
3. What will you give from your market day, and to whom?

Safety first. A parent supervises the market day and keeps the cash box. Sell only to family, friends and neighbors you know; follow your town's rules for selling food and handle food with clean hands.

PROJECT

The Family Market Day

You will plan and hold a market day for family and friends, the closing celebration of the year. You will show your best project from each unit, sell something you made, keep honest books and give part of what you earn.

You will need

- A table, a tablecloth and a sign
- Your best project or portfolio from each unit
- Items to sell that you have made: baked goods, cards, bookmarks, crafts, seedlings
- Price tags, a cash box with change, a receipt pad and your ledger notebook
- A Give envelope

Steps

1. **Plan.** Choose what to sell. Calculate the cost of each item and set an honest price that covers your costs (use your Unit 6 break-even skills). Make price tags and a guarantee card.
2. Decide before the market what share of your profit you will give and to whom. Write it in your ledger.
3. Set up your booth with your sign, your products and a display of your best work from each unit with its ledger pages.
4. Invite family and friends. As guests come, explain one project and how you priced your products.
5. Record every sale in your ledger as it happens. Give correct change and a receipt if asked.
6. At the end, count the cash with a parent (two-person count) and check it against your ledger.
7. Prepare an income statement for the day: revenue, expenses, profit. Put the giving share into your Give envelope and deliver it.

8. Write a final reflection: What did you learn this year about work, money, honesty and giving?

Tips

- Practice your one-minute pitch before guests arrive.
- Thank every customer, whether or not he buys.

Check your work

- ☐ I can calculate the cost of a loan and explain why saving first is usually wiser.
- ☐ I priced my goods honestly, kept a ledger of every sale and prepared an income statement.
- ☐ I gave part of my profit cheerfully, as I planned.

LEDGER NOTEBOOK

1. Copy your market-day ledger and income statement.
2. Write Wesley's three rules at the top of a page and give one example of each from your own life.
3. Make a table comparing saving for a \$60 item and borrowing for it at \$2 interest a week: weeks, total paid, extra cost.

From history. Benjamin Franklin's *The Way to Wealth* (1758) was so popular that it was reprinted many times and translated into many languages. Its advice on hard work, thrift and avoiding debt was memorized by generations of young Americans.

COMMON MISTAKES

- Thinking all borrowing is wrong. Careful borrowing for a home or useful equipment can be wise; borrowing for wants you cannot afford is not.
- Looking only at the weekly payment. Always add up the total cost of a loan.
- Thinking you must be rich to give. The widow gave two mites, and Jesus praised her most of all.

Make it a game • Borrow a Bean. Your parent lends you ten beans and charges one extra bean for each round you wait to repay. After four rounds, count the cost of borrowing. Say why the borrower is servant to the lender. Then give Wesley's three rules by raising a finger for each and tell how the widow's two mites fit.

Scripture. “The rich ruleth over the poor, and the borrower is servant to the lender.” (Proverbs 22:7, KJV)

Debt gives someone else a claim on your future work. Save first, borrow rarely and carefully, and you keep your freedom to give.

SAVING, INVESTING AND GIVING

Earning money is only half of the story; the other half is what you do with it. In this unit you will learn to make a **budget** with three jars, Give, Save and Spend, as Joseph planned for seven years of plenty and seven of famine. You will see how **interest** makes savings grow, and how compound growth turned Benjamin Franklin's gift of £1,000 each to Boston and Philadelphia into a fund that helped young tradesmen for two hundred years.

Then you will visit the buttonwood tree on Wall Street where New York's stockbrokers signed their agreement in 1792, and learn how stocks and bonds work, why higher rewards come with higher risks, and why the wise "give a portion to seven, and also to eight." Last, you will learn the true cost of borrowing, John Wesley's rule, "gain all you can, save all you can, give all you can," and you will hold a **family market day** to show and sell what you have made this year.

PREREQUISITES

- Can calculate percents of money amounts
- Knows profit, income statements and balance sheets (Units 6 and 7)
- Knows what a bank does (Unit 2)

MASTERY CHECKLIST

- ☐ I can make a budget with Give, Save and Spend, and track it for a month.
- ☐ I can calculate simple and compound interest and explain why compound growth is powerful over time.
- ☐ I can explain what stocks and bonds are, how the Buttonwood Agreement began the New York Stock Exchange, and why diversification lowers risk.
- ☐ I can calculate the cost of a loan and explain why the borrower is servant to the lender.
- ☐ I can explain why giving is part of wise money management, and I took part in a family market day.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **The Way to Wealth, by Benjamin Franklin (1758)**: Free on Project Gutenberg. A short speech by “Father Abraham” made up of Poor Richard’s sayings on work, thrift and debt, such as “Diligence is the mother of good luck.” Read a page aloud with Lessons 8.1 and 8.4 and copy three sayings into your ledger notebook. Ages 9 and up.
- **John Wesley, “The Use of Money” (Sermon 50)**: Free. Wesley’s sermon on gaining, saving and giving all you can. Parents may read the three main headings and a few paragraphs aloud with Lesson 8.4. Ages 11 and up with a parent.
- **Federal Reserve Bank of St. Louis: Econ Lowdown personal finance lessons**: Free. Short lessons on budgeting, saving, interest and credit from a Federal Reserve bank. Fits the whole unit. Ages 10 and up.
- **Pay Day (family board game, Winning Moves)**: Ages 8 and up, 2–4 players. A month of bills, mail, deals and paydays. A light, cheerful way to practice budgeting and see the cost of borrowing. Fits Lessons 8.1 and 8.4.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

8.1 Budgets and the Three Jars: Joseph’s Seven Years

2 sessions of 45 minutes

8.2 Interest and Compound Growth: The Talents and Franklin’s 200-Year Gift

2 sessions of 45 minutes

8.3 Stocks, Bonds and the Buttonwood Tree

2 sessions of 45 minutes

8.4 Debt, Giving and the Family Market Day

2 sessions of 45 minutes

UNIT 8 REVIEW

Answer each question. Show your work for calculations and use complete sentences for explanations. The review is worth 50 points.

