

SPORTS & GAMES OF THE WORLD

First edition

8 units

32 lessons

A video for every lesson

FIRST EDITION

COURSE GUIDE

People have always played. Archaeologists have dug up game boards from the royal tombs of Ur, about 4,500 years old, and found that the same game was still being played two thousand years later. Children in Bruegel's Flanders rolled hoops and played leapfrog; children in Song-dynasty China kicked a feathered ball; Haudenosaunee players ran with sticks and a deer-hide ball across fields a mile long. This course follows those games around the world and through the centuries, from the first board games to the great sports that were written down as rules in the 1800s.

Every lesson follows the same path. First comes **the story**: a real place, real people and a real date. Then **how it changed** as the game traveled or grew. Then **how it is played**, with rules simple enough to try that afternoon. Last, **why it matters**: what the game teaches about skill, courage, fairness or friendship. In the second session the student makes the game from paper, beans, cardboard or a soft ball, plays it many times, and keeps a scorebook of every game.

God made people for work and for rest, and the prophet Zechariah saw a day when “the streets of the city shall be full of boys and girls playing.” Good play is one of His gifts. It teaches us to keep rules when no one is looking, to lose without sulking and win without boasting, and to enjoy other people. The course ends with a family games festival where the student teaches the games of the year to family and friends.

Most videos come from museums, halls of fame and trusted teaching channels: the British Museum, the Olympics, the National Baseball Hall of Fame, TED-Ed and a few careful history channels chosen lesson by lesson. Every video was previewed frame by frame and its description read, and its sponsors and advertising were checked. Some channels end with an invitation to subscribe or a short sponsor message; you can stop the video when the teaching ends. The

“when” note says when to watch, and a parent note flags anything to know in advance.

Start with Lesson 1.1 →

WHO IT IS FOR

Written for students in grades 4–7 (about ages 9–13). A 9-year-old can follow every lesson with a parent reading along; a 12-year-old can read it alone. No special skills are needed beyond reading, counting and simple measuring. Nothing needs to be bought: every game is made from paper, cardboard, dried beans, coins, buttons, plastic cups, a soft ball and a balloon.

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: making and playing the game, and filling in the scorebook. In the last week of each unit, add a third session for the unit review and the portfolio project.
2. **Story, change, play, meaning.** The core ideas are written to be read aloud or read alone. The paragraphs marked *The story* and *How it changed* tell what happened; *How it is played* gives the rules; *Why it matters* draws out the lesson for life. 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, drawing, museum object 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 the questions, which point back to the game and its history.
4. **The scorebook.** Keep one notebook for the whole year: the scorebook. For every game, write the date, the players and the rules you used, then keep score in a table. After the games, write one or two sentences: Who won most often? Was the game fair? What would you change? Honest scores matter more than winning.
5. **Making and playing.** Every project is a real game made at home and played many times, often against a parent or a brother or sister. Play at least five games before deciding whether a game is fair or which strategy works best. When a rule is unclear, agree on it before you start and write it down.

6. **Unit review and portfolio.** Each unit ends with a short review (50 points) and a portfolio project, such as a museum card for an ancient game, a scrapbook of the Olympics or a handmade games box. Keep the portfolio pages and photographs in one folder for the year; they become the displays at the games festival.
7. **Optional books and games.** Some units list free books, printables or family games that fit the lessons. They are extras, never required.
8. **Safety.** Read the safety box before every active game. Warm up, use soft balls and balloons indoors, keep clear of windows, lamps and people, and wear proper shoes. Sticks, brooms and bats are swung only outdoors with a clear circle and an adult watching. Fly kites only in open fields far from power lines. Stop if anything hurts, and tell a parent.
9. **The world games festival.** In the last week, set out the best game from each unit with its scorebook pages and let the student run a family games festival, teaching guests to play and keeping the scores.

SCOPE AND SEQUENCE

UNIT 1 • WEEKS 1-4

Why We Play

Why people play: work, rest and play in God's world (Zechariah 8:5); tag, hopscotch and marbles through history; the eighty games in Bruegel's *Children's Games*; and playing fair.

- 1.1 Made for Work and Play
- 1.2 Tag, Hopscotch, Marbles and Knucklebones
- 1.3 Bruegel's Children's Games
- 1.4 Playing Fair: Rules, Referees and Honest Play

UNIT 2 • WEEKS 5-8

The Oldest Board Games

The oldest board games: the Royal Game of Ur and Irving Finkel's rule tablet, Egyptian Senet, mancala, and Nine Men's Morris, each made from paper and beans.

- 2.1 The Royal Game of Ur
- 2.2 Senet: The Game of the Pharaohs
- 2.3 Mancala: The Sowing Game
- 2.4 Nine Men's Morris

UNIT 3 • WEEKS 9–12

The Olympics

The Olympics: the ancient Games and the stadion footrace, the olive wreath and Paul’s “so run, that ye may obtain,” Coubertin and the first modern Games at Athens in 1896, and Eric Liddell’s stand in 1924.

- 3.1 The Ancient Games and the Stadion
- 3.2 The Olive Wreath and Paul’s “So Run”
- 3.3 Coubertin and the First Modern Games, 1896
- 3.4 Eric Liddell: The Runner Who Would Not Run on Sunday

UNIT 5 • WEEKS 17–20

Games of Africa and the Americas

Games of Africa and the Americas: bao and the mancala family, the Mesoamerican rubber ball and its ballgame (and how Goodyear’s vulcanization led to today’s balls), lacrosse and the Haudenosaunee, and hockey in Canada.

- 5.1 Bao: East Africa’s Great Counting Game
- 5.2 The Rubber Ball: From Mesoamerica to Today
- 5.3 Lacrosse and the Haudenosaunee
- 5.4 Hockey and Canada

UNIT 4 • WEEKS 13–16

Games of Asia

Games of Asia: chess from India to Persia, Go and its 19-by-19 board, Chinese kites and cuju, and sepak takraw and cricket in India.

- 4.1 Chess: From India to the World
- 4.2 Go: Black and White Stones
- 4.3 Kites, Shuttlecocks and Cuju
- 4.4 Sepak Takraw and Cricket in India

UNIT 6 • WEEKS 21–24

Games of Europe

Games of Europe: the Football Association’s first rules (1863), golf at St Andrews, tennis from the jeu de paume to Wimbledon, and curling and the Highland games.

- 6.1 Soccer’s First Rules, 1863
- 6.2 Golf at St Andrews
- 6.3 Tennis: From the Jeu de Paume to Wimbledon
- 6.4 Curling and the Highland Games

UNIT 7 • WEEKS 25–28

America's Games

America's games: baseball and the Knickerbocker rules (1845), Naismith's basketball (1891), Morgan's volleyball (1895) and Walter Camp's football.

- 7.1 Baseball: The Knickerbocker Rules of 1845
- 7.2 Naismith's Basketball, 1891
- 7.3 Morgan's Volleyball, 1895
- 7.4 Walter Camp's Football

UNIT 8 • WEEKS 29–32

Family Games and a World Games Festival

Family games: Milton Bradley's *Checkered Game of Life* (1860), checkers and dominoes, inventing a game with fair rules, and a world games festival for the whole family.

- 8.1 The Mansion of Happiness and the Checkered Game of Life
- 8.2 Checkers and Dominoes
- 8.3 Inventing a Game with Fair Rules
- 8.4 A World Games Festival

WEEKLY PACING CALENDAR

WEEK	PLAN
1	- Session 1: Lesson 1.1 Made for Work and Play: warm-up, video, teaching and picture study - Session 2: Lesson 1.1 project and scorebook <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 Tag, Hopscotch, Marbles and Knucklebones: warm-up, video, teaching and picture study - Session 2: Lesson 1.2 project and scorebook
3	- Session 1: Lesson 1.3 Bruegel's Children's Games: warm-up, video, teaching and picture study - Session 2: Lesson 1.3 project and scorebook
4	- Session 1: Lesson 1.4 Playing Fair: Rules, Referees and Honest Play: warm-up, video, teaching and picture study - Session 2: Lesson 1.4 project and scorebook - Session 3: Unit 1 review and portfolio project
5	- Session 1: Lesson 2.1 The Royal Game of Ur: warm-up, video, teaching and picture study - Session 2: Lesson 2.1 project and scorebook

WEEK	PLAN
6	• Session 1: Lesson 2.2 Senet: The Game of the Pharaohs: warm-up, video, teaching and picture study • Session 2: Lesson 2.2 project and scorebook
7	• Session 1: Lesson 2.3 Mancala: The Sowing Game: warm-up, video, teaching and picture study • Session 2: Lesson 2.3 project and scorebook
8	• Session 1: Lesson 2.4 Nine Men's Morris: warm-up, video, teaching and picture study • Session 2: Lesson 2.4 project and scorebook • Session 3: Unit 2 review and portfolio project
9	• Session 1: Lesson 3.1 The Ancient Games and the Stadion: warm-up, video, teaching and picture study • Session 2: Lesson 3.1 project and scorebook
10	• Session 1: Lesson 3.2 The Olive Wreath and Paul's "So Run": warm-up, video, teaching and picture study • Session 2: Lesson 3.2 project and scorebook
11	• Session 1: Lesson 3.3 Coubertin and the First Modern Games, 1896: warm-up, video, teaching and picture study • Session 2: Lesson 3.3 project and scorebook
12	• Session 1: Lesson 3.4 Eric Liddell: The Runner Who Would Not Run on Sunday: warm-up, video, teaching and picture study • Session 2: Lesson 3.4 project and scorebook • Session 3: Unit 3 review and portfolio project
13	• Session 1: Lesson 4.1 Chess: From India to the World: warm-up, video, teaching and picture study • Session 2: Lesson 4.1 project and scorebook
14	• Session 1: Lesson 4.2 Go: Black and White Stones: warm-up, video, teaching and picture study • Session 2: Lesson 4.2 project and scorebook

WEEK	PLAN
15	• Session 1: Lesson 4.3 Kites, Shuttlecocks and Cuju: warm-up, video, teaching and picture study • Session 2: Lesson 4.3 project and scorebook
16	• Session 1: Lesson 4.4 Sepak Takraw and Cricket in India: warm-up, video, teaching and picture study • Session 2: Lesson 4.4 project and scorebook • Session 3: Unit 4 review and portfolio project
17	• Session 1: Lesson 5.1 Bao: East Africa's Great Counting Game: warm-up, video, teaching and picture study • Session 2: Lesson 5.1 project and scorebook
18	• Session 1: Lesson 5.2 The Rubber Ball: From Mesoamerica to Today: warm-up, video, teaching and picture study • Session 2: Lesson 5.2 project and scorebook
19	• Session 1: Lesson 5.3 Lacrosse and the Haudenosaunee: warm-up, video, teaching and picture study • Session 2: Lesson 5.3 project and scorebook
20	• Session 1: Lesson 5.4 Hockey and Canada: warm-up, video, teaching and picture study • Session 2: Lesson 5.4 project and scorebook • Session 3: Unit 5 review and portfolio project
21	• Session 1: Lesson 6.1 Soccer's First Rules, 1863: warm-up, video, teaching and picture study • Session 2: Lesson 6.1 project and scorebook
22	• Session 1: Lesson 6.2 Golf at St Andrews: warm-up, video, teaching and picture study • Session 2: Lesson 6.2 project and scorebook
23	• Session 1: Lesson 6.3 Tennis: From the Jeu de Paume to Wimbledon: warm-up, video, teaching and picture study • Session 2: Lesson 6.3 project and scorebook
24	• Session 1: Lesson 6.4 Curling and the Highland Games: warm-up, video, teaching and picture study

WEEK	PLAN
	• Session 2: Lesson 6.4 project and scorebook • Session 3: Unit 6 review and portfolio project
25	• Session 1: Lesson 7.1 Baseball: The Knickerbocker Rules of 1845: warm-up, video, teaching and picture study • Session 2: Lesson 7.1 project and scorebook
26	• Session 1: Lesson 7.2 Naismith's Basketball, 1891: warm-up, video, teaching and picture study • Session 2: Lesson 7.2 project and scorebook
27	• Session 1: Lesson 7.3 Morgan's Volleyball, 1895: warm-up, video, teaching and picture study • Session 2: Lesson 7.3 project and scorebook
28	• Session 1: Lesson 7.4 Walter Camp's Football: warm-up, video, teaching and picture study • Session 2: Lesson 7.4 project and scorebook • Session 3: Unit 7 review and portfolio project
29	• Session 1: Lesson 8.1 The Mansion of Happiness and the Checkered Game of Life: warm-up, video, teaching and picture study • Session 2: Lesson 8.1 project and scorebook
30	• Session 1: Lesson 8.2 Checkers and Dominoes: warm-up, video, teaching and picture study • Session 2: Lesson 8.2 project and scorebook
31	• Session 1: Lesson 8.3 Inventing a Game with Fair Rules: warm-up, video, teaching and picture study • Session 2: Lesson 8.3 project and scorebook
32	• Session 1: Lesson 8.4 A World Games Festival: warm-up, video, teaching and picture study • Session 2: Lesson 8.4 project and scorebook • Session 3: Unit 8 review and portfolio project <i>Last week. Hold a family game day: the student runs the culminating event from Unit 8 and shows guests the scorebook and the best project from each unit.</i>

MATERIALS

A scorebook (any bound notebook), pencils, a ruler and colored pencils

One notebook for the whole year: rules, score tables, drawings and “what I would change.”

Card stock or cereal-box cardboard, paper, tape, glue and scissors

For game boards, playing pieces and the games box.

Dried beans (about 100), buttons, coins and bottle caps

Counters and playing pieces for Ur, Senet, mancala, Nine Men’s Morris, bao and checkers.

Two empty egg cartons (12-cup)

The mancala and bao boards in Units 2 and 5.

Two ordinary dice and four coins

Four coins tossed together make the ancient “dice” of Ur and Senet: count the heads.

A soft foam ball, a tennis ball, a beach ball and a few balloons

For the active games: cuju, sepak takraw, volleyball, tennis and basketball. Balloons and foam balls are the indoor balls.

A laundry basket or bucket, plastic cups and string

Naismith’s peach basket, skittles, and a net for balloon volleyball.

Sidewalk chalk or masking tape and a tape measure

For hopscotch courts, the stadion track, curling targets and playing fields.

Two brooms or plastic hockey sticks and a pair of rolled socks

For floor hockey and the lacrosse and curling projects. Swing only outdoors or in a clear room with an adult.

A stopwatch or phone timer

For timing races and games.

Optional: a checkers set, a chess set, dominoes

Homemade boards and pieces work just as well.

GRADING

Grades come mostly from the projects, the scorebook and the portfolio, because games are learned by making and playing them. A game that turned out unfair, honestly recorded and then improved, earns full credit.

PART	%
Projects (making the game, playing it, following the rules)	40
Scorebook (rules written down, score tables, honest records, reflections)	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 who won. Did the student make the game carefully, write down the rules, play enough games to learn something, keep honest scores and think about fairness?
- A scorebook page earns full marks when it has a date, the rules used, a score table and one or two sentences of reflection.
- Unit reviews may be done aloud for a student who writes slowly; the parent writes down the answers.
- Keep each unit's portfolio pages and photographs in one folder. They make a fine record of the year and the centerpiece of the world games festival.

A NOTE TO PARENTS

You do not need to be an athlete or a historian to teach this course. Read the story aloud, watch the video together, and then be the student's first opponent. Ask "Who do you think will win, and why?" before a game and "Was that fair?" after it. Those two questions teach most of what the course is about.

Games are a wonderful school for character. Expect sulking after losses and crowing after wins, especially at first, and treat them gently as part of the lesson. Praise careful rule-keeping and good manners more than victories. The course tells the history of the games plainly: it says once, plainly, that the ancient Greek Games honored a pagan god, and it leaves out the darker parts of some ancient games. Its pictures were chosen and checked for modesty.

Many projects are active. Clear a space, use soft balls and balloons indoors, and be present for anything with a stick, a bat or a kite. Every game in the course can be played with what you already have at home.

UNIT 1

WHY WE PLAY

Every people in history has played. Children in ancient Egypt rolled balls of stitched leather, Roman children played with nuts and knucklebones, and Flemish children in 1560 rolled hoops and played leapfrog in the town square. In this unit you will learn why play is one of God's good gifts, how some of the oldest games in the world are still played on playgrounds today, and what a painter named Pieter Bruegel saw when he filled one picture with about two hundred and fifty children at play.

Last, you will learn the most important rule of every game: play fair. A game only works when everyone keeps the same rules, even when no one is watching. You will meet a famous umpire and a famous golfer who showed what that means, and you will write the rules for a game of your own and play it with a referee.

PREREQUISITES

- Can read a short paragraph and tell it back in his or her own words
- Can count, add and make a simple tally
- Has a notebook to use as a scorebook for the year

MASTERY CHECKLIST

- ☐ I can explain from Scripture why work, rest and play are all good gifts from God.
- ☐ I can tell the history of tag, hopscotch, marbles and knucklebones, and play each one.
- ☐ I can find at least ten games in Bruegel's

Children's Games and play five of them.

Children's

Games

Children's

Games

Children's

Games

- ☐ I can explain why rules and referees make a game fair, and write clear rules for a game.
- ☐ I can keep a scorebook with the date, the rules, a score table and a sentence about fairness.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **William Wells Newell, *Games and Songs of American Children* (Project Gutenberg):**
Free. An 1883 collection of the rhymes and rules of American playground games, many of them centuries old, for finding more games for Lessons 1.1–1.3. A parent should choose the games to read aloud. Ages 9+.

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 for Work and Play	2 sessions of 45 minutes
1.2	Tag, Hopscotch, Marbles and Knucklebones	2 sessions of 45 minutes
1.3	Bruegel's Children's Games	2 sessions of 45 minutes
1.4	Playing Fair: Rules, Referees and Honest Play	2 sessions of 45 minutes

UNIT 1 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

- 5 pts**
What did the prophet Zechariah see as a sign of a happy, peaceful city?
- 5 pts**
Name two toys or games that archaeologists have found from ancient times.
- 5 pts**
Where does the word “hopscotch” come from?
- 5 pts**
What were the first knucklebones made from, and what modern game comes from them?

5. (5 pts)

Who painted *Children's Games*, in what year, and about how many children are in it?

6. (5 pts)

Name four games from Bruegel's painting that children still play today.

7. (5 pts)

Why do historians treat Bruegel's painting as a record of the past?

8. (5 pts)

Who was Bill Klem, and why did players trust him?