1. **5 pts**

What three things did Joseph do that every good budget does?

2. 5 pts

Sam earns \$30 this month. He gives 10%, saves 20% and spends the rest. How much goes in each jar?

3. 5 pts

\$200 is saved at 5% simple interest. How much will there be after 4 years? How much with compound interest (round to the cent)?

4. 5 pts

Use the rule of 72: about how long does it take money to double at 8% a year?

5. 5 pts

What did Benjamin Franklin leave to Boston and Philadelphia, and how was it meant to grow?

6. 5 pts

What is the difference between a stock and a bond? Which is usually riskier?

7. 5 pts

What was the Buttonwood Agreement?

8. 5 pts

What would happen to an investor who put all his savings in one company that failed? How does Ecclesiastes 11:2 advise him?

9. 5 pts

You borrow \$50 and pay \$5 a month plus \$1 interest each month until it is repaid. How many months does it take and what is the total cost?

10. 5 pts

What are John Wesley's three rules for the use of money? Why did Jesus praise the poor widow?

ANSWER KEY

1. He planned ahead before the good years ended, set aside a fixed share (one fifth) of every harvest, and kept careful records.
2. Give \$3, Save \$6, Spend \$21.
3. Simple: $\$200 + 4 \times \$10 = \$240$. Compound: $200 \times 1.05 \times 1.05 \times 1.05 \times 1.05 \approx \$243.10$.
4. $72 \div 8 = 9$ years.
5. £1,000 each, to be lent at 5% interest to young married tradesmen; repaid loans with interest would be lent again, so the fund would grow by compound interest for 200 years.
6. A stock is part ownership of a company; a bond is a loan to a company or government that pays interest. Stocks are usually riskier but can grow more.
7. A short agreement signed by 24 New York brokers on May 17, 1792, by tradition under a buttonwood tree on Wall Street, to trade with each other at a set commission; it was the start of the New York Stock Exchange.
8. He would lose everything. Solomon advises spreading what you have among many (“a portion to seven, and also to eight”), which is diversification.
9. $50 \div 5 = 10$ months. Total paid = $\$50 + 10 \times \$1 = \$60$, so the loan cost \$10 extra.
10. Gain all you can, save all you can, give all you can. Jesus praised the widow because she gave all she had out of her poverty, which was more than the rich gave out of their plenty.

PORTFOLIO PIECE: MY MARKET DAY AND MONEY PLAN

Put together a record of your family market day: your price list with costs, your ledger of every sale, your income statement, a photograph or drawing of your booth, and a note about what you gave and to whom. Add a one-page money plan for the coming year: your expected income, your Give, Save and Spend percentages, one saving goal with how long it will take (with a small compound-interest table if the money will earn interest), and your own rule about borrowing.

LOOK FOR	WHAT IT MEANS
Market-day records	Price list, complete ledger and a correct income statement for the day.
Honesty	Prices cover costs and are truthfully labeled; the cash count matches the ledger.
Money plan	A realistic budget with percentages, a saving goal with a timeline and a sensible borrowing rule.
Giving	A planned gift carried out, with a short note about why.

BONUS: RUN A REAL BUSINESS

This optional bonus unit is your chance to do for real what you have studied all year. With a parent as your partner, you will choose a small business, plan it on one page, make your product or prepare your service, figure out what it costs, sell it honestly to people you know, and close the books with a profit report and a gift. Good first businesses include baked goods for neighbors and church friends, greeting cards or bookmarks, garden seedlings, pet care or yard help for families you know.

Each lesson begins with a real person who started small: Orville and Wilbur Wright printing a neighborhood newspaper as young men, Margaret Rudkin baking bread in her kitchen, L. L. Bean refunding his first customers' money for boots that leaked, and R. G. LeTourneau, who built a great company and gave most of its profits away. Use this unit after the family market day, over the summer, or alongside the year.

PREREQUISITES

- Has finished, or is working through, Units 6–8 (entrepreneurship, bookkeeping, saving and giving)
- Has a parent willing to be a partner, supervisor and cash-box keeper
- Has checked local rules for selling food or running a stand

MASTERY CHECKLIST

- ☐ I can choose a business that meets a real need and write a one-page plan for it.
- ☐ I can make my product, find my costs per item and set an honest price.
- ☐ I can sell honestly and safely, keep a sales ledger and serve customers well.
- ☐ I can close my books with an income statement and a balance sheet, reflect on what I learned and give part of my profit.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Biz Kid\$ (public television series)**: Free videos made for public television, in which young people start real businesses and learn about money. Watch an episode on starting a business with a parent before Lesson 9.1. Ages 9–14.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

9.1 Choose and Plan: The One-Page Plan	2 sessions of 45 minutes
9.2 Make It and Cost It	2 sessions of 45 minutes
9.3 Sell It Honestly	2 sessions of 45 minutes
9.4 Close the Books: Profit, Lessons and Giving	2 sessions of 45 minutes

UNIT 9 REVIEW

Answer each question about your own business and the stories in this unit. Show your work for calculations. The review is worth 50 points.

1. 5 pts

Name the seven parts of a one-page business plan.

2. 5 pts

How did the Wright brothers' small businesses help them later?

3. 5 pts

A batch of 24 cookies uses \$3.60 of ingredients and \$0.60 of bags. Two cookies burn. What is the cost per good cookie?

4. 5 pts

Why could Margaret Rudkin charge 25 cents for bread when most bread cost 10 cents?

5. 5 pts

A customer buys an item for \$2.65 and pays with a \$10 bill. How much change is due? Count it up.

6. 5 pts

What happened to L. L. Bean's first 100 pairs of boots, and what did he do?

7. (5 pts)

What would happen to a young business that never wrote down its sales and never counted its cash?

8. (5 pts)

A business had revenue of \$96 and expenses of \$41. The owner repays a parent \$15 that was counted in expenses. What is the net profit? If the owner gives 10% and saves 30%, how much goes to each?

9. (5 pts)

What did R. G. LeTourneau mean by asking how much of God's money he should keep?

10. (5 pts)

Name one thing that went well in your business and one thing you would change, and explain why.

ANSWER KEY

1. The need, my customers, my product, costs and price, how I will sell, risks and safety, saving and giving.
2. Their printing and bicycle businesses taught them careful work and record keeping and earned the money that paid for their flying experiments.
3. Batch cost = \$4.20. Good cookies = 22. $\$4.20 \div 22 \approx \$0.19$ per cookie.
4. Her bread was made with better, wholesome ingredients, customers tasted the difference, and she told them honestly why it cost more.
5. \$7.35: $\$2.65 + 10\text{¢} = \$2.75$, $+ 25\text{¢} = \$3.00$, $+ \$2 = \$5.00$, $+ \$5 = \$10.00$.
6. Ninety pairs came back because the stitching failed. He refunded every customer, fixed the design and kept selling with the same guarantee.
7. It would not know whether it made a profit, could not find mistakes or missing money, and could not plan or repay its partner honestly.
8. Net profit = $\$96 - \$41 = \$55$ (the \$15 was already an expense). Give \$5.50; Save \$16.50; Spend \$33.00.
9. That everything he had belonged to God and he was a steward of it, so giving was not giving away his own money but managing God's money faithfully.
10. Answers vary; a full answer gives a specific success, a specific change and a reason based on the records.

PORTFOLIO PIECE: MY REAL BUSINESS REPORT

Put together a complete record of your business: the one-page plan and partnership agreement, your cost sheet, your sales ledger and cash counts, your income statement and balance sheet, a photograph or drawing of your product and your selling table, a note about your gift, and your one-page reflection. Present it to your family as a short report, as if they were investors hearing how their money was used.

LOOK FOR	WHAT IT MEANS
Plan	A complete one-page plan with real numbers and a signed partnership agreement.
Records	Cost sheet, sales ledger, cash counts, income statement and balance sheet are complete, correct and match the receipts.
Honesty and service	Prices, labels and guarantee were truthful; customers were served kindly; any problems were handled well.
Reflection and giving	An honest reflection with specific lessons, and the planned gift was given.

9.1 CHOOSE AND PLAN: THE ONE-PAGE PLAN

OBJECTIVES

- Choose a small business that meets a real need, that you can do well and safely.
- Write a one-page business plan with customers, product, price, costs, selling plan, risks and giving.
- Check local rules and set up safety rules and a partnership agreement with a parent.

Warm-up. Look back at your need-finding list from Lesson 6.1 and your one-page plan from the Unit 6 portfolio. Circle the idea you are most excited about. Then write one sentence: “My business will help ___ by ___.”

WATCH

Make A Business Plan! Tip #2 for Youth Entrepreneurs

Kids Markets • 2:43

<https://www.youtube.com/watch?v=4GwA2jtZOB8>

WHEN TO WATCH

Before you write your one-page plan.

Note: Young sellers at a children’s market explain how they plan and set goals.

BACKUP VIDEO

The Wright Brothers’ Cycle Shop | The Henry Ford’s Innovation Nation

The Henry Ford • 4:17

https://www.youtube.com/watch?v=_dxaU6izBIY

After the story of the Wright brothers’ businesses.

KEY TERMS

business plan

A written plan that explains what a business will sell, to whom, at what price, how it will make a profit and what risks it faces.

target customer

The kind of person most likely to need and buy your product or service.

goal

A specific result you aim for, with a number and a date, such as “sell 40 cards by June 30.”

permit

Written permission from a town or county to do something, such as sell food or set up a stand.

partnership agreement

A written agreement between partners about who does what, who pays for what and how profits are shared.

CORE IDEAS

The story. Long before they flew, Orville and Wilbur Wright of Dayton, Ohio, were young businessmen. As a teenager Orville learned printing and built his own printing press from scrap parts, including, the brothers later said, an old gravestone and the folding top of a buggy. In 1889 the brothers began publishing a small neighborhood newspaper, the *West Side News*, and they ran a print shop that printed handbills and papers for others. A few years later they opened a bicycle shop, repairing, selling and then building bicycles of their own design. The careful work and the profits from these small businesses paid for their flying experiments.

How they figured it out. The Wrights began with what they could do well and with what their neighbors needed: a local paper, printing for local businesses, and then repairs for the new bicycles that everyone wanted. They started small, used tools they built themselves to keep costs low, and kept careful accounts. When the newspaper did not pay well enough, they changed course. Every good small business begins this way: a real need, a skill you have, a small and careful start, and a willingness to change the plan.

The big idea. A **business plan** puts your thinking on paper before you spend money. A one-page plan answers seven questions: What need will I meet? Who are my **target customers**? What exactly will I sell? What will it cost me, and what price will I charge? How and where will I sell it? What could go wrong, and how will I make the risks smaller? How much of my profit will I save and give? Then set a **goal** with a number and a date. Remember Jesus’ words about the man who builds a tower: he “sitteth not down first, and counteth the cost” (Luke 14:28).

In business today. Banks and investors ask for a business plan before they lend or invest. Towns have rules for selling food and for stands on sidewalks, and some require a **permit**, so check with a parent before you begin. Partners write down who does what. You and your parent are partners: you will do the work and keep the books; your parent will supervise, keep the cash box safe and help you follow the rules.

PICTURE STUDY



Orville Wright and Edwin Sines in the Wright Bicycle Shop, Wright brothers, 1897 · Photograph · Library of Congress, Prints and Photographs Division

Image: [Wikimedia Commons](#), public domain

The Wright brothers took many photographs of their own work. In this one, Orville Wright (on the right) works beside his boyhood friend Edwin Sines, who had been his partner in a small printing business when they were teenagers. The careful work and steady profits of the Wrights' bicycle shop in Dayton, Ohio, paid for their experiments in flight.