9. (5 pts)

What happened to Bobby Jones at the 1925 U.S. Open, and what did it cost him?

10. (5 pts)

What would happen if one player in a game could change the rules whenever he wanted? Use 2 Timothy 2:5 in your answer.

ANSWER KEY

1. Streets “full of boys and girls playing,” along with old men and women sitting in the streets (Zechariah 8:5).
2. Any two: leather balls, spinning tops, clay whistles, wheeled toy carts, dolls, knucklebones, game boards, clay marbles.
3. From “hop” and “scotch,” an old word for a line scratched on the ground. It appears in English writing by 1677 as “scotch-hoppers.”
4. The small ankle bones of sheep. The game of jacks comes from knucklebones.
5. Pieter Bruegel the Elder, in 1560. There are about 250 children playing more than 80 games.
6. Any four: leapfrog, hoop rolling, spinning tops, stilts, blind man’s buff, knucklebones, tug-of-war, piggyback, hobbyhorses, building with bricks, ball games.
7. Because he painted the games, toys and clothes of 1560 carefully and accurately, so it shows what children really played then.
8. A National League umpire from 1905 to 1941 who worked 18 World Series. Players trusted him because he called the game the same for both teams and stood by his decisions.
9. His ball moved slightly as he set his club down. No one else saw it, but he called a one-stroke penalty on himself. He tied for first and lost the playoff, so the honest penalty cost him the championship.
10. The game would stop being fair or fun, and no one could truly win. Paul wrote that an athlete is not crowned “except he strive lawfully”: a win without keeping the rules is no real win.

PORTFOLIO PIECE: MY FAMILY’S BOOK OF GAMES

Make a small book of at least six games: two from your family interviews, two from this unit’s ancient playground games, and two from Bruegel’s painting. For each game, write a page with its name, where and when it was played, the equipment needed, the rules in numbered steps, and a drawing or photograph of you playing it. Add a cover, a title page with Zechariah 8:5, and a last page called “Our Rules for Fair Play” listing five rules your family will keep in every game this year.

LOOK FOR	WHAT IT MEANS
Six complete games	Each game has its history, equipment, numbered rules and a picture.
Clear rules	Someone who has never played could follow the rules without asking questions.
History	Each game is placed correctly in time and place, using facts from the lessons and interviews.
Fair-play page	Five sensible rules for fair play, at least one connected to 2 Timothy 2:5.
Care and neatness	Neat writing, a cover and title page, and pages in order.

1.1 MADE FOR WORK AND PLAY

OBJECTIVES

- Explain from Scripture why work, rest and play are all part of God's good design.
- Describe some of the oldest toys and games that archaeologists have found.
- Interview an older relative about the games of his or her childhood and play two of them.

Warm-up. Make a quick list: every game you played in the last week, indoors and outdoors. Which one is the oldest, do you think? Which one would a child two hundred years ago recognize?

WATCH

Historic Children's Games #timetraveltuesday

Culture & Heritage Museums • 2:09

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

WHEN TO WATCH

After the core ideas. Museum staff in 1800s dress play hoop rolling, Annie Over and the game of graces, games that need almost nothing.

KEY TERMS

play

Something done for its own enjoyment, like a game, a sport or make-believe.

Sabbath

The day of rest God gave His people after six days of work (Exodus 20:8-11).

recess

A break for play in the middle of the school day.

game

Play with rules and a goal, such as reaching the end first or capturing the most pieces.

archaeologist

A person who studies the past by digging up and examining the things people left behind.

CORE IDEAS

The story. About 2,500 years ago, the prophet Zechariah looked forward to a day when the ruined city of Jerusalem would be rebuilt and full of life again. What picture of a happy, safe city did God give him? Old men and women sitting in the streets, and “the streets of the city shall be full of boys and girls playing in the streets thereof” (Zechariah 8:5). Children at play were a sign of peace and blessing.

How it changed. God made the world in six days and rested on the seventh, and He gave people both work and rest. Play fits into that rest. Archaeologists have found toys and games in almost every ancient place they have dug: balls of stitched leather and spinning tops in Egypt, clay whistles in the Indus Valley, little wheeled carts in ancient Turkey, and dolls, knucklebones and game boards in Greece and Rome. The toys changed from clay and wood to plastic, but the games themselves changed surprisingly little. A child from ancient Rome would understand tag, catch and hide-and-seek right away.

How it is played. In 1872 the American painter Winslow Homer painted a group of country schoolboys at recess playing a game called snap the whip. The boys hold hands in a long line and run. Then the boy at one end, the “anchor,” stops suddenly and the line swings around like a whip, until the boys at the far end are flung loose and tumble into the grass. There is no board and no ball, just a field and friends. Many of the best games need nothing else.

Why it matters. Play is not a waste of time. It rests the mind, strengthens the body and teaches lessons that are hard to learn any other way: taking turns, keeping rules, losing well and enjoying other people. But play is good in its place. Solomon wrote that there is “a time to weep, and a time to laugh; a time to mourn, and a time to dance” (Ecclesiastes 3:4). Work comes first, and play is the refreshment that follows it.

PICTURE STUDY



Snap the Whip, Winslow Homer, 1872 · Oil on canvas · Butler Institute of American Art, Youngstown, Ohio

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

Winslow Homer grew up in New England and worked as an artist for *Harper's Weekly* magazine. A few years after the Civil War he painted this scene of country schoolboys at recess. Many Americans loved it because it showed an ordinary, happy moment of childhood. Homer painted a smaller version too, and the magazine printed a copy as an engraving in 1873.

Look closely

- Count the boys in the line. Which boy is the “anchor” holding everyone back?
- Find the two boys who have been flung loose at the end of the whip. What happened to them?
- Look at the boys' feet. Why might country children in 1872 play barefoot?
- Find the schoolhouse and the girls in the distance. What are they doing?

Talk about it

1. The game needs no equipment at all. What does it need instead?
2. Why do you think the boy at the very end of the line has the hardest job?
3. What games do children play at recess today that these boys would recognize?

Safety first. Play running games on soft grass with plenty of space, away from trees, fences and the street. Snap the whip is not part of the project: the children at the end can be flung hard. Stop if anything hurts, and tell a parent.

PROJECT

The Games Interview

Every family has a history of games. In this project you will interview two or three older people about the games they played as children, write down the rules, and then play two of those games yourself.

You will need

- Scorebook and pencil
- Two or three older relatives or neighbors (in person or on the phone)
- Whatever the games need: a ball, chalk, a rope, coins or nothing at all

Steps

1. **Prepare.** Write these questions in your scorebook: Where did you grow up? What games did you play at recess or after school? Which was your favorite? How did you play it? Did you ever argue about the rules?
2. **Interview.** Ask each person the questions and write down the answers. Ask them to explain the rules of one game slowly, step by step.
3. Make a table in your scorebook with four columns: person, year they were about your age, game, and equipment needed.
4. Choose two games from your interviews that you can play at home.
5. Write the rules of each game in numbered steps, as clearly as you can.
6. **Play.** Play each game at least three times with family members. Keep score or record who won each time.
7. **Compare.** Was the game the same as the one you play today, a little different, or completely new to you? Write two sentences about what changed and what stayed the same.

Tips

- Grandparents often remember games with funny names. Ask them to write the name down for you.
- If a rule is unclear, ask the person what they did when there was an argument.

- Take a photograph of the person you interviewed for your portfolio, if they agree.

Check your work

- ☐ I interviewed at least two people and recorded their answers.
- ☐ I wrote the rules of two old games in numbered steps and played each one at least three times.
- ☐ I can explain one thing that changed and one that stayed the same.

SCOREBOOK

1. Start your scorebook: write your name, the year and the verse Zechariah 8:5 on the first page.
2. Draw a timeline across one page from 3000 BC to today and mark three toys or games from this lesson on it.
3. Make a score table for the two games you played: date, players, winner, and one sentence about the game.

From history. The word “recess” comes from a Latin word meaning “to go back” or “to withdraw.” American schools in the 1800s gave children a morning and an afternoon recess, and many of the games played in Homer’s painting, like tag, ring games and snap the whip, were already old when he painted them.

COMMON MISTAKES

- Thinking that games are new. Most playground games are hundreds or thousands of years old.
- Writing rules that only make sense to you. Read them to someone who has never played and see if they understand.
- Treating play as more important than work. Play is the rest that follows work, not a replacement for it.

Make it a game • Oldest Toy Detectives. Play archaeologist. Your parent hides five small household objects in a room, each standing for a toy or game long ago: a stone, a stick, a bead, a shell, a scrap of cloth. You find each one and say what game it might have been used for. Then name one reason from Scripture that work, rest and play all belong in God's design.

Scripture. “And the streets of the city shall be full of boys and girls playing in the streets thereof.” (Zechariah 8:5, KJV)

God promised a rebuilt Jerusalem where children could play safely. Play in peace is a picture of His blessing.

1.2 TAG, HOPSCOTCH, MARBLES AND KNUCKLEBONES

OBJECTIVES

- Tell the history of four very old games: tag, hopscotch, marbles and knucklebones (jacks).
- Mark out a hopscotch court and a marbles ring with correct measurements.
- Play each game several times and record the results in a scorebook.

Warm-up. Play one round of freeze tag in the yard or a clear room (walking only indoors). Then sit down and answer: Who made up the rules of tag? Where did you learn them?

WATCH

18th Century Children's Games

The Conococheague Institute • 4:06

<https://www.youtube.com/watch?v=xnoxT-GU-qU>

WHEN TO WATCH

After the story paragraph. A living-history museum in Pennsylvania shows children the games of the 1700s.

KEY TERMS

tag

A chasing game in which the player who is “it” tries to touch another player, who then becomes “it.”

marbles

Small hard balls of clay, stone or glass, shot with the thumb to knock other marbles out of a ring.

hopscotch

A hopping game played on a numbered court drawn on the ground. The name comes from “hop” and “scotch,” an old word for a scratched line.

knucklebones

An ancient tossing-and-catching game first played with the small ankle bones of sheep; the game of jacks comes from it.

shooter

The marble a player flicks with the thumb to hit the others.

CORE IDEAS

The story. In 1922 boys and girls from cities across America came to a national marbles tournament to find out who could shoot best. The National Marbles Tournament is still held every summer in Wildwood, New Jersey, and young players still crouch at a ring 10 feet across and flick their shooters with their thumbs. The game they play is thousands of years old: small clay balls have been found in the ruins of ancient Egypt and the Indus Valley, and Roman children played very similar games with nuts.

How it changed. Marbles were first made of clay, stone or polished nuts. In the 1840s German glassmakers invented special tongs called marble scissors to shape hot glass into perfect balls, and by the late 1800s factories were making marbles by the million. Knucklebones began with the little ankle bones of sheep, which have four different sides and can be tossed and caught on the back of the hand. Greek and Roman children played it, and later the bones were replaced by metal or plastic jacks and a small rubber ball. Hopscotch appears in English writing by 1677 as “scotch-hoppers”; a “scotch” was a line scratched in the dirt. No one knows who invented tag. It is played in some form everywhere, from “tig” in England to “la mancha” in Spain.

How it is played. In hopscotch, you toss a small stone onto square 1, hop over it on one foot through all the squares, land on two feet where two squares sit side by side, turn around at the top, and hop back, picking up the stone on the way. Then you toss to square 2, and so on. If your stone misses its square or you step on a line, your turn ends. In Ringer, the game played at the national tournament, 13 marbles are set in an X in the middle of the ring, and players take turns flicking a shooter from outside the ring. Each marble you knock out counts one point, and you keep shooting as long as you knock one out.

Why it matters. These games have lasted because they need almost nothing: a few stones, a scratched line, some friends. They also teach real skills. Hopscotch builds balance and careful footwork; marbles builds a steady hand and good aim;

knucklebones builds quick eyes and hands; tag builds speed and quick decisions.
And every one of them depends on honesty: did your foot touch the line, or not?

PICTURE STUDY



Boys Playing Marbles, André-Henri Dargelas, about 1860 · Drawing on paper · Walters Art Museum, Baltimore

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

André-Henri Dargelas was a French artist who loved to draw and paint children at play and at school. In this drawing, made about 1860, boys are playing marbles in the dust of a village square. The ring is scratched into the ground, just as it is in marbles games today.

Look closely

- Find the ring drawn in the dirt. How many marbles can you see inside it and outside it?
- Look at the crouching boy's hand. How is he holding his shooter?
- Look at the standing boy who is bent forward. What is he watching for?
- Find the basket. What might be inside it?

Talk about it

1. Why does the shooter get so low to the ground?
2. What could the watching boys be checking to make sure the game is fair?
3. How is this game the same as marbles games played today, more than 160 years later?

Safety first. Draw hopscotch courts on a driveway or sidewalk away from traffic, with an adult nearby. Play tag on grass or in a clear room, walking only indoors. Keep marbles and jacks away from small children, who might swallow them.

PROJECT

Four Ancient Playground Games

You will mark out a hopscotch court and a marbles ring, make a set of knucklebones, and play all four games from this lesson, keeping score in your scorebook.

You will need

- Sidewalk chalk (or masking tape on a smooth floor) and a tape measure
- A small flat stone or bean bag for hopscotch
- Marbles (about 13 per game), or dried beans and a bottle cap as a shooter
- Five small stones or five dried beans as knucklebones, and a small ball if you have one
- Scorebook and pencil

Steps

1. **Hopscotch.** Draw a court of eight squares, each about 1 foot (30 centimeters) on a side: three single squares, a pair, a single, a pair, and a half-circle “home” at the top. Number them 1 to 8.
2. Play hopscotch with a partner. Record in your scorebook how far each player gets before making a mistake. Play at least five rounds.
3. **Marbles.** Draw a ring about 3 feet (1 meter) across. Place 13 marbles in an X in the middle. Take turns shooting from outside the ring. Count how many marbles each player knocks out.
4. **Knucklebones.** Sit on the floor. Toss all five stones down. Pick one up, toss it in the air, grab another stone from the floor, and catch the tossed stone in the same hand. Keep going until you have all five (“onesies”). Then try picking up two at a time (“twosies”).
5. Record how many tries it takes you to finish onesies and twosies.
6. **Tag.** Play three kinds of tag outdoors: freeze tag, shadow tag (step on someone’s shadow) and tunnel tag (crawl under a frozen player’s arms to free them). Write the rules of each in your scorebook.

7. Make a table of all four games: equipment needed, skill used (balance, aim, quick hands or speed), and which game you were best at.

Tips

- In marbles, “knuckle down” means keeping one knuckle touching the ground when you shoot. It makes your aim steadier.
- In hopscotch, toss the stone gently. Spinning it makes it slide.
- Agree before you start whether marbles knocked out are kept for the game only or “for keeps.” In this course, every marble goes home with its owner.

Check your work

- ☐ I marked out a hopscotch court and a marbles ring and played both at least five times.
- ☐ I can play onesies and twosies in knucklebones.
- ☐ I can tell the history of each of the four games in one or two sentences.

SCOREBOOK

1. Draw your hopscotch court with its measurements and numbers.
2. Make a score table for marbles: round, player, marbles knocked out. Add up the totals.
3. Write the rules of your favorite kind of tag in numbered steps, as if for a child who has never played.

From history. The Roman emperor Augustus, ruler when Jesus was born, liked to relax by playing knucklebones and games with nuts, according to the Roman writer Suetonius. Even emperors enjoyed the same simple games as the children in the street.

COMMON MISTAKES

- Thinking the games were invented recently. All four are hundreds or thousands of years old.
- Changing the rules in the middle of a game. Agree on the rules first and write them down.
- Playing marbles “for keeps” without agreeing first. That leads to hurt feelings.

Make it a game • Playground Time Machine. Race the clock to draw a hopscotch court and a marbles ring on paper with the correct measurements from memory. Then tell your parent one fact about each of the four games: tag, hopscotch, marbles and knucklebones. Your parent keeps a tally of facts. Beat your own score of correct facts in a second round.

1.3 BRUEGEL'S CHILDREN'S GAMES

OBJECTIVES

- Describe Pieter Bruegel the Elder's painting *Children's Games* (1560) and why it is a record of history.
- Identify at least ten games in the painting and name their modern versions.
- Play five of Bruegel's games and record how they went.

Warm-up. Look at the picture for this lesson for one full minute without talking. Then cover it and list every game you remember seeing. How many did you find?

WATCH

Children's Games by Pieter Bruegel the Elder (1560)

World Heritage Notes • 8:36

https://www.youtube.com/watch?v=F_BYMqKU9LI

WHEN TO WATCH

Before the picture study. The camera moves slowly across the painting; try to name each game before the narrator does.

Note: A small channel. It shows details of the painting only; parents may wish to preview it.

KEY TERMS

Flanders

A region in what is now Belgium, home to many great painters in the 1400s and 1500s.

genre painting

A painting of ordinary people doing ordinary things, such as working, eating or playing.

leapfrog

A game in which players take turns vaulting over the bent backs of the others.

hoop rolling

A game of rolling a large hoop along the ground and keeping it upright by tapping it with a stick.

stilts

Tall poles with footrests that let a person walk high above the ground.

CORE IDEAS

The story. In 1560 the Flemish painter Pieter Bruegel the Elder painted a town square filled from edge to edge with children: about two hundred and fifty of them, playing more than eighty different games. The painting is about 4 feet high and 5 feet wide and hangs today in the Kunsthistorisches Museum, the great art museum of Vienna, Austria. Bruegel did not paint kings or saints here. He painted ordinary children doing what children do.

How it changed. Because Bruegel painted so carefully, historians use his picture like a photograph from 1560. In it you can find leapfrog, hoop rolling, spinning tops, stilts, blind man's buff, knucklebones, piggyback fights, tug-of-war, building with bricks, hobbyhorses, a ball made from a blown-up pig's bladder, and many more. Most of these games are still played. The tops are plastic now, the hoops are hula hoops and the balls are rubber, but a child from 1560 would know exactly what to do with them.

How it is played. Take leapfrog. One player bends over with hands on knees and head tucked down. The next player runs up, puts both hands on the first player's back, spreads his legs wide and vaults over. Then he bends over a few steps farther on, and the next player jumps over both. The line moves across the field like a wave. Hoop rolling is just as simple: give the hoop a push and keep it rolling with light taps of a stick. The skill is in the timing.