Look closely

- Find the two men at work. What are they doing with their hands?
- Look at the tools and parts on the bench and the wall. Which ones can you name?
- Find the bicycle frames. Were they buying bicycles to sell, or making their own?

Talk about it

1. How did a small, steady business help the Wrights do something much bigger?
2. What skills from a bicycle shop might help someone build an airplane?
3. What skill do you have that could become a small business?

Safety first. A parent must approve the business and supervise all selling and money. Sell only to family, friends and neighbors you know; never sell door to door alone or online without a parent, and never give out personal information. Check your town's rules for food sales and stands.

PROJECT

My One-Page Plan and Partnership Agreement

You will choose your business, research your customers and costs, and write a one-page plan and a simple partnership agreement with your parent.

You will need

- Your Unit 6 plan and need-finding list
- Ledger notebook, a calculator and one clean sheet of paper for the final plan
- A parent partner

Steps

1. Choose your business with your parent. Make sure it meets a real need, that you can do it well, and that it is safe and allowed in your town.
2. Ask five possible customers you know whether they would buy, how many and at what price. Record their answers.
3. List every supply you will need and its cost. Find the cost per item (or per job) and choose a price, as you did in Lesson 6.4. Calculate your break-even point.
4. Write your one-page plan with seven headings: The need, My customers, My product, Costs and price, How I will sell, Risks and safety, Saving and giving.
5. Set one goal with a number and a date.
6. Write a partnership agreement with your parent: who pays for the first supplies (and whether you will pay it back from sales), who keeps the cash box, how many hours you will work, and what share of the profit you will save and give. Both sign it.
7. Make a calendar for the next three weeks: when you will make your product, when you will sell, and when you will close the books.

Tips

- Choose something you can make or do well again and again. Simple is good.
- If your parent lends you money for supplies, record it as a liability in your books, just as you learned in Lesson 7.3.

Check your work

- ☐ I chose a business that meets a real need and is safe and allowed.
- ☐ My one-page plan answers all seven questions with real numbers.
- ☐ My partner and I signed an agreement and a calendar.

LEDGER NOTEBOOK

1. Copy your one-page plan into your ledger notebook.
2. Draw a picture of your target customer and write three things he or she needs or likes.
3. Draw the Wright brothers' homemade printing press as you imagine it and label the parts they found or reused.

From history. The Wright Cycle Company's shop building was moved in 1937 to Henry Ford's museum village in Dearborn, Michigan, where visitors can still see it. Another building where the Wrights ran their bicycle and printing businesses still stands in Dayton as part of a national historical park.

COMMON MISTAKES

- Choosing something you cannot do well or safely. Start with a skill you have.
- Guessing your costs. Write down every supply and its real price.
- Skipping the rules. A business that ignores the town's rules or a parent's supervision is not a good business.

Make it a game · Sixty-Second Plan. Give a sixty-second pitch of your business plan to your parent. Your parent keeps a checklist of seven parts: customers, product, price, costs, selling plan, risks and giving. Score one point for each part, and note any missing permit or partner. Revise and pitch again to beat your score.

Scripture. "For which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?" (Luke 14:28, KJV)

You met this verse at the start of the year. Now you are the builder. A one-page plan is how a young business owner sits down first and counts the cost.

9.2 MAKE IT AND COST IT

OBJECTIVES

- Make your product or prepare your service carefully, with a quality standard.
- Keep a cost sheet and calculate the real cost per item, including small supplies.
- Tell how Margaret Rudkin started Pepperidge Farm from her kitchen and chose quality over the lowest price.

Warm-up. Read the ingredients on a loaf of store bread. Then look up a simple homemade bread recipe. Which list is longer? Why might homemade bread cost more to make than store bread, and why might some people pay more for it?

WATCH

PEPPERIDGE FARM - Life in America

Recollection Road • 8:06

<https://www.youtube.com/watch?v=UGuhoIV8pnU>

WHEN TO WATCH

After the story of Margaret Rudkin, before your first batch.

KEY TERMS

quality standard

A clear description of what every finished product must be like before it may be sold.

cost sheet

A table that lists every material and its cost, and calculates the cost of each item made.

batch

A group of items made at the same time, such as one tray of cookies.

cost per item

The total cost of a batch divided by the number of good items it made.

waste

Materials or items that are spoiled, broken or left over and cannot be sold.

CORE IDEAS

The story. In 1937 Margaret Rudkin lived on a farm called Pepperidge Farm in Fairfield, Connecticut. One of her sons was often ill, and a doctor suggested he eat

food made without the additives common in store bread of the time. So she began baking stone-ground whole-wheat bread herself with simple, wholesome ingredients. Her first loaves were failures, she later admitted, but she kept practicing. The doctor liked her bread so much that he ordered it for other patients. She took a loaf to her local grocer, who agreed to sell it, even though her bread cost 25 cents a loaf when most store bread sold for about 10 cents.

How they figured it out. Rudkin made a choice: she would not cut her costs by using cheaper ingredients. Instead, she would make the best bread she could and tell customers honestly why it cost more. Customers who tasted it came back for more, and orders grew so fast that she moved her bakery from her kitchen to the farm's garage and stables, and later to a real factory. She watched every cost, kept quality high and hired bakers she trained herself. Within a few years Pepperidge Farm bread was sold in many states, and in 1961 she sold the company to the Campbell Soup Company.

The big idea. Before you can price honestly, you must know your real costs. A **cost sheet** lists every ingredient or material, what you paid for it, and how much each batch uses. Divide the batch cost by the number of good items to find the **cost per item**. Do not forget small things: paper bags, ribbon, tape, labels. And watch for **waste**: if 2 of 24 cookies burn, your cost is spread over only 22. A clear **quality standard** means every item you sell is one you are proud of. Some customers will pay more for higher quality, as Rudkin's did, but only if the quality is real and you explain it truthfully.

In business today. Bakeries, factories and restaurants keep careful cost sheets and change them when the price of flour or fuel changes. Many small businesses compete not by being the cheapest but by being the best. Whatever you make, make it well: "Whatsoever ye do, do it heartily, as to the Lord" (Colossians 3:23).

PICTURE STUDY



The Milkmaid, Johannes Vermeer, about 1657–1658 · Oil on canvas · Rijksmuseum, Amsterdam

Image: [Wikimedia Commons](#), public domain

Vermeer painted this kitchen maid at her ordinary work, probably preparing bread pudding from stale bread and milk so that nothing would go to waste. He painted her with great care and dignity, as if her work mattered, because it did.

Look closely

- Watch the stream of milk. How carefully is she pouring? Why would she go slowly?
- Find the bread on the table. What might she be making with it?
- Look at the light from the window. Where does it fall?
- Look at her arms and hands. What do they tell you about her work?

Talk about it

1. How does this maid show care for quality and for not wasting anything?
2. Why do you think Vermeer chose to paint a maid at work instead of a rich lady?
3. What is your quality standard for your product? How will you check it?

Safety first. If you are baking or cooking, an adult must supervise the oven and stove, everyone washes hands, and you follow food-safety rules and your town's rules for selling food. Label any common allergens (such as nuts, milk, eggs or wheat) on every package.

PROJECT

My First Batch and Cost Sheet

You will make your first real batch, inspect it against your quality standard, and calculate exactly what each good item cost.

You will need

- The supplies for your product, with their receipts
- A kitchen scale or measuring cups, if needed
- Ledger notebook and a calculator

Steps

1. Write your quality standard: three to five things every finished item must have (for example: evenly baked, no broken edges, sealed bag, label with ingredients and price).
2. Rule a cost sheet: Material, Package size, Package price, Amount used in one batch, Cost for one batch.
3. For each material, calculate the cost for one batch. Example: a 5-pound bag of flour (about 18 cups) costs \$3.60, so each cup costs \$0.20; a recipe using 3 cups costs \$0.60 of flour.
4. Add up the cost of one batch, including packaging.
5. Make the batch. Inspect every item against your standard. Count the good items and the waste.
6. Calculate the cost per good item: $\text{batch cost} \div \text{number of good items}$.
7. Compare your cost per item with the price in your plan. Is your profit per item what you expected? Adjust the price or the recipe if you must, and write down why.

Tips

- Keep every receipt in an envelope. You will need them to close the books in Lesson 9.4.
- If a material will last for many batches (a cookie cutter, a stamp), it is a fixed cost, not part of the cost per item.

Check your work

- ☐ I have a written quality standard and my items meet it.
- ☐ My cost sheet includes every material and packaging, and my cost per item is correct.
- ☐ I compared my cost with my price and made a sensible decision.

LEDGER NOTEBOOK

1. Copy your cost sheet neatly.
2. Draw your finished product and its label or package.
3. Write a short note in Margaret Rudkin's voice explaining to a grocer why her bread costs 25 cents.

From history. Margaret Rudkin wrote *The Margaret Rudkin Pepperidge Farm Cookbook* in 1963, which included stories of how she began. She said that she had never baked a loaf of bread before she started, and that her success came from using the best ingredients and refusing to cut corners.

COMMON MISTAKES

- Forgetting packaging and small supplies in the cost.
- Dividing by the number of items made instead of the number of good items.
- Lowering quality to lower the cost without telling customers. If you change your product, be honest about it.

Make it a game • Guess the Real Cost. Your parent lists the supplies for a pretend batch of twelve items, including small ones such as a pinch of salt, and two items ruined as waste. Each of you guesses the cost per item first. Then work it out on a cost sheet. Closest guess wins, and the real cost is the answer.

9.3 SELL IT HONESTLY

OBJECTIVES

- Sell your product or service honestly and safely, with a pitch, price tags and a guarantee.
- Keep a sales ledger during selling and give correct change.
- Tell how L. L. Bean kept his guarantee when his first boots failed, and handle a customer's complaint well.

Warm-up. Practice making change. A customer buys an item for \$1.35 and pays with a \$5 bill. Count up from \$1.35 to \$5.00 out loud using coins and bills. How much change did you give?

WATCH

How To Sell Lots Of Stuff! Tip #8 for Youth Entrepreneurs

Kids Markets • 2:37

<https://www.youtube.com/watch?v=YKXlGe1CQsQ>

WHEN TO WATCH

Before your selling day; practice the greeting and closing questions.

BACKUP VIDEO

100th Anniversary Maine Hunting Shoe | L.L.Bean

L.L.Bean • 1:32

<https://www.youtube.com/watch?v=VogqTpkL5u8>

After the story of L. L. Bean.

KEY TERMS

customer service

Everything a business does to help customers before, during and after a sale.

guarantee

A promise to fix, replace or refund a product that does not meet the customer's reasonable expectations.

sales ledger

A record of every sale: date, item, quantity, price and amount received.

making change

Giving back the correct difference when a customer pays more than the price.

repeat customer

A customer who comes back to buy again, usually because he trusted the seller the first time.

CORE IDEAS

The story. Leon Leonwood Bean of Freeport, Maine, loved hunting and fishing but was tired of coming home with cold, wet feet. In 1912 he had a shoemaker stitch leather tops onto rubber work boots, making a light, waterproof hunting shoe. He mailed a small catalog to hunters and promised that his boots would give perfect satisfaction. He sold 100 pairs. Then trouble came: the stitching tore away from the rubber on most of them, and 90 pairs came back.