Why it matters. Bruegel's painting shows something worth noticing: children make up games with whatever is at hand. A barrel becomes a horse, a fence becomes a climbing frame, a pile of bricks becomes a building site. Look closely, and you will also see children who are not playing nicely. Some are pulling hair and some are pushing. Games can bring out the best and the worst in us, which is why fair play matters so much (Lesson 1.4).

PICTURE STUDY



Children's Games (detail), Pieter Bruegel the Elder, 1560 · Oil on oak panel · Kunsthistorisches Museum, Vienna

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

This is one corner of Bruegel's huge painting. The whole picture is crowded with about two hundred and fifty children. In this corner alone you can find more than a dozen games. Bruegel painted the clothes children really wore in Flanders in 1560: caps, long coats, aprons and bright red and green stockings.

Look closely

- Find the boys playing leapfrog or piggyback near the bottom of the picture.
- Find the ring of red bricks. What might the children be building?
- Find the girl holding a round, pale ball. Balls like this were made from a blown-up pig's bladder.
- Find the children who are not being kind to each other. What are they doing?
- Count the hats lying on the ground. Why might they be there?

Talk about it

1. Which games in this picture do you still play today?
2. Why do you think Bruegel painted ordinary children instead of kings or soldiers?

3. If you painted the games children play today, what would you put in your picture?

Safety first. Play leapfrog only on soft grass, with players of similar size, and vault with your hands flat on the partner's back, never on the head or neck. Walk on stilts or tin-can stilts only on flat ground with an adult watching. Clear a wide space for hoop rolling.

PROJECT

Five Games from 1560

Bruegel's children played with hoops, tops, sticks and each other. You will choose five games from his painting, play each one, and keep a record of how it went, just as a historian might test whether the games really work.

You will need

- A hula hoop or bicycle rim and a short stick
- A spinning top, or a homemade top: a pencil pushed through the center of a cardboard circle about 3 inches (8 centimeters) across
- A blindfold (a soft scarf) for blind man's buff
- Two empty tin cans and string for tin-can stilts (with an adult)
- A balloon (the modern "bladder ball") and a rope for tug-of-war
- Scorebook and pencil

Steps

1. **Find.** With a parent, look at the whole painting online at a museum website or in a book, and list at least ten games you can find. Compare your list with the picture in this lesson.
2. Choose five games from your list that you can play safely at home: for example, hoop rolling, spinning tops, blind man's buff, leapfrog and tug-of-war.
3. **Hoop rolling.** Roll the hoop with taps of the stick. Time how long you can keep it rolling. Try three times and record your best time.
4. **Tops.** Make or find a top. Spin it five times and time each spin. Record the longest.
5. **Blind man's buff.** One blindfolded player tries to catch the others in a clear room while they call his name. When he catches someone, he guesses who it is by touch.
6. Play your other two games and record what happened.
7. Make a table: game, what Bruegel's children used, what you used, and how many minutes you played.

8. Write two sentences: Which of Bruegel's games was the most fun? Which would be the hardest to play today, and why?

Tips

- A homemade top spins longer if the pencil is exactly in the center of the disk and the point is sharp.
- In blind man's buff, the other players should stay in the room and stay quiet enough to be found.
- Look for games in the painting that you have never heard of, and ask a parent if they know them.

Check your work

- ☐ I found at least ten games in Bruegel's painting.
- ☐ I played five of them and recorded times or results for each.
- ☐ I can explain why historians use this painting to learn about the past.

SCOREBOOK

1. Draw one game from the painting in a small box and label it with its old name and its modern name.
2. Make a table of your hoop and top times: try, time in seconds, best time circled.
3. Write a list of five games you would put in a painting of children's games today.

From history. Bruegel painted *Children's Games* in Antwerp, where he lived and worked before moving to Brussels in 1563. He also painted famous scenes of peasants harvesting, hunters in the snow and village weddings. His two sons, Pieter and Jan, became painters too.

COMMON MISTAKES

- Looking at the painting too quickly. Bruegel hid games in every corner; it takes time to find them.
- Assuming all the children are being good. Bruegel showed quarrels too, honestly.
- Forgetting that the painting is a record. It tells us what was really played in 1560.

Make it a game • Spot the Game. Draw ten quick stick-figure games from Bruegel's painting, one per slip of paper: leapfrog, hoop rolling, stilts and others. Put them face down. Draw a slip, then act out the game in silence while your parent guesses. Next, name the modern version. Score a point for each correct guess and each modern name.

1.4 PLAYING FAIR: RULES, REFEREES AND HONEST PLAY

OBJECTIVES

- Explain why every game depends on rules that all players keep.
- Tell the stories of Bill Klem, the umpire, and Bobby Jones, who called a penalty on himself.
- Write clear rules for a game, play it with a referee and record every call.

Warm-up. Play a quick game of rock, paper, scissors with a family member, but this time one player may change the rules whenever he wants. Play five rounds. How did it feel? Now play five rounds with fixed rules.

WATCH

The PUZZLING Origins of Umpire Signals | Baseball History

Baseball Historian · 7:10

<https://www.youtube.com/watch?v=Le6dLgVNUTY>

WHEN TO WATCH

After the story paragraph. Learn how umpires such as Bill Klem began using arm signals so that every player and fan could see the call.

KEY TERMS

rule

An agreement about what players may and may not do in a game.

referee

A judge who watches a game and decides when a rule has been broken; in baseball the referee is called the umpire.

penalty

A cost a player or team pays for breaking a rule, such as a free kick, an extra stroke or a lost turn.

sportsmanship

Playing fairly, respecting opponents and officials, and winning or losing with grace.

integrity

Doing what is right even when no one is watching.

CORE IDEAS

The story. Bill Klem umpired in baseball's National League for 37 seasons, from 1905 to 1941, and worked in 18 World Series, more than any other umpire. He stood his ground when players and crowds shouted at him, and he is often remembered for saying that he never called one wrong. In 1953 he became one of the first two umpires elected to the National Baseball Hall of Fame. Players did not always like his calls, but they trusted that he called the game the same for both teams.

How it changed. Long ago, games were played by local customs, and players argued about them. As games spread from village to village, people began to write the rules down and to choose a neutral judge. In early baseball the umpire sat in a chair to one side; later umpires stood behind the catcher and used arm signals so that everyone in the stadium could see the call. Today almost every sport has a printed rulebook and trained officials. But no rulebook can cover everything, and no referee sees everything. A game still depends on the honesty of the players.

How it is played. At the 1925 U.S. Open golf championship, the young golfer Bobby Jones stood over his ball in the long grass. As he set his club down, the ball moved slightly. No one else saw it. Jones told the officials and gave himself a one-stroke penalty. He finished the tournament tied for first and then lost the playoff, so that one stroke cost him the championship. When people praised him for his honesty, he replied that you might as well praise a man for not robbing a bank. In golf, players call penalties on themselves to this day.

Why it matters. The apostle Paul wrote that an athlete “is he not crowned, except he strive lawfully” (2 Timothy 2:5). A victory won by cheating is not really a victory at all. Fair play means keeping the rules when no one is watching, accepting the referee's call without sulking, and treating your opponent as a neighbor. It is one of the best things games can teach.

PICTURE STUDY



Bill Klem, Umpire, Bain News Service, 1914 · Glass plate negative (photograph) · Library of Congress, Washington, D.C.

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

The Bain News Service took thousands of photographs of baseball players and officials in the 1910s, and the Library of Congress keeps the glass negatives. This one shows Bill Klem at a ballpark in 1914, already one of the most respected umpires in the game. Notice that he is dressed very differently from the players.

Look closely

- Look at Klem's clothes. Why might an umpire dress differently from the players?
- Look at his face. Does he look nervous or calm?
- Find the crowd in the grandstand behind him. How might a crowd make an umpire's job harder?
- Find the name written at the top of the picture. Who do you think wrote it, and why?

Talk about it

1. Why is it important that an umpire favors neither team?
2. What should a player do when he thinks the umpire made a wrong call?

3. Bobby Jones called a penalty on himself when no one else saw it. Why is that harder than obeying a referee?

PROJECT

Write the Rules, Then Play by Them

In this project you will take a simple game, write a complete set of rules for it, and test the rules by playing with a referee. You will discover how many questions a good rulebook has to answer.

You will need

- A simple game to write rules for: for example, a beanbag toss into a bucket, a paper-ball basketball game, or a homemade bowling game with plastic bottles
- At least three people: two players and a referee
- Scorebook and pencil

Steps

1. Choose your game and play it once without written rules. Write down every argument or question that came up.
2. **Write.** Write a rulebook of at least eight numbered rules. Answer these questions: How do you start? How do you score? What is a foul? What is the penalty for a foul? How does the game end? What happens if there is a tie?
3. Read your rules aloud to someone who has never played. Change any rule that confuses them.
4. Choose a referee. The referee holds the rulebook and makes every call.
5. **Play.** Play at least three games with the referee. The referee writes down every call in the scorebook: what happened and which rule was used.
6. After each game, ask: Did any situation come up that the rules did not cover? Add a new rule for it.
7. Switch roles so that every person is referee once.
8. Write a final copy of your rules and two sentences about what you learned from being the referee.

Tips

- Good rules are short and clear. Use numbers and simple words.
- A referee must decide quickly and then stick to the decision.

- Thank the referee after each game, even if you disagree with a call.

Check your work

- ☐ My rulebook has at least eight numbered rules, including how to score, what a foul is and how the game ends.
- ☐ We played at least three games with a referee and recorded every call.
- ☐ I added at least one new rule after testing.

SCOREBOOK

1. Copy 2 Timothy 2:5 at the top of a page and write one sentence about what “strive lawfully” means in a game.
2. Make a referee’s log: game number, what happened, the call, and the rule number used.
3. Write about a time you were tempted to bend a rule in a game. What did you do, and what would you do now?

From history. Bobby Jones never turned professional. He played as an amateur, won 13 major championships, and in 1930 won all four of the major tournaments of his day in a single year. Later he helped found the Augusta National Golf Club and the Masters Tournament. The United States Golf Association’s award for sportsmanship is named for him.

COMMON MISTAKES

- Thinking that a rule only matters when the referee is watching.
- Writing rules that say how to win but not what happens when there is a tie or a foul.
- Arguing with the referee during the game. Accept the call, and talk about the rule calmly afterward.

Make it a game • The Honest Referee. Pretend to be Bill Klem, a famous umpire. Your parent describes a made-up game moment, such as a ball touching the line, and you call it fairly and explain the rule. Then tell the Bobby Jones story in three sentences. Swap roles. A caller who gives an honest answer earns a point.

Scripture. “And if a man also strive for masteries, yet is he not crowned, except he strive lawfully.” (2 Timothy 2:5, KJV)

Paul used the games of his day to teach that the crown goes only to the one who keeps the rules.

UNIT 1

WHY WE PLAY

Every people in history has played. Children in ancient Egypt rolled balls of stitched leather, Roman children played with nuts and knucklebones, and Flemish children in 1560 rolled hoops and played leapfrog in the town square. In this unit you will learn why play is one of God's good gifts, how some of the oldest games in the world are still played on playgrounds today, and what a painter named Pieter Bruegel saw when he filled one picture with about two hundred and fifty children at play.

Last, you will learn the most important rule of every game: play fair. A game only works when everyone keeps the same rules, even when no one is watching. You will meet a famous umpire and a famous golfer who showed what that means, and you will write the rules for a game of your own and play it with a referee.

PREREQUISITES

- Can read a short paragraph and tell it back in his or her own words
- Can count, add and make a simple tally
- Has a notebook to use as a scorebook for the year

MASTERY CHECKLIST

- ☐ I can explain from Scripture why work, rest and play are all good gifts from God.
- ☐ I can tell the history of tag, hopscotch, marbles and knucklebones, and play each one.
- ☐ I can find at least ten games in Bruegel's

Child and play five of them.

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- ☐ I can explain why rules and referees make a game fair, and write clear rules for a game.
- ☐ I can keep a scorebook with the date, the rules, a score table and a sentence about fairness.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **William Wells Newell, *Games and Songs of American Children* (Project Gutenberg):**
Free. An 1883 collection of the rhymes and rules of American playground games, many of them centuries old, for finding more games for Lessons 1.1–1.3. A parent should choose the games to read aloud. Ages 9+.

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 for Work and Play	2 sessions of 45 minutes
1.2	Tag, Hopscotch, Marbles and Knucklebones	2 sessions of 45 minutes
1.3	Bruegel's Children's Games	2 sessions of 45 minutes
1.4	Playing Fair: Rules, Referees and Honest Play	2 sessions of 45 minutes

UNIT 1 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

1. **5 pts**
What did the prophet Zechariah see as a sign of a happy, peaceful city?
2. **5 pts**
Name two toys or games that archaeologists have found from ancient times.
3. **5 pts**
Where does the word “hopscotch” come from?
4. **5 pts**
What were the first knucklebones made from, and what modern game comes from them?

5. (5 pts)

Who painted *Children's Games*, in what year, and about how many children are in it?

6. (5 pts)

Name four games from Bruegel's painting that children still play today.

7. (5 pts)

Why do historians treat Bruegel's painting as a record of the past?

8. (5 pts)

Who was Bill Klem, and why did players trust him?

9. (5 pts)

What happened to Bobby Jones at the 1925 U.S. Open, and what did it cost him?

10. (5 pts)

What would happen if one player in a game could change the rules whenever he wanted? Use 2 Timothy 2:5 in your answer.

ANSWER KEY

1. Streets “full of boys and girls playing,” along with old men and women sitting in the streets (Zechariah 8:5).
2. Any two: leather balls, spinning tops, clay whistles, wheeled toy carts, dolls, knucklebones, game boards, clay marbles.
3. From “hop” and “scotch,” an old word for a line scratched on the ground. It appears in English writing by 1677 as “scotch-hoppers.”
4. The small ankle bones of sheep. The game of jacks comes from knucklebones.
5. Pieter Bruegel the Elder, in 1560. There are about 250 children playing more than 80 games.
6. Any four: leapfrog, hoop rolling, spinning tops, stilts, blind man’s buff, knucklebones, tug-of-war, piggyback, hobbyhorses, building with bricks, ball games.
7. Because he painted the games, toys and clothes of 1560 carefully and accurately, so it shows what children really played then.
8. A National League umpire from 1905 to 1941 who worked 18 World Series. Players trusted him because he called the game the same for both teams and stood by his decisions.
9. His ball moved slightly as he set his club down. No one else saw it, but he called a one-stroke penalty on himself. He tied for first and lost the playoff, so the honest penalty cost him the championship.
10. The game would stop being fair or fun, and no one could truly win. Paul wrote that an athlete is not crowned “except he strive lawfully”: a win without keeping the rules is no real win.

PORTFOLIO PIECE: MY FAMILY’S BOOK OF GAMES

Make a small book of at least six games: two from your family interviews, two from this unit’s ancient playground games, and two from Bruegel’s painting. For each game, write a page with its name, where and when it was played, the equipment needed, the rules in numbered steps, and a drawing or photograph of you playing it. Add a cover, a title page with Zechariah 8:5, and a last page called “Our Rules for Fair Play” listing five rules your family will keep in every game this year.

LOOK FOR	WHAT IT MEANS
Six complete games	Each game has its history, equipment, numbered rules and a picture.
Clear rules	Someone who has never played could follow the rules without asking questions.
History	Each game is placed correctly in time and place, using facts from the lessons and interviews.
Fair-play page	Five sensible rules for fair play, at least one connected to 2 Timothy 2:5.
Care and neatness	Neat writing, a cover and title page, and pages in order.

UNIT 2

THE OLDEST BOARD GAMES

Long before chess or checkers, people sat down across a board and moved pieces by the throw of dice or sticks. In this unit you will meet four of the oldest board games in the world. The Royal Game of Ur was buried in the royal tombs of ancient Mesopotamia about 4,500 years ago, and a museum curator figured out its rules from a clay tablet. Senet was the favorite game of ancient Egypt, from farmers to pharaohs. Mancala, the sowing game, has been played across Africa and Asia for many centuries. Nine Men's Morris was scratched into the stone benches of medieval cathedrals by bored builders and choirboys.

For each game you will learn the story of how it was found, how it spread and changed, and how to play it. Then you will make each one from paper, cardboard, an egg carton and dried beans, play it many times, and keep score. By the end of the unit you will have a box of ancient games and the skill to teach them to anyone.

PREREQUISITES

- Keeps a scorebook with the date, rules and a score table (Unit 1)
- Can count to 30 and add small numbers quickly
- Can cut, fold and glue card stock carefully

MASTERY CHECKLIST

- ☐ I can tell how the Royal Game of Ur was discovered and how Irving Finkel found its rules on a clay tablet.
- ☐ I can explain how four coins or four sticks can be used as “dice,” and which throws are most common.
- ☐ I can play Senet, mancala (oware) and Nine Men's Morris by the rules and teach them to someone else.
- ☐ I can find Mesopotamia, Egypt, West Africa and medieval England on a map and say which game came from each.
- ☐ I can make a sturdy game board and pieces from household materials.

LESSONS IN THIS UNIT

2.1	The Royal Game of Ur	2 sessions of 45 minutes
2.2	Senet: The Game of the Pharaohs	2 sessions of 45 minutes
2.3	Mancala: The Sowing Game	2 sessions of 45 minutes
2.4	Nine Men's Morris	2 sessions of 45 minutes

UNIT 2 REVIEW

Answer each question in complete sentences. Show your work for the counting question. The review is worth 50 points.

1. **5 pts**
Where and when were the boards of the Royal Game of Ur found, and who found them?
2. **5 pts**
How did Irving Finkel discover the rules of the game?
3. **5 pts**
You toss four coins and count the heads. Which total is most likely, and which two are least likely?
4. **5 pts**
What does a rosette square do in the Royal Game of Ur?
5. **5 pts**
Describe a Senet board and the path the pieces follow.
6. **5 pts**
Why do historians say that all Senet rules today are “reconstructions”?
7. **5 pts**
What does “sowing” mean in mancala, and how do you capture in oware?

8. **5 pts**

Name three places where mancala games are played and their names there.

9. **5 pts**

What is a mill in Nine Men's Morris, and what happens when you make one?

10. **5 pts**

What would happen if Nine Men's Morris had no moving stage, only placing?
How would the game change?