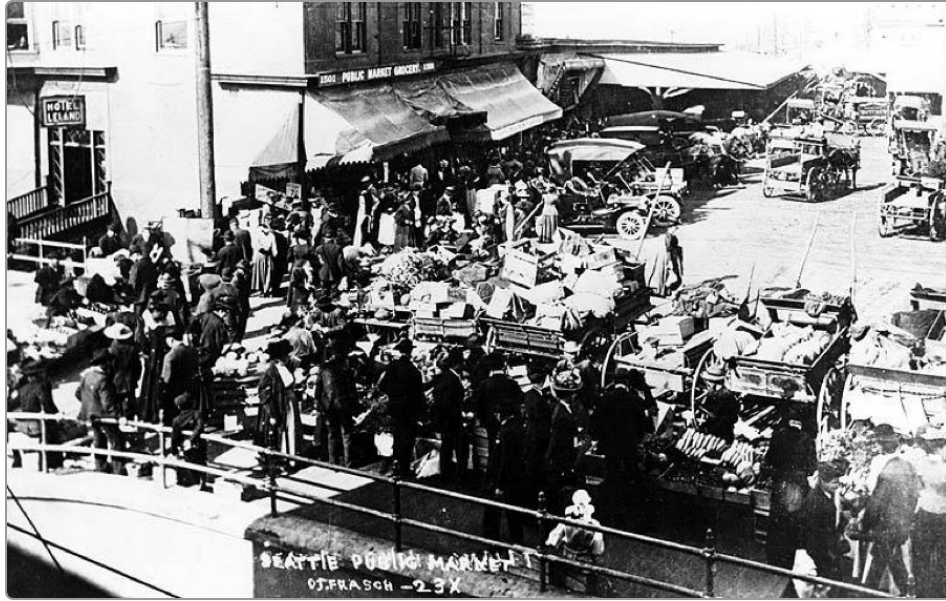
How they figured it out. L. L. Bean could have blamed the customers or kept their money. Instead he kept his promise. He refunded every one of the ninety customers, though it nearly put him out of business, and he went back to work to fix the design with a stronger rubber bottom. Then he sold the improved boots with the same guarantee. Customers learned that Bean meant what he said, and they came back for years. His guarantee became the heart of his business, which grew from a basement room under his brother's clothing store into a famous company that still sells the same kind of boot today.

The big idea. Honest selling means a truthful **pitch**, clear **price tags**, correct **change** and a **guarantee** you are willing to keep, even when it costs you. Good **customer service** means greeting people kindly, listening, thanking them, and fixing problems quickly. A complaint is a chance to win a customer's trust for good. Keep a **sales ledger** as you sell, so your books will be accurate. "A good name is rather to be chosen than great riches" (Proverbs 22:1); every **repeat customer** is a sign that you have earned one.

In business today. The best businesses train every worker to treat customers the way they themselves would want to be treated. They keep their promises about prices,

quality and delivery, and they make it easy to return a product that is not right. Your business is small, but the same rules apply. And for your safety, sell only with a parent nearby, only to people you know, and never handle money alone.

PICTURE STUDY



Vegetable Sellers at the Pike Place Market, Seattle, Unknown photographer, between about 1907 and 1920 · Photograph · Seattle Municipal Archives

Image: [Wikimedia Commons](#), public domain

In 1907 the city of Seattle opened the Pike Place Market so that farmers could sell their vegetables, fruit and eggs straight to the people who would eat them, instead of through middlemen. On the first day, farmers sold out within hours. The market still operates today.

Look closely

- Find the farmers' wagons and stalls. How did the farmers bring their goods to market?
- Look for horses and automobiles. What does that tell you about when this photograph was taken?
- Look at the crowd. Why would so many shoppers come to buy straight from farmers?

Talk about it

1. Why would farmers want to sell straight to customers?
2. How could a farmer here win repeat customers week after week?
3. How is your own selling day like this market?

Safety first. Sell only with a parent present, only to family, friends and neighbors you know, and never door to door alone. A parent keeps the cash box. Do not take card numbers or personal information, and do not sell online without a parent.

PROJECT

Selling Day

You will sell your product or service to people you know, with a parent supervising, keeping an honest ledger of every sale and practicing good customer service.

You will need

- Your products with price tags and labels
- A sign, your guarantee card and your one-minute pitch
- A cash box with change (counted and recorded before you start)
- Your ledger notebook ruled as a sales ledger: Time, Customer (first name or “neighbor”), Item, Quantity, Price, Amount received, Change given

Steps

1. Count the starting cash in the cash box with your parent and record it.
2. Set up your table or your service schedule. Put out your sign, price tags and guarantee card.
3. Greet each customer, give your pitch if he wants to hear it, and answer questions honestly.
4. For every sale, record it in the sales ledger before the next customer. Count the change back out loud.
5. If a customer has a complaint, listen, thank him, and keep your guarantee. Record what happened.
6. At the end, count the cash with your parent. Ending cash – starting cash should equal the total of your sales ledger. If it does not, look for the mistake.
7. Write a short note about one customer conversation that went well and one thing you would do differently.

Tips

- Smile and say thank you to everyone, whether or not they buy.
- If you are not sure about change, slow down and count it twice. Customers prefer careful to fast.

Check your work

- ☐ I sold honestly with clear prices and a guarantee.
- ☐ My sales ledger records every sale, and the cash count matches it.
- ☐ I served customers kindly and handled any problem well.

LEDGER NOTEBOOK

1. Copy your sales ledger and the cash-count check.
2. Draw your sales table as it looked, and label the sign, price tags, guarantee card and cash box.
3. Write L. L. Bean's guarantee in your own words and then your own guarantee underneath.

From history. L. L. Bean's store in Freeport, Maine, began staying open all night, every night, in the 1950s, because hunters and fishermen passed through at all hours. It has rarely closed its doors since.

COMMON MISTAKES

- Waiting until the end to write down sales. Record each sale as it happens.
- Giving change too quickly. Count up from the price to the amount paid.
- Arguing with a customer who has a complaint. Listen first, then keep your promise.

Make it a game • Change Streak. Set up a pretend shop with price tags. Your parent buys several items and pays with play money or real coins. Count the correct change back aloud, and write each sale on a sales ledger. Aim for ten correct sales in a row. A wrong change resets your streak. End with a friendly guarantee.