ANSWER KEY

1. In the royal cemetery of Ur, in southern Iraq (ancient Mesopotamia), in the 1920s, by Leonard Woolley's team. The boards are about 4,500 years old.
2. He read a clay tablet in cuneiform, written by a Babylonian scribe in 177 BC and kept in the British Museum, which explained the moves of the twenty-square game.
3. 2 heads is most likely (6 ways out of 16). 0 and 4 heads are least likely (1 way each out of 16).
4. A piece on a rosette is safe from capture, and landing on a rosette gives the player another throw.
5. Thirty squares in three rows of ten. The path runs in an S shape: left to right on the top row, right to left on the middle row, left to right on the bottom row.
6. No complete ancient rule book has been found. Historians suggest rules based on boards, pieces, paintings and texts, but cannot be certain.
7. Picking up all the seeds in one pit and dropping them one by one into the following pits. In oware you capture when your last seed lands in an opponent's pit and makes 2 or 3 there; you also take any 2s or 3s in the pits just before it.
8. Any three: Ghana (oware), Nigeria (ayo), East Africa (bao), Uganda (omweso), Malaysia (congkak), the Caribbean (warri), Egypt (mangala), the United States (Kalah).
9. Three of your pieces in a row along a line. You remove one of your opponent's pieces (not one in a mill, unless no other is left).
10. It would be much like tic-tac-toe: once all the points were filled, the game would stop, and there would be less room for planning. The moving stage lets players build running mills and block each other.

PORTFOLIO PIECE: A MUSEUM OF ANCIENT GAMES

Make a small “museum exhibit” of the four games in this unit. Put all four boards and their pieces in one box or folder. For each game, write a museum card about the size of an index card: the name of the game, where and when it was played, how we know about it (a find, a tablet, a photograph or a book), and the basic rules in five or six numbered steps. Add a map showing Mesopotamia, Egypt, Ghana and England with each game marked. Then invite your family to your museum and teach each visitor one game.

LOOK FOR	WHAT IT MEANS
Four working games	Each board is correct and sturdy, with all its pieces and throwing sticks or coins.
Museum cards	Each card gives accurate history and clear rules a visitor could follow.
Map	The four places are marked correctly with the name of each game.
Teaching	The student taught at least one game to a visitor, who could then play it.

2.1 THE ROYAL GAME OF UR

OBJECTIVES

- Tell how the Royal Game of Ur was discovered and how its rules were found on a clay tablet.
- Use four coins as “dice” and explain why a throw of 2 is the most common.
- Make a Royal Game of Ur board and play at least five games.

Warm-up. Toss four coins together twenty times and count the heads each time (0, 1, 2, 3 or 4). Make a tally. Which number came up most often? Which came up least?

WATCH

Deciphering the world's oldest rule book | Irving Finkel | Curator's Corner S1 Ep1 [PILOT]

The British Museum · 7:02

<https://www.youtube.com/watch?v=WHjznvH54Cw>

WHEN TO WATCH

After “How it changed.” Irving Finkel tells how he found the rules on the clay tablet.

BACKUP VIDEO

Tom Scott vs Irving Finkel: The Royal Game of Ur | PLAYTHROUGH | International Tabletop Day 2017

The British Museum · 25:33

<https://www.youtube.com/watch?v=WZskjLq040I>

Optional and longer: Finkel teaches the game to Tom Scott and they play a full match. Good to watch before your own games.

KEY TERMS

Mesopotamia

The land between the Tigris and Euphrates rivers, in what is now Iraq, where some of the first cities were built.

Ur

An ancient city in southern Mesopotamia; the Bible names Ur of the Chaldees as the home of Abraham (Genesis 11:31).

cuneiform

Wedge-shaped writing pressed into soft clay with a reed, used in Mesopotamia for about 3,000 years.

rosette

A flower-shaped square on the Ur board; a piece that lands on one is safe and earns another throw.

curator

A museum expert who cares for and studies a collection of objects.

CORE IDEAS

The story. In the 1920s the British archaeologist Leonard Woolley dug up the royal cemetery of Ur, in what is now southern Iraq. Among gold helmets, harps and jewelry, his team found several wooden game boards decorated with shell and red and blue stone. Each board had twenty squares, and five of them were marked with a flower, or rosette. The boards were about 4,500 years old. They were buried in the time when Ur was one of the great cities of the world, a few centuries before Abraham left “Ur of the Chaldees.” One beautiful board is now in the British Museum in London.

How it changed. For more than fifty years no one knew the rules. Then a British Museum curator named Irving Finkel, who reads cuneiform, studied a small clay tablet that the museum had bought in 1880. It had been written by a Babylonian scribe in 177 BC, more than two thousand years after the boards at Ur were made, and it explained the moves of the same twenty-square game. The game had lasted for thousands of years and spread from Mesopotamia to Egypt, Crete, Cyprus and India. Finkel even learned that Jewish families in the city of Kochi, in southern India, were still playing a version of it in the twentieth century.

How it is played. Each player has seven pieces that start off the board. Players move their pieces along a path: four squares on their own side, down the shared middle row of eight squares, and back along two more squares on their own side to finish. The game used pyramid-shaped dice with two marked tips out of four, so a throw could be 0, 1, 2, 3 or 4. Four coins work exactly the same way: count the heads. Land on an opponent’s piece in the middle row and it goes back to start. Land on a rosette and you are safe and throw again. The first player to bring all seven pieces home wins.

Why it matters. The Royal Game of Ur shows that people four and a half thousand years ago enjoyed the same things we do: a little luck, a little planning and a friend across the table. It also shows how history is uncovered: a spade in the desert found the board, and a patient scholar reading clay found the rules. Truth about the past is often found by people who keep looking long after others have given up.

PICTURE STUDY



Game Box for Playing Senet and Twenty Squares, Unknown Egyptian craftsman, about 1635–1458 BC · Wood and ivory · Metropolitan Museum of Art, New York
Image: [Wikimedia Commons](#), public domain

The Game of Ur traveled. This game box was made in Egypt more than a thousand years after the boards at Ur, and its top shows the same twenty-square game. Turn it over and the other side has a board for Senet, the game in Lesson 2.2. The little drawer at the end held the playing pieces and the throwing sticks. A family could carry two games in one box.

Look closely

- Count the squares on the top of the box. How many are in the long middle row?
- Find the carved animals in the ivory. They look like hunting dogs and gazelles. Why might a game maker decorate a board with a hunt?
- Find the drawer and the peg that kept it shut. What was kept inside?
- Compare the layout of squares with your own Ur board. What is the same?

Talk about it

1. This box was made in Egypt, far from Ur. How do you think the game traveled so far?
2. Why would a two-sided game box be useful?

3. What does this box tell us about the people who owned it?

PROJECT

Make and Play the Royal Game of Ur

You will make a full-size board, seven pieces for each player and a set of coin “dice,” play at least five games, and keep track of how often each throw comes up.

You will need

- A piece of card stock or cereal-box cardboard, a ruler, a pencil and markers
- 14 playing pieces: 7 dried beans of one color and 7 of another (or two colors of buttons)
- Four coins
- Scorebook and pencil

Steps

1. **Draw the board.** Draw three rows of squares, each square 2 inches (5 centimeters). The middle row has 8 squares. The top and bottom rows each have 4 squares at the left end and 2 squares at the right end, with a gap of 2 empty spaces between them.
2. Draw a rosette (a flower) on five squares: the first square of each outer row at the far left end, the last square of each outer row at the right end, and the fourth square of the middle row.
3. Decorate the other squares with dots and patterns, like the Ur boards.
4. **Learn the path.** Each player’s pieces enter on the fourth square of his own outer row, move left to the end of that row, step into the middle row and travel all the way along it, then step back into his own outer row at the right end and move off the board. Trace the path with your finger.
5. **Play.** Take turns tossing four coins. The number of heads is how many squares you may move one piece. A throw of 0 means no move. You must move exactly; you need the exact number to bear a piece off.
6. Landing on an opponent’s piece in the middle row sends it back off the board to start again. A piece on a rosette is safe, and landing on a rosette gives you

another throw.

7. Play at least five games. In your scorebook, record the winner and the number of turns each game took.
8. **Count the throws.** During one game, tally every throw: 0, 1, 2, 3 or 4. Which was most common?

Tips

- The middle rosette is the best square on the board: it is safe, and an opponent cannot pass you easily. Try to hold it.
- Don't hurry all your pieces onto the board. Sometimes it is better to keep one safe and wait for a good throw.
- With four coins, a throw of 2 comes up most often, about 6 times in 16, and 0 or 4 only about once in 16.

Check your work

- ☐ I made a board with the right shape and five rosettes, and seven pieces for each player.
- ☐ I played at least five games and recorded the winners.
- ☐ I tallied the throws and can say which number came up most.

SCOREBOOK

1. Draw the Ur board and mark the path of your pieces with arrows.
2. Make a tally chart of the throws from one game: 0, 1, 2, 3 and 4. Circle the most common.
3. Write a short museum label for your board: name of the game, where it was found, how old it is and who found the rules.

From history. Irving Finkel has worked at the British Museum since 1979. In 2017 he played the Royal Game of Ur against the YouTube presenter Tom Scott in a video that millions of people have watched. Because of his work, people all over the world now play a game that was lost for two thousand years.

COMMON MISTAKES

- Forgetting that only the middle row is shared. Pieces on your own outer squares cannot be captured.

- Counting tails instead of heads. Decide before you begin which side counts, and stick to it.
- Thinking the rules were found at Ur. The boards were found at Ur; the rules came from a tablet written much later in Babylon.

Make it a game • Four-Coin Tally. Flip four coins twenty times and tally how many land heads up, one mark each. Before each flip, predict the count. Predict the most common result and say why a throw of two comes up so often. Then tell your parent the Royal Game of Ur story in order: discovery, tablet, rosette. Beat your best guess score.

Scripture. “and they went forth with them from Ur of the Chaldees, to go into the land of Canaan” (Genesis 11:31, KJV)

Abraham’s family came from Ur, the same city where the royal game boards were buried. By the usual reckoning, the boards were already a few centuries old in Abraham’s day.

2.2 SENET: THE GAME OF THE PHARAOHS

OBJECTIVES

- Tell where Senet was played, by whom, and how we know.
- Explain how throwing sticks work like coins, and why the S-shaped path matters.
- Make a Senet board and throwing sticks and play at least five games.

Warm-up. Make four throwing sticks: four craft sticks (or strips of card), each colored on one side only. Toss them ten times and count how many colored sides land up each time.

WATCH

How to play Senet

Triple S Games · 2:51

<https://www.youtube.com/watch?v=oeLAfm1bx3U>

WHEN TO WATCH

After “How it is played.” The video uses a slightly different reconstruction (no marked sides counts as 6, not 5). Either rule works: choose one and keep it.

Note: Rules only, no commentary. The description contains store links; you need not use them.

KEY TERMS

Senet

An ancient Egyptian racing game played on a board of thirty squares in three rows of ten. The name means “passing.”

hieroglyphs

The picture-writing of ancient Egypt.

throwing sticks

Flat sticks with one marked side, tossed together and counted instead of dice.

tomb painting

A painting on the wall of an Egyptian tomb, often showing scenes of daily life.

reconstruction

A careful best guess at something lost,
such as the rules of an old game, based
on the evidence.

CORE IDEAS

The story. In 1922 Howard Carter opened the tomb of the young pharaoh Tutankhamun in Egypt's Valley of the Kings. Among the golden treasures were several Senet game boxes, one made of ebony and ivory and mounted on a little sledge with lion's feet. Senet was already old by Tutankhamun's day. Pictures of people playing it appear in Egyptian tomb paintings from about 4,500 years ago, and boards have been found in the houses of ordinary workers as well as in the tombs of kings and queens.

How it changed. The name Senet means "passing," and the game was a contest to be first along thirty squares arranged in three rows of ten. For more than a thousand years Egyptians played it at home, often scratching a grid on a stone or a piece of pottery. Over time Egyptians also gave the game a place in their religion, and some of the last five squares were marked with special signs. Today we do not have a rule book for Senet. Historians such as Timothy Kendall and R. C. Bell studied the boards, the pieces and the paintings and suggested rules that work well. Every set of Senet rules played today is a reconstruction.

How it is played. Each player has five pieces (some versions use seven), set out alternately on the first ten squares. The path runs in an S shape: left to right along the top row, right to left along the middle row, and left to right along the bottom row. Players throw four sticks, each marked on one side. Count the marked sides: 1, 2, 3 or 4, and if no marked sides land up, the throw counts as 5. If you land on a single enemy piece, you swap places with it. Two of your pieces side by side protect each other. The first player to move all his pieces off the end of the board wins.

Why it matters. Senet was played for about three thousand years. It shows how much ancient people loved games, and it shows something about how history works: when evidence is missing, honest historians say so and offer their best reconstruction. When you play Senet, you are playing a game that Egyptians of every rank enjoyed in the age of Joseph and Moses.

PICTURE STUDY



Senet Board and Gaming Pieces, Unknown Egyptian craftsman, about 1479–1425 BC (reign of Thutmose III) · Wood with blue-green faience tiles · Metropolitan Museum of Art, New York

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

This Senet box comes from the reign of Thutmose III, one of Egypt's most powerful pharaohs. Its squares are made of faience, a glazed material that shines blue and green. There are two shapes of pieces, one for each player. A drawer in the side held the pieces and the throwing sticks when the game was over.

Look closely

- Count the squares. Are there really three rows of ten?
- Find the two different shapes of playing pieces. Which shape belongs to which player, do you think?
- Look for squares with signs or marks on them. Where are they on the board?
- Find the drawer at the end of the box.

Talk about it

1. Why do you think the special squares are near the end of the path?
2. Ordinary Egyptians scratched Senet boards on stone. How is this board different from theirs?

3. We have no rule book for Senet. How do historians decide which rules to suggest?

PROJECT

Make and Play Senet

You will make a Senet board and four throwing sticks, play by Kendall's reconstructed rules, and test whether the player who goes first wins more often.

You will need

- Card stock or cardboard, a ruler and markers
- Four craft sticks or card strips, colored on one side only
- 10 playing pieces: 5 of one kind and 5 of another (beans, buttons or bottle caps)
- Scorebook and pencil

Steps

1. **Draw the board.** Draw three rows of ten squares, each about 1½ inches (4 centimeters). Number them 1 to 30 following the S-shaped path.
2. Mark square 15 with a small circle, square 26 with three lines ("the beautiful house"), and squares 27–30 with simple signs. In our rules square 27 is water: a piece that lands there must go back to square 15.
3. **Set up:** place pieces alternately on squares 1–10, one player's pieces on the odd squares and the other's on the even squares.
4. **Throw.** Toss the four sticks. Count the colored sides up: 1, 2, 3 or 4. No colored sides counts as 5. A throw of 1, 4 or 5 gives you another throw.
5. **Move.** Move one piece forward along the path. If you land on a single enemy piece, swap places with it. You may not land on a piece that has a friend right beside it, because two in a row protect each other.
6. Every piece must stop on square 26 before it may leave the board. Bear off with an exact throw.
7. Play at least six games. Record who went first, who won and how many throws each game took.
8. Answer in your scorebook: Did the first player win more often? Did you change any rule to make the game work better?

Tips

- Keep two pieces side by side whenever you can. They are much harder to attack.
- Senet games can be long. Set a timer for 20 minutes if you need to stop, and count who has the most pieces off the board.
- If your family prefers different reconstructed rules, write them down and use them all the way through.

Check your work

- ☐ I made a 3-by-10 board with the S-shaped path numbered and four throwing sticks.
- ☐ I played at least six games and recorded the results.
- ☐ I can explain why every set of Senet rules is a reconstruction.

SCOREBOOK

1. Draw the Senet board and show the S-shaped path with arrows.
2. Make a table of your six games: game number, who went first, winner, number of throws.
3. Tally 30 throws of your four sticks. Which number came up most? Was it the same as with four coins in Lesson 2.1?

From history. Tutankhamun's tomb held four game boxes in all. The largest, made of ebony and ivory, had Senet on its top and the twenty-squares game of Ur on its underside, just like the box in Lesson 2.1.

COMMON MISTAKES

- Moving along each row from left to right. The middle row runs the other way.
- Forgetting that a throw with no marked sides counts as 5, not 0.
- Saying “the ancient rules of Senet are” as if we knew them for certain. We have good guesses, not a rule book.

Make it a game • Tomb Painting Riddles. Take turns giving riddles about Senet: where it was played, by whom, and how we know. Use throwing sticks made from craft sticks or spoons marked on one side as the clue. Your parent guesses the answer. Explain why the S-shaped path matters. The first to answer five riddles correctly wins. A parent may slip in one false clue.

2.3 MANCALA: THE SOWING GAME

OBJECTIVES

- Explain what a mancala game is and where these games have been played.
- Play oware, the mancala game of Ghana, by its standard rules.
- Make an egg-carton mancala board and record captures over several games.

Warm-up. Put 4 beans in each cup of an egg carton. Pick up the beans from one cup and drop them one at a time into the next cups, going around the carton. Where did your last bean land? Try it from a different cup.

WATCH

Basic Oware Rules for Beginners

First Step Tours • 5:00

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

WHEN TO WATCH

Before the project. A Ghanaian guide explains the basic rules of oware with a real board.

BACKUP VIDEO

Oware: the Ghanaian Traditional Sport | Trans World Sport

Trans World Sport • 6:47

<https://www.youtube.com/watch?v=8KuJSnZ2i9Y>

A report from Ghana on oware clubs, carved boards and the game's place in village life.

KEY TERMS

mancala

A family of “count-and-capture” board games played with seeds or stones in rows of pits. The name comes from an Arabic word meaning “to move.”

sowing

Picking up all the seeds in one pit and dropping them one by one into the following pits, like a farmer sowing a field.

oware

The mancala game of the Akan people of Ghana, played on two rows of six pits with 48 seeds.

capture

Taking seeds off the board and keeping them as points.

store

A place beside the board, or a large pit at the end, where a player keeps the seeds he has captured.

CORE IDEAS

The story. In the 1870s the photographer Pascal Sébah opened a studio in Cairo, Egypt, and photographed daily life in the city. One of his pictures shows two men on a wooden bench in front of a carved window, leaning over a small board with rows of pits, while a boy and another man watch. They were playing *mangala*, a mancala game. Travelers to Africa and the Middle East in those years saw the same kind of game everywhere: in market squares, on doorsteps and under shade trees, often with pits simply scooped in the dirt.

How it changed. Mancala games are very old. Rows of pits for them have been found carved into stone in Africa and the Middle East, some more than a thousand years old. As the games spread they took many names and many rules: *oware* in Ghana, *ayo* among the Yoruba of Nigeria, *bao* in East Africa (Lesson 5.1), *omweso* in Uganda, and *congkak* in Malaysia. African families carried the game across the Atlantic, and it is still played in the Caribbean as *warri*. The version sold in American toy stores, called Kalah, was worked out in the United States in the 1940s from these older games.

How it is played. In oware, two players face each other across two rows of six pits, with 4 seeds in each pit. On your turn, pick up all the seeds from one pit on your side and sow them counterclockwise, one in each following pit, around the board. If your last seed lands in an opponent's pit and makes the count there exactly 2 or 3, you capture those seeds. If the pit before it also has 2 or 3, you capture those too, and so on back along the row. Since there are 48 seeds, the first player to capture 25 wins.

Why it matters. Mancala looks simple, but it is a game of real counting and planning. Good players count the seeds in a pit and work out exactly where the last seed will fall, sometimes many pits ahead. Children who grow up playing oware become

quick at arithmetic without noticing it. The game also teaches patience: sometimes the best move is to build up a big pit and wait.

PICTURE STUDY



Mangala Players in Cairo, Pascal Sébah, 1870s · Albumen photograph · Cairo, Egypt

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

Pascal Sébah was one of the best-known photographers in Egypt and Turkey in the 1800s. Cameras then needed long exposures, so the men in this picture had to hold very still. They are playing mangala on a small wooden board set on the bench between them. The carved wooden lattice behind them is called a *mashrabiya*; it lets in air and light while keeping out the sun.

Look closely

- Find the game board. How are the two players sitting?
- Look at the player on the left. Is he moving seeds or thinking?
- Find the boy and the man watching. Why do people like to watch a good game?
- Look at the carved window behind them. What does it tell you about the city?

Talk about it

1. The players had to keep still for the photograph. What clues show this was not a quick snapshot?
2. Why do you think mancala could be played almost anywhere?
3. What would the boy in the picture learn by watching the game?

PROJECT

An Egg-Carton Oware Board

You will turn an egg carton into an oware board, learn to count your sowing ahead of time, and keep a record of captures in several games.

You will need

- One 12-cup egg carton (two rows of six cups) and two small bowls or cups as stores
- 48 dried beans, small stones or buttons
- Paint or markers to decorate the carton (optional)
- Scorebook and pencil

Steps

1. **Make the board.** Cut the lid off the egg carton. Decorate the outside if you like. Set a small bowl at each end as a store for captured seeds.
2. Put 4 seeds in each of the 12 cups. Each player owns the six cups on his side.
3. **Sow.** On your turn, pick up all the seeds from one of your cups and drop one in each cup counterclockwise. If a cup holds 12 or more seeds, skip the cup you started from as you go around.
4. **Capture.** If your last seed lands in an opponent's cup and makes the total there 2 or 3, take those seeds into your store. Then check the cup before it: if it also has 2 or 3, take those too, and keep going back along the opponent's row.
5. You must leave your opponent seeds to play if you can. If he has none, you must make a move that gives him some.
6. The game ends when one player has 25 or more seeds, or when no more captures are possible. Count the seeds in each store.
7. Play at least five games. Record each player's captures in your scorebook.
8. **Count ahead.** Before each move in your last game, count the seeds in the cup and say aloud where the last seed will land. How often were you right?

Tips

- Count the seeds in a cup before you pick them up. The count tells you exactly where your last seed will fall.
- Cups with 1 or 2 seeds on your opponent's side are targets. Cups with 1 or 2 on your side are in danger.
- A cup with many seeds can go all the way around the board. Save it for the right moment.

Check your work

- ☐ I made an egg-carton board and can set it up with 48 seeds.
- ☐ I can sow and capture by the oware rules, including multiple captures.
- ☐ I played at least five games and recorded the scores.

SCOREBOOK

1. Draw the oware board from above, with 4 seeds in each pit and an arrow showing the counterclockwise direction.
2. Make a score table for five games: game, my captures, opponent's captures, winner.
3. Draw one board position from your game where you made a double capture, and explain it in a sentence.

From history. Oware is so loved in Ghana that the Asante kings had beautifully carved boards. Today there are oware clubs and tournaments in Africa, Europe and the Caribbean.

COMMON MISTAKES

- Sowing clockwise. In oware, seeds always travel counterclockwise.
- Capturing on your own side. You capture only in your opponent's row.
- Forgetting to skip the starting cup when a big pit goes all the way around.

Make it a game • Sowing Memory Match. Make six pairs of cards from paper: oware words matched to meanings, such as sowing and dropping seeds one by one, or store and the pit that keeps captures. Turn all twelve face down and play memory match with your parent. Each match must be said aloud with the rule explained. Most pairs wins.

2.4 NINE MEN’S MORRIS

OBJECTIVES

- Tell the history of Nine Men’s Morris from the Roman world to medieval Europe.
- Play Nine Men’s Morris by the standard rules, including forming “mills.”
- Make a board and test a strategy over several games.

Warm-up. Play three quick games of tic-tac-toe. Then ask: what would happen if, after placing three pieces each, you could slide your pieces to new spots? You are about to play a game that works like that.

WATCH

Nine Men’s Morris: Learn the Game Rules, Part 1 with Jason

[NovaScotiaMuseum](#) · 5:02

<https://www.youtube.com/watch?v=TUgmSYU8i3c>

WHEN TO WATCH

Before the project. A Nova Scotia Museum educator teaches the rules.

BACKUP VIDEO

How To Play Nine Men's Morris

[Gather Together Games](#) · 3:28

https://www.youtube.com/watch?v=lmFDibk7_qc

A short, clear tutorial with a board seen from above.

KEY TERMS

Nine Men’s Morris

A two-player strategy game in which each player has nine pieces (“men”) and tries to make rows of three.

merels

Another old name for the game and its pieces, from a Latin word for a game piece.

mill

Three of your pieces in a straight row along a line of the board; making one lets you remove an opponent’s piece.

point

One of the 24 spots on the board where a piece may stand, where lines meet or end.

blocked

Unable to move any piece; in Nine Men's Morris a blocked player loses.

CORE IDEAS

The story. In 1283 King Alfonso X of Castile, in Spain, finished a great illustrated book called the *Libro de los juegos*, the *Book of Games*. It explained chess, dice games and board games, with nearly a hundred and fifty colorful pictures of people playing them. One picture shows two men crouching on either side of a board of three nested squares joined by lines, while two friends with spears look on. They are playing Nine Men's Morris.

How it changed. The game is old. Boards for it have been found scratched into Roman buildings, and one was carved into a plank of the Gokstad Viking ship, buried in Norway about AD 900. In the Middle Ages it was everywhere in Europe. Boards are still scratched into the stone benches of the cloisters of Westminster Abbey and Canterbury Cathedral, where workers or choirboys must have played during breaks. Shepherds cut boards into the turf of village greens; in *A Midsummer Night's Dream*, Shakespeare writes that "the nine men's morris is fill'd up with mud." In some countries the game is still called "mill."

How it is played. The board has 24 points on three nested squares joined by lines. Each player has nine pieces. First, players take turns placing one piece at a time on any empty point. Then they take turns sliding a piece along a line to a neighboring empty point. Whenever you make a mill, three in a row along a line, you remove one of your opponent's pieces (but not one that is in a mill, unless no other piece is left). A player who is down to two pieces, or who cannot move, loses. In a popular rule, a player with only three pieces may "fly" a piece to any empty point.

Why it matters. Nine Men's Morris has no dice and no luck at all. Every win comes from thinking ahead: placing pieces where they can move later, blocking your opponent's rows, and setting up a piece that can slide back and forth to make a new mill every turn. It is a good first step toward chess and checkers, and it is so simple that it can be played with stones and a stick in the dirt.

PICTURE STUDY



Nine Men's Morris, from the *Book of Games*, Workshop of Alfonso X of Castile, 1283 · Paint and gold on parchment (manuscript illustration) · Library of the Monastery of El Escorial, near Madrid, Spain

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

King Alfonso X was called “the Wise” because he loved learning: astronomy, law, music and games. His *Book of Games* was made by a team of scribes and painters. In this picture the board is tipped up toward us so that we can see it clearly, a trick medieval painters often used. In this version the players also used dice, which Alfonso’s book describes as a variation.

Look closely

- Count the nested squares on the board. Find the lines that join them.
- Count the pieces you can see on the board. Can you find any three in a row?
- Look at the player on the right. One of the watchers is pointing at the board. What might he be saying?
- Look at the two watchers’ spears. Who might these men be?

Talk about it

1. Why did the painter tip the board up instead of showing it flat?
2. Alfonso’s book shows people of many kinds playing games. What does that tell us about games in 1283?
3. Would you rather play Nine Men’s Morris with dice or without? Why?

PROJECT

A Board for Nine Men's Morris and a Strategy Test

You will make a sturdy board, learn the game, and then test one strategy idea: is it better to place your first pieces on the corners or on the middle points of the sides?

You will need

- A square of cardboard about 10 inches (25 centimeters) on a side, a ruler and a marker
- 18 pieces: 9 of one color and 9 of another (beans, buttons, coins or bottle caps)
- Scorebook and pencil

Steps

1. **Draw the board.** Draw three squares, one inside another: about 9 inches, 6 inches and 3 inches on a side (22, 15 and 8 centimeters), all with the same center.
2. Draw four short lines joining the middle of each side of the outer square to the middle of the matching side of the inner square. Put a dot on each corner and each midpoint: 24 points in all.
3. **Learn the game.** Play three practice games. Place all nine pieces first, then move along the lines. Remove a piece whenever you make a mill.
4. **Test a strategy.** In the next four games, one player places pieces on the middle points of the sides (where four lines meet) whenever possible, and the other prefers corners (where only two lines meet).
5. Switch strategies for four more games so each player tries both.
6. Record every game: who used which strategy, who won, and how many pieces the winner had left.
7. Write your conclusion: Which strategy won more often? Why might points where more lines meet be more valuable?

Tips

- During placing, don't rush to make a mill. Spread your pieces so they can move later.
- A "running mill" is a piece that can slide out of a mill and back in again, making a mill every two turns. Try to build one.
- Always look at what your opponent is about to make before you move.

Check your work

- ☐ I made a board with 24 points and the correct lines.
- ☐ I played at least eleven games and recorded each one.
- ☐ I can explain which opening strategy worked better and why.

SCOREBOOK

1. Draw the Nine Men's Morris board and mark all 16 possible mills in colored pencil.
2. Make a table of your strategy test: game, strategy, winner, pieces left.
3. Draw a running mill and explain how it works in two sentences.

From history. Alfonso's *Book of Games* also describes larger versions: Three Men's Morris, played like tic-tac-toe with sliding pieces, and Twelve Men's Morris, with diagonal lines added. The original book is kept at the royal monastery of El Escorial near Madrid.

COMMON MISTAKES

- Moving pieces diagonally or jumping. Pieces slide only along lines to the next empty point.
- Removing a piece from a mill when other pieces are available. Pieces in a mill are protected unless there is no other choice.
- Thinking the game is only about making mills. Keeping room to move is just as important.

Make it a game • Mill Maker Sprint. Draw the Nine Men's Morris board from memory in sixty seconds and mark where a mill can be formed. Your parent times you. Then place three beans on the board and challenge your parent to find the move that makes a mill. Say what blocked means. Then tell where the game was played, from Rome to the Middle Ages.

UNIT 2

THE OLDEST BOARD GAMES

Long before chess or checkers, people sat down across a board and moved pieces by the throw of dice or sticks. In this unit you will meet four of the oldest board games in the world. The Royal Game of Ur was buried in the royal tombs of ancient Mesopotamia about 4,500 years ago, and a museum curator figured out its rules from a clay tablet. Senet was the favorite game of ancient Egypt, from farmers to pharaohs. Mancala, the sowing game, has been played across Africa and Asia for many centuries. Nine Men's Morris was scratched into the stone benches of medieval cathedrals by bored builders and choirboys.

For each game you will learn the story of how it was found, how it spread and changed, and how to play it. Then you will make each one from paper, cardboard, an egg carton and dried beans, play it many times, and keep score. By the end of the unit you will have a box of ancient games and the skill to teach them to anyone.

PREREQUISITES

- Keeps a scorebook with the date, rules and a score table (Unit 1)
- Can count to 30 and add small numbers quickly
- Can cut, fold and glue card stock carefully

MASTERY CHECKLIST

- ☐ I can tell how the Royal Game of Ur was discovered and how Irving Finkel found its rules on a clay tablet.
- ☐ I can explain how four coins or four sticks can be used as "dice," and which throws are most common.
- ☐ I can play Senet, mancala (oware) and Nine Men's Morris by the rules and teach them to someone else.
- ☐ I can find Mesopotamia, Egypt, West Africa and medieval England on a map and say which game came from each.
- ☐ I can make a sturdy game board and pieces from household materials.

LESSONS IN THIS UNIT

2.1	The Royal Game of Ur	2 sessions of 45 minutes
2.2	Senet: The Game of the Pharaohs	2 sessions of 45 minutes
2.3	Mancala: The Sowing Game	2 sessions of 45 minutes
2.4	Nine Men's Morris	2 sessions of 45 minutes

UNIT 2 REVIEW

Answer each question in complete sentences. Show your work for the counting question. The review is worth 50 points.

1. **5 pts**
Where and when were the boards of the Royal Game of Ur found, and who found them?
2. **5 pts**
How did Irving Finkel discover the rules of the game?
3. **5 pts**
You toss four coins and count the heads. Which total is most likely, and which two are least likely?
4. **5 pts**
What does a rosette square do in the Royal Game of Ur?
5. **5 pts**
Describe a Senet board and the path the pieces follow.
6. **5 pts**
Why do historians say that all Senet rules today are “reconstructions”?
7. **5 pts**
What does “sowing” mean in mancala, and how do you capture in oware?

8. **5 pts**

Name three places where mancala games are played and their names there.

9. **5 pts**

What is a mill in Nine Men's Morris, and what happens when you make one?

10. **5 pts**

What would happen if Nine Men's Morris had no moving stage, only placing?
How would the game change?

ANSWER KEY

1. In the royal cemetery of Ur, in southern Iraq (ancient Mesopotamia), in the 1920s, by Leonard Woolley's team. The boards are about 4,500 years old.
2. He read a clay tablet in cuneiform, written by a Babylonian scribe in 177 BC and kept in the British Museum, which explained the moves of the twenty-square game.
3. 2 heads is most likely (6 ways out of 16). 0 and 4 heads are least likely (1 way each out of 16).
4. A piece on a rosette is safe from capture, and landing on a rosette gives the player another throw.
5. Thirty squares in three rows of ten. The path runs in an S shape: left to right on the top row, right to left on the middle row, left to right on the bottom row.
6. No complete ancient rule book has been found. Historians suggest rules based on boards, pieces, paintings and texts, but cannot be certain.
7. Picking up all the seeds in one pit and dropping them one by one into the following pits. In oware you capture when your last seed lands in an opponent's pit and makes 2 or 3 there; you also take any 2s or 3s in the pits just before it.
8. Any three: Ghana (oware), Nigeria (ayo), East Africa (bao), Uganda (omweso), Malaysia (congak), the Caribbean (warri), Egypt (mangala), the United States (Kalah).
9. Three of your pieces in a row along a line. You remove one of your opponent's pieces (not one in a mill, unless no other is left).
10. It would be much like tic-tac-toe: once all the points were filled, the game would stop, and there would be less room for planning. The moving stage lets players build running mills and block each other.

PORTFOLIO PIECE: A MUSEUM OF ANCIENT GAMES

Make a small “museum exhibit” of the four games in this unit. Put all four boards and their pieces in one box or folder. For each game, write a museum card about the size of an index card: the name of the game, where and when it was played, how we know about it (a find, a tablet, a photograph or a book), and the basic rules in five or six numbered steps. Add a map showing Mesopotamia, Egypt, Ghana and England with each game marked. Then invite your family to your museum and teach each visitor one game.

LOOK FOR	WHAT IT MEANS
Four working games	Each board is correct and sturdy, with all its pieces and throwing sticks or coins.
Museum cards	Each card gives accurate history and clear rules a visitor could follow.
Map	The four places are marked correctly with the name of each game.
Teaching	The student taught at least one game to a visitor, who could then play it.

UNIT 3

THE OLYMPICS

Nearly 2,800 years ago, Greek runners lined up on a long dirt track in a valley in southern Greece and dashed one length of the stadium. The winner received no money and no medal, only a crown of olive leaves, yet his name was remembered for centuries. The ancient Games were held every four years for more than a thousand years. The apostle Paul, who knew these games well, used them to teach Christians how to run the course of faith.

In this unit you will visit the ancient Games, learn what the olive wreath meant and why Paul wrote “so run, that ye may obtain,” and see how a French educator named Pierre de Coubertin brought the Games back to life in Athens in 1896. Last, you will meet Eric Liddell, the Scottish runner who would not run on the Lord’s Day and then won a gold medal in a distance he had hardly ever run.

PREREQUISITES

- Can measure distances with a tape measure and time with a stopwatch
- Can find Greece and France on a map
- Keeps a scorebook with dates and score tables (Units 1–2)

MASTERY CHECKLIST

- ☐ I can describe the ancient Games: where and when they began, the stadion footrace, the truce and the olive wreath.
- ☐ I can explain how Paul used the Games to teach about the Christian life (1 Corinthians 9:24-25).
- ☐ I can tell how Pierre de Coubertin revived the Games and what happened at Athens in 1896.
- ☐ I can tell the story of Eric Liddell in 1924 and explain why he would not run on Sunday.
- ☐ I can measure, run and time events fairly and record the results.

LESSONS IN THIS UNIT

3.1 The Ancient Games and the Stadion

2 sessions of 45 minutes

3.2 The Olive Wreath and Paul’s “So Run”

2 sessions of 45 minutes

UNIT 3 REVIEW

Answer each question in complete sentences. Show your work for the calculation.
The review is worth 50 points.

1. **5 pts**

When were the first recorded ancient Games held, and what was the only event?

2. **5 pts**

What was the sacred truce, and why was it needed?

3. **5 pts**

What prize did winners receive at the ancient Games?

4. **5 pts**

Name the five events of the ancient pentathlon.

5. **5 pts**

What did Paul mean when he wrote that athletes seek “a corruptible crown; but we an incorruptible”?

6. **5 pts**

Who was Pierre de Coubertin, and what did he do in 1894?

7. **5 pts**

Who won the first marathon in 1896, and why was it special to the Greek crowd?