Scripture. "A good name is rather to be chosen than great riches, and loving favour rather than silver and gold." (Proverbs 22:1, KJV)

L. L. Bean gave back money he could have kept, and gained a good name that lasted more than a century. Honest selling is worth more than any single sale.

9.4 CLOSE THE BOOKS: PROFIT, LESSONS AND GIVING

OBJECTIVES

- Close the books of your business with an income statement and a balance sheet.
- Reflect honestly on what went well, what went wrong and what you learned.
- Tell how R. G. LeTourneau gave most of his income away, and give part of your own profit as you planned.

Warm-up. Gather every receipt, your cost sheet and your sales ledger. Before you add anything, guess: did your business make a profit? How much? Write your guess down.

WATCH

Manage the Money! Tip #3 for Youth Entrepreneurs

Kids Markets • 2:52

<https://www.youtube.com/watch?v=ll5ojLdatcU>

WHEN TO WATCH

Before you close your books.

BACKUP VIDEO

R.G. LeTourneau History

LeTourneau University • 2:12

<https://www.youtube.com/watch?v=nCUZWEUjdTw>

After the story of R. G. LeTourneau.

KEY TERMS

closing the books

Finishing the records for a period: adding up all revenue and expenses and preparing the financial reports.

net profit

What is left after every expense, including repaying any supplies a partner paid for, has been subtracted from revenue.

reflection

Thinking carefully about what happened, what you learned and what you will do differently.

firstfruits

In Scripture, the first and best part of a harvest, given to God before using the rest (Proverbs 3:9).

CORE IDEAS

The story. Robert Gilmour LeTourneau left school at fourteen, worked as an iron molder, a mechanic and a land-leveling contractor, and failed in business more than once. In the 1920s and 1930s he invented huge earthmoving machines, scrapers and bulldozers that helped build dams, roads and airfields around the world, and his company grew large. LeTourneau was a committed Christian. He believed that God had given him his inventions and his business, and he and his wife decided to give most of their income to God's work. In time they were giving about 90 percent and living on the other 10. He also founded a school, now LeTourneau University in Texas, to train young engineers and technicians.

How they figured it out. LeTourneau did not give carelessly. He kept his business healthy, paid his workers and suppliers, and reinvested in new machines, because a business that fails can give nothing. He set up a foundation to manage the giving, so that it would be done well and would continue. He used to say that the question was not how much of his money he would give to God, but how much of God's money he would keep for himself. That is the idea of **stewardship** you have studied all year.

The big idea. **Closing the books** means finishing the story your numbers tell. Add up every sale (revenue) and every cost (expenses), and subtract to find your **net profit**. Repay anything your parent partner lent you. Make a balance sheet for the last day: your cash and leftover supplies (assets), anything you still owe (liabilities), and what is truly yours (owner's equity). Then **reflect**: Did you meet your goal? What sold best? What would you change? Last, carry out the giving you planned. Scripture calls this honoring the Lord "with the firstfruits of all thine increase" (Proverbs 3:9).

In business today. Every business closes its books at the end of each month and year, studies the results, and plans the next season. Many business owners also give generously from their profits to their churches, to schools and to people in need. Your business may be small, but you have done what every real business owner does: you met a need, counted the cost, sold honestly, kept the books and shared the fruit of your work. *Fabricando fit faber*: by making, one becomes a maker.

PICTURE STUDY



Portrait of a Merchant, Jan Gossaert, about 1530 · Oil on panel · National Gallery of Art, Washington, D.C.

Image: [Wikimedia Commons](#), public domain

Jan Gossaert, a painter from the Low Countries, painted this merchant at his desk in the busy trading world of Antwerp. The papers hanging on the wall behind him are bundles of letters and accounts, one of them labeled “miscellaneous letters,” another “miscellaneous drafts.”

Look closely

- Find the pen and the open book. What might he be writing?
- Find the coins and the small balance on the desk. What would he weigh with it?
- Find the bundles of papers on the wall. Why would a merchant keep so many letters and records?
- Look at his face. Does he look worried, careful, proud or tired?

Talk about it

1. This merchant is closing his books, perhaps at the end of the day. What would he need to check?
2. Why would a wise merchant keep every letter and receipt?

3. If this merchant had a good year, what would you advise him to do with his profit?

PROJECT

Closing the Books and the Giving Day

You will finish your business's records, prepare an income statement and a balance sheet, write an honest reflection, and give part of your profit as you planned.

You will need

- Your receipts, cost sheet, sales ledger and cash box
- Ledger notebook and a calculator
- Your Give envelope

Steps

1. Add up all your revenue from the sales ledger. Check it against the cash count from Lesson 9.3.
2. Add up all your expenses from your receipts and cost sheets, including packaging and any fixed costs.
3. Prepare an income statement: Revenue – Expenses = Net profit (or loss). Calculate your profit margin.
4. Repay your parent partner for any supplies he or she paid for, and record it.
5. Prepare a balance sheet for your last day: assets (cash, leftover supplies), liabilities (anything still owed), owner's equity. Make sure it balances.
6. Divide your profit by your plan: Give, Save, Spend. Deliver your gift.
7. Write a one-page reflection: Did I meet my goal? What sold best and why? What went wrong and what did I learn from it? How did I treat my customers? Would I run this business again, and what would I change?
8. Share your books and your reflection with your family, and have a parent audit them against the receipts.

Tips

- A loss is not a failure if you learned from it and recorded it honestly. Many great businesses began with losses.
- Thank your parent partner and your customers. A thank-you note is good business and good manners.

Check your work

- ☐ My income statement and balance sheet are complete and correct.
- ☐ I repaid my partner, divided my profit and gave as I planned.
- ☐ My reflection is honest and names specific lessons and changes.

LEDGER NOTEBOOK

1. Copy your final income statement and balance sheet.
2. Draw a pie chart of how you divided your profit among Give, Save and Spend.
3. Write a short letter to yourself to read before you start your next business.

From history. R. G. LeTourneau's machines helped build airfields and roads during the Second World War, and some of his giant earthmovers were the largest wheeled vehicles of their day. He held about three hundred patents, and his engineering school, founded in 1946, still trains engineers today.

COMMON MISTAKES

- Counting revenue as profit. Subtract every expense first.
- Forgetting to repay a partner's loan before dividing profit.
- Writing a reflection that only lists successes. Honest lessons from mistakes are the most valuable part.

Make it a game • Close the Books Countdown. Set a five-minute countdown. Your parent hands you a pile of sales and cost slips. Total them, write a short income statement, and name the net profit. Then set aside firstfruits for giving. Finish by saying one thing that went well, one that went wrong, and one lesson learned.

Scripture. "Every man according as he purposeth in his heart, so let him give; not grudgingly, or of necessity: for God loveth a cheerful giver." (2 Corinthians 9:7, KJV)

You planned your giving before your business began. Now you carry it out, not because you must, but cheerfully, as a thank-you to God for the work He gave you to do.

BONUS: RUN A REAL BUSINESS

This optional bonus unit is your chance to do for real what you have studied all year. With a parent as your partner, you will choose a small business, plan it on one page, make your product or prepare your service, figure out what it costs, sell it honestly to people you know, and close the books with a profit report and a gift. Good first businesses include baked goods for neighbors and church friends, greeting cards or bookmarks, garden seedlings, pet care or yard help for families you know.

Each lesson begins with a real person who started small: Orville and Wilbur Wright printing a neighborhood newspaper as young men, Margaret Rudkin baking bread in her kitchen, L. L. Bean refunding his first customers' money for boots that leaked, and R. G. LeTourneau, who built a great company and gave most of its profits away. Use this unit after the family market day, over the summer, or alongside the year.

PREREQUISITES

- Has finished, or is working through, Units 6–8 (entrepreneurship, bookkeeping, saving and giving)
- Has a parent willing to be a partner, supervisor and cash-box keeper
- Has checked local rules for selling food or running a stand

MASTERY CHECKLIST

- ☐ I can choose a business that meets a real need and write a one-page plan for it.
- ☐ I can make my product, find my costs per item and set an honest price.
- ☐ I can sell honestly and safely, keep a sales ledger and serve customers well.
- ☐ I can close my books with an income statement and a balance sheet, reflect on what I learned and give part of my profit.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Biz Kid\$ (public television series)**: Free videos made for public television, in which young people start real businesses and learn about money. Watch an episode on starting a business with a parent before Lesson 9.1. Ages 9–14.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

9.1 Choose and Plan: The One-Page Plan	2 sessions of 45 minutes
9.2 Make It and Cost It	2 sessions of 45 minutes
9.3 Sell It Honestly	2 sessions of 45 minutes
9.4 Close the Books: Profit, Lessons and Giving	2 sessions of 45 minutes

UNIT 9 REVIEW

Answer each question about your own business and the stories in this unit. Show your work for calculations. The review is worth 50 points.

1. 5 pts

Name the seven parts of a one-page business plan.

2. 5 pts

How did the Wright brothers' small businesses help them later?

3. 5 pts

A batch of 24 cookies uses \$3.60 of ingredients and \$0.60 of bags. Two cookies burn. What is the cost per good cookie?

4. 5 pts

Why could Margaret Rudkin charge 25 cents for bread when most bread cost 10 cents?

5. 5 pts

A customer buys an item for \$2.65 and pays with a \$10 bill. How much change is due? Count it up.

6. 5 pts

What happened to L. L. Bean's first 100 pairs of boots, and what did he do?

7. (5 pts)

What would happen to a young business that never wrote down its sales and never counted its cash?

8. (5 pts)

A business had revenue of \$96 and expenses of \$41. The owner repays a parent \$15 that was counted in expenses. What is the net profit? If the owner gives 10% and saves 30%, how much goes to each?

9. (5 pts)

What did R. G. LeTourneau mean by asking how much of God's money he should keep?

10. (5 pts)

Name one thing that went well in your business and one thing you would change, and explain why.

ANSWER KEY

1. The need, my customers, my product, costs and price, how I will sell, risks and safety, saving and giving.
2. Their printing and bicycle businesses taught them careful work and record keeping and earned the money that paid for their flying experiments.
3. Batch cost = \$4.20. Good cookies = 22. $\$4.20 \div 22 \approx \$0.19$ per cookie.
4. Her bread was made with better, wholesome ingredients, customers tasted the difference, and she told them honestly why it cost more.
5. \$7.35: $\$2.65 + 10\text{¢} = \$2.75$, $+ 25\text{¢} = \$3.00$, $+ \$2 = \$5.00$, $+ \$5 = \$10.00$.
6. Ninety pairs came back because the stitching failed. He refunded every customer, fixed the design and kept selling with the same guarantee.
7. It would not know whether it made a profit, could not find mistakes or missing money, and could not plan or repay its partner honestly.
8. Net profit = $\$96 - \$41 = \$55$ (the \$15 was already an expense). Give \$5.50; Save \$16.50; Spend \$33.00.
9. That everything he had belonged to God and he was a steward of it, so giving was not giving away his own money but managing God's money faithfully.
10. Answers vary; a full answer gives a specific success, a specific change and a reason based on the records.

PORTFOLIO PIECE: MY REAL BUSINESS REPORT

Put together a complete record of your business: the one-page plan and partnership agreement, your cost sheet, your sales ledger and cash counts, your income statement and balance sheet, a photograph or drawing of your product and your selling table, a note about your gift, and your one-page reflection. Present it to your family as a short report, as if they were investors hearing how their money was used.

LOOK FOR	WHAT IT MEANS
Plan	A complete one-page plan with real numbers and a signed partnership agreement.
Records	Cost sheet, sales ledger, cash counts, income statement and balance sheet are complete, correct and match the receipts.
Honesty and service	Prices, labels and guarantee were truthful; customers were served kindly; any problems were handled well.
Reflection and giving	An honest reflection with specific lessons, and the planned gift was given.