8. **5 pts**

A runner covers a 96-meter course in 16 seconds. What is her speed in meters per second?

9. 5 pts

Why did Eric Liddell refuse to run the 100 meters in Paris, and what did he do instead?

10. 5 pts

What might have happened if Liddell had decided to run on Sunday after all? Would people remember him the same way?

ANSWER KEY

1. In 776 BC. The only event was the stadion, a sprint of one length of the stadium, about 192 meters.
2. An agreement announced before each Games so that athletes and visitors could travel safely to and from the Games, even through lands at war.
3. A wreath of wild olive leaves, along with honor from their home cities.
4. The stadion footrace, long jump, discus, javelin and wrestling.
5. The athlete's wreath withers and fades, but the reward God gives to those who are faithful lasts forever. Christians should live with even more discipline than athletes because their prize is greater.
6. A French educator who wanted to bring back the Games. In 1894 he gathered delegates at the Sorbonne in Paris, who founded the International Olympic Committee and chose Athens for the first modern Games in 1896.
7. Spyridon Louis, a Greek water-carrier. The marathon was a new event inspired by Greek history, and a Greek won it in front of 80,000 Greeks in Athens.
8. $96 \div 16 = 6$ meters per second.
9. The heats were on Sunday, which he kept as the Lord's Day. He trained for the 200 and 400 meters instead, won bronze in the 200 and gold in the 400 meters in a world-record 47.6 seconds.
10. Answers will vary. He might have won the 100 meters, but he would have gone against his conscience, and his story would not be remembered as an example of faithfulness and conviction.

PORTFOLIO PIECE: A SCRAPBOOK OF THE GAMES

Make a scrapbook of at least eight pages telling the story of the Games from 776 BC to 1924. Include a map of Greece with the site of the ancient Games, Athens and Corinth; a page on the ancient events and the olive wreath; a page with 1 Corinthians 9:24-25 and what it means; a page on Coubertin and Athens 1896; a page on Eric Liddell; and pages with photographs and results from your own stadion, pentathlon and family Games. End with a page called “My Own Course” about one thing you want to train for with discipline this year.

LOOK FOR	WHAT IT MEANS
History	Dates, names and places are correct for the ancient Games, 1896 and 1924.
Scripture	1 Corinthians 9:24-25 is copied accurately and explained in the student’s own words.
Own results	Tables and photographs from the stadion, pentathlon and family Games are included.
Reflection	The “My Own Course” page names a real goal and a plan for disciplined practice.
Care	Neat pages, captions on every picture, and a cover.

3.1 THE ANCIENT GAMES AND THE STADION

OBJECTIVES

- Tell where and when the ancient Greek Games began and how often they were held.
- Describe the stadion footrace, the sacred truce and the prize of an olive wreath.
- Measure a scale stadion, run it several times and calculate speed.

Warm-up. Guess how long it would take you to run the length of two football fields (about 200 meters). Write your guess. You will test it in the project.

WATCH

Ancient Olympia, Greece 🇬🇷 The World's First Stadium

Laura Bronner • 6:50

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

WHEN TO WATCH

After “How it changed.” A traveler walks through the ruins to the stone tunnel and runs on the ancient track.

Note: A travel video. The description includes tour-booking links, which you need not use. Parents may wish to preview it.

KEY TERMS

stadion

A Greek measure of length, about 192 meters (630 feet) at the ancient Games, and the footrace of that length. Our word “stadium” comes from it.

truce

An agreement to stop fighting for a time. A truce let athletes and visitors travel safely to the Games.

olive wreath

A crown of wild olive leaves, the only prize given to winners at the ancient Games.

pentathlon

A contest of five events: the footrace, long jump, discus, javelin and wrestling.

archaeology

The study of the past from the things people left behind, such as buildings, tools and inscriptions.

CORE IDEAS

The story. The Greeks counted their years from the first recorded Games, held in 776 BC in a green valley called Olympia, in southern Greece. That year there was only one event: the stadion, a sprint of one length of the track, about 192 meters. The winner, according to Greek tradition, was a cook named Koroibos from the nearby city of Elis. The Games honored Zeus, the chief god of the Greeks, whose great temple stood beside the athletes' grounds. For more than a thousand years, until about AD 393, the Games were held every four years.

How it changed. Over the centuries more events were added: a two-length footrace, a long-distance run, wrestling, the pentathlon and chariot racing. A stone stadium was built with grassy banks where about 40,000 spectators could stand. Before each Games, heralds traveled to every Greek city to announce a sacred truce, so that athletes and visitors could travel safely even through lands at war. Only free Greek men and boys could compete, and they trained for ten months before the Games began.

How it is played. The runners in the stadion started from a line of stone slabs with grooves for their toes; you can still see them today. A horn sounded, and they sprinted straight down the track to the far end. There were no curves. In the longer events, runners turned around a post at each end. The judges, dressed in purple, watched for false starts, and a runner who jumped too early could be whipped! The winner was crowned with a wreath of wild olive leaves cut from a sacred tree, and his home city often honored him for the rest of his life.

Why it matters. The ancient Games are the reason we still have a world-wide Olympic Games today, with its flame, its truce and its ideal of striving to be one's best. They also show that people have always admired discipline: athletes who trained for months and kept the rules. The prize was only a handful of leaves, but the honor was great. As you will see in the next lesson, the apostle Paul noticed that and drew a lesson from it.

PICTURE STUDY



Ruins of the Echo Hall and the Stadium, Unknown photographer, late 1800s · Albumen photograph from a travel album · Hallwyl Museum, Stockholm, Sweden

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

German archaeologists began digging at the site of the ancient Games in 1875 and uncovered the temples, the athletes' training grounds and the stadium, which had been buried under river mud for centuries. Travelers soon came to see the ruins and bought photographs like this one for their albums. The caption names the Echo Hall, a long covered walkway famous for echoing a voice seven times, and the stadium beyond it.

Look closely

- Look at the long straight wall in the middle of the picture. What kind of building might it have belonged to?
- Find the fallen blocks in front. How do you think they came to be scattered?
- Look at the hills behind the ruins. Spectators once stood on grassy banks below hills like these.
- Find any shapes that look like columns or steps.

Talk about it

1. The site was buried under mud for over a thousand years. How might that have protected it?
2. Why do you think travelers wanted photographs of these ruins?

3. What would you most like to see if you could visit the site of the ancient Games today?

Safety first. Run on grass or a school track, never on a street, with proper running shoes and a parent nearby. Warm up first with a few minutes of brisk walking and easy jogging. Drink water, and rest in the shade on hot days. Stop if anything hurts, and tell a parent.

PROJECT

Run a Stadion

You will measure out a stadion (or a scaled-down one), run it several times with a fair start, time each run, and work out your speed. Then you will compare yourself with the fastest runners in history.

You will need

- A long tape measure or a measuring wheel (or count your steps)
- Four markers for the start and finish lines: shoes, cones or sticks
- A stopwatch or phone timer, and a helper to start you and time you
- Scorebook and pencil

Steps

1. **Measure.** In a park, field or school track, measure a straight course of 192 meters (630 feet). If you do not have space, measure a scaled stadion of 96 meters (half) or 48 meters (a quarter) and note the scale in your scorebook.
2. Mark the start and finish lines clearly.
3. **Fair start.** Agree on a starting signal: “Ready, set,” then a clap. A runner who moves before the clap must go back and start again.
4. **Run.** Warm up, then run the course three times, resting at least three minutes between runs. Your helper times each run.
5. Record each time in your scorebook. Circle your best time.
6. **Speed.** Divide the distance by your best time to find your speed in meters per second. For example, 96 meters in 20 seconds is $96 \div 20 = 4.8$ meters per second.
7. Compare: a top sprinter today runs about 10 meters per second. How many times faster is that than your speed?
8. If a brother, sister or parent runs too, make a table of everyone’s best times and speeds. Crown the winner with a paper wreath.

Tips

- Lean forward slightly at the start and pump your arms.

- Run all the way through the finish line, not just to it.
- Make a wreath for the winner by cutting leaf shapes from green paper and taping them to a paper band.

Check your work

- ☐ I measured my course carefully and wrote down its length.
- ☐ I ran it three times with a fair start and recorded every time.
- ☐ I calculated my speed in meters per second.

SCOREBOOK

1. Draw a map of Greece and mark the site of the ancient Games, Athens and Corinth.
2. Make a table of your three runs: run number, time in seconds, speed. Circle the best.
3. Draw the stone starting line with its toe grooves, and write one sentence about why a fair start matters.

From history. The Greeks used the four years between Games as a way of counting time: an “Olympiad.” A Greek historian might write that something happened “in the third year of the 80th Olympiad.” The ancient stadium has been uncovered, and visitors may still run its length today.

COMMON MISTAKES

- Thinking the ancient athletes ran around an oval track. The stadion was a straight dash.
- Measuring the course carelessly. A few meters short or long changes every time.
- Thinking the winners were paid in gold. The prize at the Games was only an olive wreath.

Make it a game • Stadion Story Chain. Tell the story of the ancient Greek Games by building a story chain with your parent. Each person adds one sentence: where, when, how often, the stadion race, the sacred truce, the olive wreath. If someone gets a fact wrong, the other says halt and corrects it. Finish by racing across a room barefoot and calling who won the stadion.

3.2 THE OLIVE WREATH AND PAUL’S “SO RUN”

OBJECTIVES

- Describe the ancient pentathlon and the training of Greek athletes.
- Explain how Paul used the Games to teach Christians about self-control and an “incorruptible crown.”
- Hold a five-event home pentathlon and record the results.

Warm-up. Hold a wreath of leaves (real or paper) in your hand. Leave it on a sunny windowsill for the week and look at it each day. What happens to it?

WATCH

What is the Story of Ancient Corinth?

Drive Thru History with Dave Stotts • 5:16

https://www.youtube.com/watch?v=jiRM_FEqJml

WHEN TO WATCH

After the story paragraph. Visit Corinth, the city where Paul lived for a year and a half, near the site of the Isthmian Games.

KEY TERMS

Isthmian Games

Greek games held every two years near Corinth, where Paul lived for a year and a half.

temperate

Self-controlled: able to say no to what is not good for you.

corruptible

Able to rot, wither or fade away.

incorruptible

Never fading or decaying; lasting forever.

epistle

A letter, especially one of the letters of the apostles in the New Testament.

CORE IDEAS

The story. About AD 50 the apostle Paul came to Corinth, a busy Greek city on a narrow neck of land, and stayed a year and a half, making tents and preaching (Acts

18). Near Corinth were held the Isthmian Games, second only to the great Olympic Games in fame. Paul would have seen athletes training and crowds gathering. A few years later he wrote to the Christians in Corinth that many runners compete but only one receives the prize: “So run, that ye may obtain” (1 Corinthians 9:24).

How it changed. Paul noticed two things about athletes. First, they trained hard and gave up many comforts: “every man that striveth for the mastery is temperate in all things.” Second, their prize did not last: “they do it to obtain a corruptible crown; but we an incorruptible” (1 Corinthians 9:25). At the Isthmian Games the winner’s wreath was made of pine or wild celery, and in a few days it withered. Paul used the athlete as a picture of the Christian, who trains and keeps going for a prize that never fades. Near the end of his life he wrote, “I have finished my course, I have kept the faith” (2 Timothy 4:7).

How it is played. The most admired athletes in Greece were the pentathletes, who had to be good at five things: the stadion footrace, the long jump, the discus throw, the javelin throw and wrestling. Long jumpers carried stone or metal weights, called *halteres*, and swung them forward to jump farther. The discus was a heavy disk of bronze or stone. The javelin had a leather loop that the thrower wrapped around his fingers to give it spin. In your home pentathlon, you will use safe versions of these events.

Why it matters. Paul did not tell Christians to stop enjoying games. He used games to teach, and his lesson is one every athlete can understand: you cannot win without self-control, and the best prizes are worth working for. Practice and discipline in sport are good, but they are a picture of a bigger contest. As Paul wrote elsewhere, “bodily exercise profiteth little: but godliness is profitable unto all things” (1 Timothy 4:8).

PICTURE STUDY



Saint Paul Writing His Epistles, Valentin de Boulogne (probably), about 1618–1620 · Oil on canvas ·
Museum of Fine Arts, Houston

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

Valentin de Boulogne was a French painter who worked in Rome. Like many painters of his time he used strong light and deep shadow to make his figures seem to step out of the dark. Here he imagined the apostle Paul at work on one of his letters. The sword behind him is a traditional sign for Paul, who, according to early Christian tradition, was put to death by the sword in Rome.

Look closely

- Find Paul's quill pen and the papers he is writing on. What might he be writing?
- Look at his face. Is he hurrying or thinking carefully?
- Find the open books and the rolled scroll. Why might Paul need other books while he writes?
- Find the sword in the shadows. What does it remind us of?

Talk about it

1. Paul wrote about runners and wreaths in a letter. Why do you think he used athletes as an example?
2. What is the difference between a "corruptible crown" and an "incorruptible" one?

3. How does an athlete show self-control? How can you show it this week?

Safety first. Hold the pentathlon outdoors on grass with plenty of space. Throw only soft or light objects (a paper plate, a flying disc, a pool noodle) and only when the landing area is clear of people. Do not wrestle; the fifth event is a ball toss instead. Warm up first, wear proper shoes, and drink water.

PROJECT

A Home Pentathlon

You will hold a five-event pentathlon in the yard or park, measure every result, score each event, and crown the champion with a homemade olive wreath.

You will need

- A tape measure and a stopwatch
- A paper plate or flying disc (the discus) and a foam pool noodle (the javelin)
- A soft ball and a bucket or laundry basket
- Green paper, scissors and tape for a wreath
- Scorebook and pencil

Steps

1. **Plan the events.** 1. A short sprint of 40 meters. 2. A standing long jump. 3. The discus: a paper plate or flying disc thrown for distance. 4. The javelin: a pool noodle thrown for distance. 5. Instead of wrestling, a ball toss: ten throws of a soft ball into a basket from 3 meters.
2. Mark a starting line for every event and agree on the rules before you begin. Write them in your scorebook.
3. **Compete.** Each athlete gets two tries in the throwing and jumping events; the better one counts. Measure every jump and throw from the line to where it first touched down.
4. Record every result in a table with one column for each event.
5. **Score.** In each event, the winner gets 1 point, second place 2 points, and so on. Add up each athlete's points. The lowest total wins the pentathlon.
6. Make a wreath of paper olive leaves for the champion.
7. Write in your scorebook: Which event was your best? Which would you train for if you had ten months, like the Greek athletes?

Tips

- In the standing long jump, swing your arms forward hard as you jump, just like the Greeks with their weights.

- Throw the pool noodle with a long, smooth arm motion, not a flick of the wrist.
- If only one person competes, try to beat your own first score in a second pentathlon at the end of the week.

Check your work

- ☐ I held all five events with clear rules and measured every result.
- ☐ I scored the events by place and found the champion.
- ☐ I can explain what Paul meant by “so run, that ye may obtain.”

SCOREBOOK

1. Copy 1 Corinthians 9:24-25 in your best handwriting and draw an olive wreath around it.
2. Make the pentathlon results table: athlete, sprint, jump, discus, javelin, ball toss, total points.
3. Draw the wreath on your windowsill on the first day and the last day of the week. What happened?

From history. The Greeks held four great festivals of games: the Olympic, the Pythian at Delphi, the Nemean and the Isthmian near Corinth. Each gave a different wreath: wild olive, laurel, wild celery, and pine or wild celery. An athlete who won at all four was called a *periodonikes*, a “circuit winner.”

COMMON MISTAKES

- Thinking Paul was against sports. He used sports as an example of discipline.
- Measuring throws to where they rolled instead of where they first landed.
- Adding up places the wrong way. In place scoring, the smallest total wins.

Make it a game • Run the Race. Make five pentathlon cards on paper and shuffle them: running, jumping, discus, javelin, wrestling. Draw a card and act out the event safely, using a paper plate for the discus and a rolled sock for the javelin. Your parent guesses. Then say the Paul verse idea about running for an incorruptible crown in your own words.

Scripture. “So run, that ye may obtain.” (1 Corinthians 9:24, KJV)

Paul used the runners of the Greek games to teach Christians to live with discipline and keep going to the end.

3.3 COUBERTIN AND THE FIRST MODERN GAMES, 1896

OBJECTIVES

- Tell how Pierre de Coubertin brought back the Games and why.
- Describe the first modern Games at Athens in 1896, including the first marathon.
- Plan and hold a family “Games” with an opening ceremony, events and medals.

Warm-up. Look at the five Olympic rings (draw them from memory if you can). How many rings are there, and what colors? Why do you think the rings are linked together?

WATCH

6th April 1896: The first modern Olympic Games open in Athens

HistoryPod · 2:35

<https://www.youtube.com/watch?v=BkewPyyp-jU>

WHEN TO WATCH

After the story paragraph. A short history of the opening of the first modern Games, with photographs from 1896.

BACKUP VIDEO

A Tribute To Pierre de Coubertin - Olympic Visionary | 150th Birthday 01/01/2013

Olympic Games · 1:59

<https://www.youtube.com/watch?v=5cn6FYNS6dg>

Old photographs and film of Pierre de Coubertin from the official Olympic channel.

KEY TERMS

revival

Bringing something back to life after it had ended.

marathon

A long-distance footrace, today 42.195 kilometers (26.2 miles), named for the Greek town of Marathon.

International Olympic Committee

The group, founded in Paris in 1894, that organizes the modern Olympic Games.

motto

A short saying that sums up an ideal; the Olympic motto is *Citius, Altius, Fortius*, “Faster, Higher, Stronger.”

amateur

Someone who plays a sport for love of it, not for pay.

CORE IDEAS

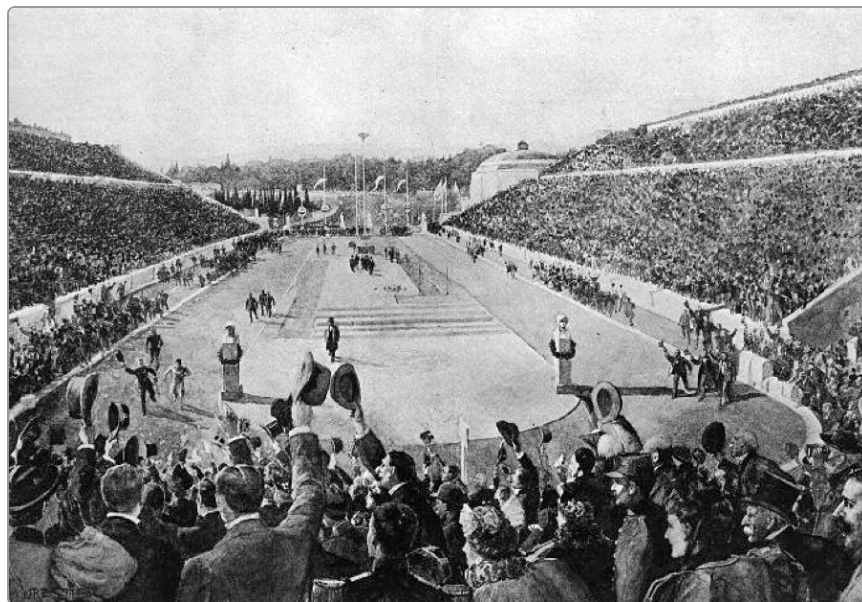
The story. Pierre de Coubertin was a French nobleman, born in Paris in 1863, who cared deeply about education. As a young man he visited English schools such as Rugby and was struck by how sport built character in the boys: courage, teamwork and fair play. He also read about the German archaeologists uncovering the ancient Games. He began to dream of bringing the Games back, not for one country but for the whole world. In June 1894 he gathered delegates from many countries at the Sorbonne in Paris, and they voted to hold the first modern Games in Athens in 1896.

How it changed. The Greeks rebuilt the ancient Panathenaic Stadium in Athens in white marble, paid for largely by a wealthy Greek merchant named George Averoff. About 240 athletes from 14 countries came, all of them men and nearly all amateurs. On April 6, 1896, an American college student named James Connolly won the triple jump and became the first modern champion. Winners received a silver medal and an olive branch. The motto “Faster, Higher, Stronger” was suggested by Coubertin’s friend Henri Didon, a priest and schoolmaster.

How it is played. The most famous event of 1896 was a new one: the marathon. A French scholar, Michel Bréal, suggested a long run from the town of Marathon to Athens, in memory of the old story of a messenger who ran that way to announce a Greek victory. The runners covered about 40 kilometers on dusty roads. A Greek water-carrier named Spyridon Louis took the lead near the end and entered the stadium to the roar of 80,000 Greeks. The two Greek princes ran beside him on the last lap. The distance was later fixed at 42.195 kilometers (26.2 miles).

Why it matters. Coubertin believed that the most important thing in the Games was not winning but taking part, and that sport could teach young people to strive honestly and respect one another. Not everything he hoped for came true, but the modern Games now bring together athletes from more than 200 nations. They are a reminder that games can be a meeting place for the whole world.

PICTURE STUDY



Spyridon Louis Enters the Stadium, Unknown illustrator, 1897 (showing April 10, 1896) · Illustration printed in the official report of the 1896 Games · From *The Olympic Games, BC 776 – AD 1896* (Athens, 1897)

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

This picture was printed in the official report of the 1896 Games, written by Coubertin and his Greek partners. It shows the moment the Greek runner Spyridon Louis came into the stadium at the end of the first modern marathon. The stadium had first been built in ancient times, about 330 BC, and was rebuilt in white marble for the Games. Its long, narrow shape with tight curves copies the ancient stadiums.

Look closely

- Find the runner coming down the track. How small does he look in the huge stadium?
- Look at the men in the front. What are they doing with their hats?
- Look at the shape of the track. How is it different from a modern oval track?
- Find the officials standing on the field near the finish.

Talk about it

1. Why do you think the Greek crowd cheered so wildly for Louis?
2. Why would the tight curves at the ends make running harder?
3. If you could have watched one moment in 1896, which would it be and why?

Safety first. Hold the family Games on grass with plenty of space. Choose safe events: walking or running races, a soft-ball throw, a standing jump, a beanbag toss. Warm up, wear proper shoes, drink water and rest in the shade.

PROJECT

The Family Games

You will plan and hold your own Games in the style of Coubertin: with an opening ceremony, a flag, an oath of fair play, at least four events, and medals for the winners.

You will need

- Paper, markers and string for a flag and medals
- Equipment for four events (a soft ball, a beanbag, a bucket, a tape measure, a stopwatch)
- Family members or friends as athletes
- Scorebook and pencil

Steps

1. **Plan.** Choose four events, at least one footrace and one throw. Write the rules of each.
2. Design a flag for your Games and make gold, silver and bronze medals from card and string.
3. Write a short oath of fair play for the athletes to say together, such as: “We promise to keep the rules, to do our best and to treat every other player with respect.”
4. **Opening ceremony.** March in, raise the flag and say the oath.
5. **Compete.** Run all four events, measuring and timing carefully. Record every result in your scorebook.
6. Award medals for each event. Clap for every athlete, not only the winners.
7. **The marathon idea.** Calculate: if a marathon is 42.195 kilometers and you walk 5 kilometers in an hour, how many hours would you need? Write the answer in your scorebook.

Tips

- Let younger children have a head start in races so that the Games are fair and fun for everyone.
- Write the results on a big “board” of paper for everyone to see.

- Take photographs for your portfolio.

Check your work

- ☐ We held at least four events with written rules.
- ☐ We had an opening ceremony, an oath of fair play and medals.
- ☐ I recorded every result and worked out the marathon calculation.

SCOREBOOK

1. Draw the five Olympic rings in their colors (blue, yellow, black, green and red) and the date 1896.
2. Make a results table for your family Games: event, gold, silver, bronze, best result.
3. Write a timeline: 776 BC first Games, AD 393 last ancient Games, 1894 the Sorbonne meeting, 1896 Athens.

From history. Coubertin designed the five-ring flag himself in 1913. The rings stand for five parts of the world joined together, and the six colors (including the white background) were chosen because every nation's flag at the time contained at least one of them.

COMMON MISTAKES

- Thinking the modern Games are a direct continuation of the ancient ones. There was a gap of about 1,500 years.
- Mixing up Athens (the 1896 Games) with the site of the ancient Games in the west of Greece.
- Thinking winners in 1896 received gold medals. They received silver medals and an olive branch.

Make it a game • Coubertin Quiz Show. Your parent plays the quiz host and asks five rapid questions about Pierre de Coubertin and the 1896 Games: why he revived them, where they were held, what the marathon was, what the motto says. You answer from memory. Every correct answer wins a bean. Swap roles and make up your own harder questions.

3.4 ERIC LIDDELL: THE RUNNER

WHO WOULD NOT RUN ON SUNDAY

OBJECTIVES

- Tell the story of Eric Liddell at the Paris Games of 1924.
- Explain why he would not run on Sunday and what it cost him.
- Compare running a sprint with running a longer distance, using timed trials.

Warm-up. Imagine you have trained for years for one big event, and then you learn it will be held on a day you have promised to keep for something more important.

Write one sentence: what would you do?

WATCH

Olympics: The true story behind Chariots of Fire | BBC Global

BBC Global · 2:49

<https://www.youtube.com/watch?v=FRIOnK52JZw>

WHEN TO WATCH

After “How it changed.” Liddell’s friends and fellow athletes remember him in old BBC interviews.

BACKUP VIDEO

The Flying Scotsman takes gold and sets a new record - Eric Liddell - Paris 1924 Olympic Games

Olympic Games · 1:12

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

Film of the 400-meter final from the official Olympic channel.

KEY TERMS

conviction

A strong belief that guides what a person does, even when it is costly.

Lord’s Day

Sunday, the first day of the week, kept by Christians for worship and rest.

heat

An early round of a running event; the fastest runners in each heat go on to the next round.

pace

How fast a runner goes over a distance; good runners plan their pace.

missionary

A person sent to another place to tell people about Jesus and to serve them.

CORE IDEAS

The story. Eric Liddell was born in 1902 in China, where his Scottish parents were missionaries. At school and university in Scotland he became the fastest sprinter in Britain, and he also played rugby for Scotland. In 1924 he was chosen to run the 100 meters at the Paris Games, his best event. Then the schedule was announced: the heats of the 100 meters would be run on a Sunday. Liddell believed God had set apart the Lord's Day for worship and rest, and he quietly said that he would not run on it.

How it changed. Some people in Britain called him a traitor to his country. Liddell did not argue. He learned of the schedule months before the Games, so he changed his training to the 200 meters and the 400 meters, which were not run on Sunday. On the Sunday of the 100-meter heats, he preached at a church in Paris. In the 200 meters he won a bronze medal. Before the final of the 400 meters, a member of the British team's staff handed him a note with words from 1 Samuel 2:30: "them that honour me I will honour."

How it is played. The 400 meters is one full lap of the track, and most runners try to save some strength for the end. On July 11, 1924, Liddell ran differently. He sprinted from the start and kept going, head thrown back, arms flying. The other runners expected him to tire, but he never slowed enough for them to catch him. He won the gold medal in 47.6 seconds, a world record. A year later he left fame behind and went back to China as a missionary teacher. He spent the rest of his life serving there, and he died in 1945 in a prison camp, where he had spent his last years caring for the children and the sick.

Why it matters. Eric Liddell is remembered not only because he ran fast, but because he was faithful. He showed that a Christian can be a great athlete and still

put God first, and he did it without boasting or anger. Talent is a gift from God, to be used fully and offered back to Him.

PICTURE STUDY



Eric Liddell Wins the 400 Meters, Le Miroir des sports (French sports magazine), July 1924 (published July 16, 1924) · Newspaper photograph · Stade de Colombes, Paris

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

This photograph appeared in a French sports magazine a few days after the 400-meter final. It shows Eric Liddell crossing the line at the Stade de Colombes in Paris, ahead of the American runner Horatio Fitch, who took the silver medal. Liddell had run the whole lap almost as a sprint.

Look closely

- Find Liddell at the finish line. How far ahead of the next runner is he?
- Look at the finish line and the posts holding the tape or string.
- Look at the crowd. Can you find anyone standing to see better?
- Compare the running clothes in 1924 with what runners wear today.

Talk about it

1. Liddell ran the 400 meters as if it were a sprint. Why did the other runners expect him to slow down?
2. Why do you think Liddell did not argue with the people who criticized him?
3. What does 1 Samuel 2:30 have to do with this picture?

Safety first. Run on grass or a track with proper shoes, warm up first, and have a parent nearby. Rest between runs and drink water. Stop if anything hurts, and tell a parent.

PROJECT

Sprinting and Pacing

Liddell surprised everyone by running a long sprint at full speed. You will test how your own speed changes over longer distances and learn to plan your pace.

You will need

- A tape measure, four markers and a stopwatch
- A helper to time you
- Scorebook and pencil

Steps

1. **Mark.** On grass or a track, mark a 50-meter course.
2. Warm up. Run 50 meters as fast as you can and record your time.
3. Rest at least five minutes. Then run 100 meters (there and back) as fast as you can and record your time.
4. Rest again. Run 200 meters (two laps there and back) and record your time.
5. **Calculate.** For each run, divide the distance by the time to find your speed in meters per second.
6. Make a bar graph of your three speeds. Did you slow down in the longer runs? By how much?
7. **Plan a pace.** On another day, run 200 meters again, trying to run each 50 meters in the same time. Have your helper call out the time at every 50-meter mark. Did a steady pace give you a better time?
8. Write two sentences: What did Liddell do that surprised the other runners? What did you learn about pace?

Tips

- Rest properly between runs, or your later times will not be fair.
- Keep your shoulders loose and your arms swinging forward and back, not across your body.
- Compare your speeds, not just your times, because the distances are different.

Check your work

- ☐ I ran three distances and recorded every time.
- ☐ I calculated my speed for each and made a bar graph.
- ☐ I can tell Liddell's story and explain why he would not run on Sunday.

SCOREBOOK

1. Copy 1 Samuel 2:30 (the part on the note) and write one sentence about how it came true for Liddell.
2. Make a table and bar graph of your speeds at 50, 100 and 200 meters.
3. Write a short timeline of Liddell's life: 1902, 1924, 1925 and 1945.

From history. The 1981 film *Chariots of Fire* made Liddell famous again, though it changed some details for the screen. In real life he knew about the Sunday heats long before he sailed for France. In 1991 a memorial stone from the granite of the Isle of Mull was placed at the site of the camp in China where he died.

COMMON MISTAKES

- Thinking Liddell found out about the Sunday heats at the last minute. He knew months ahead and trained for other events.
- Thinking he won the 100 meters. He won gold in the 400 meters and bronze in the 200 meters.
- Forgetting that his greatest work came after the Games, as a missionary in China.

Make it a game • Pace Like Liddell. Tell Eric Liddell's story in three parts: the conviction, the choice about Sunday, and the race. Then run a 4-lap pacing challenge in a yard or hallway, aiming to keep every lap the same speed. Your parent times each lap. Smallest difference between laps wins. Say what Liddell's choice cost him.

Scripture. “for them that honour me I will honour” (1 Samuel 2:30, KJV)

These were the words on the note handed to Eric Liddell before the 400-meter final in Paris.

UNIT 3

THE OLYMPICS

Nearly 2,800 years ago, Greek runners lined up on a long dirt track in a valley in southern Greece and dashed one length of the stadium. The winner received no money and no medal, only a crown of olive leaves, yet his name was remembered for centuries. The ancient Games were held every four years for more than a thousand years. The apostle Paul, who knew these games well, used them to teach Christians how to run the course of faith.

In this unit you will visit the ancient Games, learn what the olive wreath meant and why Paul wrote “so run, that ye may obtain,” and see how a French educator named Pierre de Coubertin brought the Games back to life in Athens in 1896. Last, you will meet Eric Liddell, the Scottish runner who would not run on the Lord’s Day and then won a gold medal in a distance he had hardly ever run.

PREREQUISITES

- Can measure distances with a tape measure and time with a stopwatch
- Can find Greece and France on a map
- Keeps a scorebook with dates and score tables (Units 1–2)

MASTERY CHECKLIST

- ☐ I can describe the ancient Games: where and when they began, the stadion footrace, the truce and the olive wreath.
- ☐ I can explain how Paul used the Games to teach about the Christian life (1 Corinthians 9:24-25).
- ☐ I can tell how Pierre de Coubertin revived the Games and what happened at Athens in 1896.
- ☐ I can tell the story of Eric Liddell in 1924 and explain why he would not run on Sunday.
- ☐ I can measure, run and time events fairly and record the results.

LESSONS IN THIS UNIT

3.1 The Ancient Games and the Stadion

2 sessions of 45 minutes

3.2 The Olive Wreath and Paul’s “So Run”

2 sessions of 45 minutes

UNIT 3 REVIEW

Answer each question in complete sentences. Show your work for the calculation.
The review is worth 50 points.

1. **5 pts**

When were the first recorded ancient Games held, and what was the only event?

2. **5 pts**

What was the sacred truce, and why was it needed?

3. **5 pts**

What prize did winners receive at the ancient Games?

4. **5 pts**

Name the five events of the ancient pentathlon.

5. **5 pts**

What did Paul mean when he wrote that athletes seek “a corruptible crown; but we an incorruptible”?

6. **5 pts**

Who was Pierre de Coubertin, and what did he do in 1894?

7. **5 pts**

Who won the first marathon in 1896, and why was it special to the Greek crowd?

8. **5 pts**

A runner covers a 96-meter course in 16 seconds. What is her speed in meters per second?

9. 5 pts

Why did Eric Liddell refuse to run the 100 meters in Paris, and what did he do instead?

10. 5 pts

What might have happened if Liddell had decided to run on Sunday after all? Would people remember him the same way?

ANSWER KEY

1. In 776 BC. The only event was the stadion, a sprint of one length of the stadium, about 192 meters.
2. An agreement announced before each Games so that athletes and visitors could travel safely to and from the Games, even through lands at war.
3. A wreath of wild olive leaves, along with honor from their home cities.
4. The stadion footrace, long jump, discus, javelin and wrestling.
5. The athlete's wreath withers and fades, but the reward God gives to those who are faithful lasts forever. Christians should live with even more discipline than athletes because their prize is greater.
6. A French educator who wanted to bring back the Games. In 1894 he gathered delegates at the Sorbonne in Paris, who founded the International Olympic Committee and chose Athens for the first modern Games in 1896.
7. Spyridon Louis, a Greek water-carrier. The marathon was a new event inspired by Greek history, and a Greek won it in front of 80,000 Greeks in Athens.
8. $96 \div 16 = 6$ meters per second.
9. The heats were on Sunday, which he kept as the Lord's Day. He trained for the 200 and 400 meters instead, won bronze in the 200 and gold in the 400 meters in a world-record 47.6 seconds.
10. Answers will vary. He might have won the 100 meters, but he would have gone against his conscience, and his story would not be remembered as an example of faithfulness and conviction.

PORTFOLIO PIECE: A SCRAPBOOK OF THE GAMES

Make a scrapbook of at least eight pages telling the story of the Games from 776 BC to 1924. Include a map of Greece with the site of the ancient Games, Athens and Corinth; a page on the ancient events and the olive wreath; a page with 1 Corinthians 9:24-25 and what it means; a page on Coubertin and Athens 1896; a page on Eric Liddell; and pages with photographs and results from your own stadion, pentathlon and family Games. End with a page called “My Own Course” about one thing you want to train for with discipline this year.

LOOK FOR	WHAT IT MEANS
History	Dates, names and places are correct for the ancient Games, 1896 and 1924.
Scripture	1 Corinthians 9:24-25 is copied accurately and explained in the student’s own words.
Own results	Tables and photographs from the stadion, pentathlon and family Games are included.
Reflection	The “My Own Course” page names a real goal and a plan for disciplined practice.
Care	Neat pages, captions on every picture, and a cover.

UNIT 4

GAMES OF ASIA

Asia gave the world some of its greatest games. Chess began in India about 1,500 years ago as a battle between four kinds of troops, traveled to Persia and the Arab world, and reached Europe, where the queen became the strongest piece. Go, played in China for well over two thousand years, has rules so simple that a child can learn them in five minutes and so deep that masters study it all their lives.

Asia also gave the world active games. Chinese children flew kites and kicked feathered shuttlecocks, and Chinese soldiers and emperors played cuju, a kicking game with a leather ball that FIFA, world soccer's governing body, recognizes as the earliest known form of football. In Southeast Asia players kick a woven rattan ball over a net in sepak takraw, and in India cricket, brought by the British, became the most loved sport in the country. In this unit you will learn the stories, make the boards and the balls, and play them all.

PREREQUISITES

- Can make a game board with a ruler and keep score (Units 1-2)
- Can find India, China, Japan, Persia (Iran) and Thailand on a map
- Knows how to warm up and play safely with a soft ball (Unit 3)

MASTERY CHECKLIST

- ☐ I can trace the journey of chess from chaturanga in India to shatranj in Persia and modern chess in Europe.
- ☐ I can play Go on a small board and explain liberties, capturing and territory.
- ☐ I can tell the history of kites, cuju and the shuttlecock in China, and keep a shuttlecock in the air with my feet.
- ☐ I can explain how sepak takraw is played, and tell how cricket came to India and who Ranjitsinhji was.
- ☐ I can play every game in this unit by the rules and record the results.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Lichess:** Free and without advertising. A nonprofit chess site with lessons, puzzles and a board for playing a parent across the table or online. A parent should set up any account and supervise online play. Fits Lesson 4.1. Ages 8+.

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 Chess: From India to the World	2 sessions of 45 minutes
4.2 Go: Black and White Stones	2 sessions of 45 minutes
4.3 Kites, Shuttlecocks and Cuju	2 sessions of 45 minutes
4.4 Sepak Takraw and Cricket in India	2 sessions of 45 minutes

UNIT 4 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

1. 5 pts

Why was the Indian game called chaturanga?

2. 5 pts

Trace the journey of chess from India to Europe.

3. 5 pts

What change was made to chess about 1475, and why did it matter?

4. 5 pts

In Go, what is a liberty, and how is a stone captured?

5. 5 pts

A stone sits in the corner of a Go board. How many liberties does it have? How many on the edge? In the center?

6. 5 pts

What was cuju, and what did FIFA say about it in 2004?

7. 5 pts

How is jianzi played, and how is it related to cuju?

8. 5 pts

Describe the rules of sepak takraw.

9. 5 pts

Who was Ranjitsinhji, and what did he do in 1896?

10. 5 pts

What would happen to Go if stones could be moved after they were placed?

Would it still be the same game?

ANSWER KEY

1. It means “four parts,” for the four parts of an army represented by the pieces: foot soldiers, horsemen, elephants and chariots.
2. From India (chaturanga) to Persia (chatrang) in the 500s, then through the Arab world (shatranj), and into Europe through Spain and Italy by about the year 1000.
3. The queen (once the weak vizier) was allowed to move any distance in any direction, and the bishop to sweep along diagonals. Games became much faster.
4. A liberty is an empty point directly next to a stone (up, down, left or right). A stone or group is captured when all its liberties are filled by the opponent’s stones.
5. Corner: 2. Edge: 3. Center: 4.
6. An ancient Chinese kicking game played with a leather ball (“kick ball”). In 2004 FIFA recognized it as the earliest known form of football.
7. Players keep a weighted, feathered shuttlecock in the air by kicking it, mainly with the inside of the foot, alone or passing in a circle. It is a smaller version of cuju’s keep-up game.
8. Two teams of three (regu) on a badminton-sized court with a net about 1.5 meters high. Players may use feet, knees, chest and head, never hands or arms, and each side may touch the ball three times before sending it over.
9. An Indian prince and one of the first great Indian cricketers. In 1896 he played for England against Australia in his first Test and scored 62 and 154 not out, batting with quick, wristy strokes.
10. Answers will vary. Groups could escape capture by moving away, so surrounding and territory would mean much less; it would become a different game, more like checkers.

PORTFOLIO PIECE: A PASSPORT OF ASIAN GAMES

Make a “passport” booklet with one page for each game in this unit: chess (with shatranj), Go, cuju and jianzi, sepak takraw and cricket. On each page, draw a small map showing where the game began, write the date it began or was first recorded, list the equipment, give the main rules in three to five steps, and paste in your best score or result from the project. Stamp each page with a homemade “visa” stamp after you have taught that game to a family member. Add your jianzi and your 9-by-9 Go board to your games box.

LOOK FOR	WHAT IT MEANS
Five complete pages	Each page has a map, a date, equipment, rules and a result.
Accuracy	Places, dates and rules are correct, using facts from the lessons.
Results	Scores and records from each project are included honestly.
Teaching	At least three games have a “visa” stamp for being taught to someone else.

4.1 CHESS: FROM INDIA TO THE WORLD

OBJECTIVES

- Tell how chess began in India as chaturanga and traveled through Persia to Europe.
- Explain how the pieces and their moves changed, especially the queen about 1475.
- Play a game of shatranj with the old moves and compare it with modern chess.

Warm-up. Set up a chess board (or draw one). Name each piece and show how it moves. Which piece is the strongest? Now guess: has it always been the strongest?

WATCH

A brief history of chess - Alex Gendler

TED-Ed • 5:40

<https://www.youtube.com/watch?v=YeB-1F-UK00>

WHEN TO WATCH

After the story paragraph. Follow chess on its journey across the map.

BACKUP VIDEO

An Animated History of Chess | ChessKid

ChessKid • 2:21

<https://www.youtube.com/watch?v=eKgg0L4yTC4>

A short animated history from ChessKid, good for younger students.

KEY TERMS

chaturanga

The early Indian form of chess, named for the four parts of an army: infantry, cavalry, elephants and chariots.

vizier

The king's chief adviser. In shatranj this piece stood beside the king and moved only one square diagonally; it later became the queen.

shatranj

The Persian and Arabic form of chess, played from about AD 600 until the modern rules spread in Europe.

checkmate

An attack on the king that cannot be escaped, which ends the game. It comes from the Persian “shah mat,” often translated “the king is helpless.”

Shahnameh

The *Book of Kings*, a long poem of Persian history and legend finished by the poet Ferdowsi about AD 1010.

CORE IDEAS

The story. The Persian poet Ferdowsi, in his *Book of Kings*, tells how a king of India once sent the Persian king Khosrow a gift: a board, carved pieces of ivory and teak, and a challenge. If the wise men of Persia could work out how the game was played, India would send tribute; if not, Persia must pay. Everyone was puzzled except the king's young vizier, Buzurgmihr, who studied the pieces for a day and a night and worked out the game. Then, the story says, he invented a new game of his own to send back to India. The story is a legend, but it remembers something true: chess came to Persia from India in the 500s.

How it changed. In India the game was called chaturanga, “four parts,” because its pieces were the four parts of an army: foot soldiers, horsemen, elephants and chariots, with a king and his adviser. In Persia it became *chatrang*, and after the Arab conquest of Persia it was called *shatranj* and spread across the Islamic world. Through Spain and Italy it reached Christian Europe by about the year 1000. Europeans turned the vizier into a queen and the elephant into a bishop. About 1475, probably in Spain, the queen was given her modern power to move any distance in any direction, and the bishop learned to sweep along the diagonals. The game became much faster.

How it is played. In shatranj the king, rook and knight move as they do today. But the vizier (the queen) moves only one square diagonally, and the elephant (the bishop) jumps exactly two squares diagonally, over anything in between. Pawns move one square at a time and become viziers when they reach the far side. Games are slow, and checkmate is hard. Players could also win by capturing every piece except the enemy king. When you play shatranj and then modern chess, you will feel how much the new queen changed the game.

Why it matters. Chess crossed more borders than almost any other game, and every people who played it left a mark on it. It is a game of pure thinking: there are no dice, and nothing is hidden. A chess player learns to look ahead, to see the board

from the opponent's side, and to accept the result of his own choices. Those are good habits for all of life.

PICTURE STUDY



Buzurgmihr Masters the Game of Chess, Unknown Persian painter, folio from Ferdowsi's *Shahnameh*, about 1300–1330 · Ink, watercolor and gold on paper · Metropolitan Museum of Art, New York

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

This page comes from a copy of the *Book of Kings* made in Iran about seven hundred years ago. The painting shows the story in this lesson: the wise Buzurgmihr sitting before the chessboard sent from India, while King Khosrow and his court watch to see if he can solve the puzzle. The writing around the picture is Ferdowsi's poem, in Persian.

Look closely

- Find the king on his throne. How did the painter show that he is the most important person?
- Find Buzurgmihr at the board. What is he doing with his hand?
- Look at the chessboard. How many squares can you count along one side?
- Look at the courtiers crowded around the king. How did the painter show that everyone is watching?

Talk about it

1. Why would working out a game's rules from the pieces alone be so hard?
2. The story is a legend. What true history does it remember?
3. How is this book page different from a page in a book today?

PROJECT

Play Shatranj, Then Play Chess

You will play the old Persian game of shatranj with its slow vizier and jumping elephants, then play modern chess, and compare how long the games take and how they feel.

You will need

- A chess set, or an 8-by-8 board drawn on card with homemade pieces
- Small sticky notes or paper labels to mark the vizier and the elephants
- A timer
- Scorebook and pencil

Steps

1. Set up the board as for chess. Put a label “V” on each queen (the vizier) and “E” on each bishop (the elephant).
2. **Learn the old moves.** The king, rooks and knights move as in chess. The vizier moves one square diagonally. The elephant jumps exactly two squares diagonally, even over a piece. Pawns move one square forward (no double step) and capture one square diagonally. A pawn that reaches the far row becomes a vizier. There is no castling.
3. **Play shatranj.** Play two games. You win by checkmate, by leaving the other king with no legal move, or by capturing every piece except the king. Time each game and count the moves.
4. **Play chess.** Play two games of modern chess. Time them and count the moves too.
5. Make a table: game, rules, number of moves, minutes, winner, how it ended.
6. Write three sentences: Which game was faster? Which piece made the biggest difference? Why do you think Europeans changed the rules about 1475?

Tips

- In shatranj, the knight and rook are your strongest pieces. Use them.
- Elephants can reach only a few squares on the whole board. Count them!

- If a game drags on for more than 30 minutes, stop and count the pieces each side has left.

Check your work

- ☐ I can set up and play shatranj with the old moves of the vizier and the elephant.
- ☐ I played at least two games of each and recorded the moves and times.
- ☐ I can explain how the queen changed chess.

SCOREBOOK

1. Draw a map from India to Persia to Spain and Italy, with arrows and the dates 500s, 600s, about 1000 and about 1475.
2. Draw the moves of the vizier and the elephant on a small grid, and beside them the moves of the modern queen and bishop.
3. Make the comparison table from your games and circle the fastest game.

From history. The Persian king's game in the legend, Khosrow I, reigned from 531 to 579. The game Buzurgmihr is said to have invented in reply was *nard*, an ancestor of backgammon. In the Persian word *shah*, meaning king, you can hear the beginning of our word "chess."

COMMON MISTAKES

- Thinking chess was invented in Europe. It began in India and came through Persia and the Arab world.
- Moving the shatranj elephant like a bishop. It only jumps two squares diagonally.
- Thinking the queen was always the strongest piece. She gained her power only about 1475.

Make it a game • Chess Family Tree. Draw the line of descent on paper from chaturanga to shatranj to modern chess, with one fact on each branch. Cover it and draw it again from memory. Your parent challenges you with a question about the vizier or the queen's move about 1475. Beat your own time on the second drawing.

Scripture. "in multitude of counsellors there is safety" (Proverbs 24:6, KJV)

In the legend, King Khosrow's court was saved from losing the challenge by the wise counsel of his vizier. Chess, too, rewards those who think carefully before they move.

4.2 GO: BLACK AND WHITE STONES

OBJECTIVES

- Tell the history of Go in China, Korea and Japan.
- Explain the rules of Go: placing stones, liberties, capturing and territory.
- Play Go on a 9-by-9 board and record the results.

Warm-up. Put one bean in the middle of a grid of nine squares. How many neighboring points touch it up, down, left and right? Now put it on an edge, and then in a corner. How many neighbors does it have now?

WATCH

How To Play Go (Beginner Tutorial)

Gather Together Games · 4:21

https://www.youtube.com/watch?v=cFVM_hwh56s

WHEN TO WATCH

Before the project. A clear tutorial on a small board; pause after each rule and try it on your own board.

BACKUP VIDEO

Go History — Is It a Chinese or a Japanese Game?

Go Magic · 7:03

<https://www.youtube.com/watch?v=EN10EHNdJjQ>

A Go teacher tells how the game came from China to Japan and how the Japanese Go schools began.

KEY TERMS

Go

A strategy game for two players who place black and white stones on the points of a grid to surround territory. It is called *weiqi* in China, *baduk* in Korea and *igo* in Japan.

liberty

An empty point next to a stone, directly up, down, left or right. A stone or group with no liberties is captured.

capture

Removing an opponent's stones from the board by filling all their liberties.

territory

Empty points completely surrounded by one player's stones.

atari

A Japanese word for a group that has only one liberty left and can be captured on the next move.

CORE IDEAS

The story. Go is one of the oldest board games still played in its original form. Chinese books from more than 2,300 years ago mention it, and Confucius's sayings speak of it. In old China it was one of the four arts a cultured gentleman was expected to learn, along with music, calligraphy and painting. Players sat for hours over a wooden board placing small round stones, black and white, one at a time.

How it changed. Go spread from China to Korea and then to Japan, by about the 600s. In Japan it became so admired that in the 1600s the government supported four schools of professional Go players, and the best of them held the title of Honinbo. Japanese masters studied openings and patterns for centuries and wrote books full of game records. Early boards had a grid of 17 lines each way; the standard board today has 19 lines each way, making 361 points. In 2016 a computer program called AlphaGo defeated one of the world's top players, something people had thought would take many more years.

How it is played. Black plays first. Players take turns placing one stone on any empty point where the lines cross. Stones never move once placed. A stone's liberties are the empty points directly next to it. When a stone or a connected group of stones has all its liberties filled by the opponent, it is captured and taken off the board. At the end, each player counts the empty points his stones surround plus the stones he captured, and the higher total wins. Beginners often play on a small 9-by-9 board, and many begin with "capture Go," in which the first player to capture a stone wins.

Why it matters. Go has almost no rules, yet no one has ever mastered it completely. It teaches balance: a player who grabs too much territory may be cut off and captured, and a player who plays too safely ends up with too little. It also teaches

patience and humility. Go players bow to each other before and after a game, and a player who sees that he has lost often resigns politely rather than playing on.

PICTURE STUDY



Children Playing Go, Torii Kiyonaga, 1781 · Color woodblock print · Library of Congress, Washington, D.C.

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

Torii Kiyonaga was one of the great Japanese print artists of the 1700s. Woodblock prints were made by carving a picture into wooden blocks, one for each color, and pressing paper onto them. Here Kiyonaga drew a lively group of boys dressed in Chinese style around a Go board. Japanese artists often showed such Chinese boys at play, because Go and many other arts had come to Japan from China.

Look closely

- Find the Go board. Can you see the grid of lines and the black and white stones?
- Look at the boys around the board. Are they playing calmly?
- Find the boy who has fallen over. What do you think happened?
- Find the boy running in from the right. What might he be shouting?

Talk about it

1. Go players are supposed to be calm and polite. What is going wrong in this picture?
2. Why do you think the artist made the scene funny?

3. What would you say to a friend who knocked over the board after losing?

PROJECT

A 9-by-9 Go Board and Capture Go

You will draw a beginner's Go board, play "capture Go" to learn liberties, and then play full games on the small board, counting territory at the end.

You will need

- A square of card at least 8 inches (20 centimeters) on a side, a ruler and a fine marker
- About 40 dark beans or buttons and 40 light ones for stones
- Scorebook and pencil

Steps

1. **Draw the board.** Draw 9 lines across and 9 lines down, each 2 centimeters (about $\frac{3}{4}$ inch) apart, making 81 points. Put a small dot on the center point.
2. **Capture Go.** Black plays first. Take turns placing stones on the points. The first player to capture any stone wins. Play five games and record the winner of each.
3. **Full Go.** Now play the full game. Captured stones are kept. The game ends when both players pass in a row.
4. **Count.** Count the empty points each player surrounds, and add the stones he captured. Record both totals.
5. Play at least three full games. Record the score of each.
6. Write two sentences: Where were stones easiest to capture, in the center, on the edges or in the corners? Why?

Tips

- A stone in the corner has only 2 liberties and on the edge only 3, but in the center it has 4.
- Keep your stones connected in groups; a lone stone is easy to capture.
- When your group is in atari, add a stone to give it more liberties, or let it go and play elsewhere.

Check your work

- ☐ I drew a 9-by-9 board with 81 points.
- ☐ I can explain liberties and capturing, and I won or lost five games of capture Go fairly.
- ☐ I played at least three full games and counted the territory.

SCOREBOOK

1. Draw a single stone in the center, on the edge and in the corner, and mark its liberties with small x's.
2. Make a table of your capture Go games: game, who played black, winner, number of moves.
3. Draw the final position of one full game and shade each player's territory in a different color.

From history. The famous Japanese player Honinbo Shusaku (1829–1862) won nineteen games in a row in a special yearly series of games held before the shogun. Players still study his games today, more than 160 years later.

COMMON MISTAKES

- Placing stones inside the squares. Go stones go on the points where the lines cross.
- Counting diagonal points as liberties. Only up, down, left and right count.
- Moving stones after placing them. In Go, stones stay where they are put unless captured.

Make it a game • Liberties Count. Draw a 9-by-9 grid and place a few beans as Go stones. Shout the number of liberties for each stone your parent points to. Then try atari: place one bean to leave your parent's single stone with just one liberty. Take turns. Score a point for each correct count. Add a fact about Go in China, Korea or Japan.

4.3 KITES, SHUTTLECOCKS AND CUJU

OBJECTIVES

- Tell the history of kites and of cuju, China's ancient kicking game.
- Explain how cuju was played and how the shuttlecock game jianzi grew from it.
- Make a jianzi shuttlecock and record keep-up scores; optionally fly a paper kite.

Warm-up. Try to keep a balloon in the air using only your feet and knees. Count your touches before it lands. Try three times and write down your best.

WATCH

Ancient Chinese Football Freestylers

Tifo Football by The Athletic • 6:30

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

WHEN TO WATCH

After the story paragraph. Watch how cuju players kept the ball up.

Note: Begins with a short advertisement for a sports news service.

KEY TERMS

cuju

An ancient Chinese ball game played by kicking a leather ball; the name means “kick ball.”

dynasty

A family of rulers who govern a country for many generations, such as the Han or the Song dynasty in China.

keep-up

Keeping a ball or shuttlecock in the air without letting it touch the ground.

jianzi

A Chinese game of keeping a weighted, feathered shuttlecock in the air with the feet.

kite

A light frame covered with paper or cloth that is flown in the wind on a long string.

CORE IDEAS

The story. More than a thousand years ago, the first emperor of China's Song dynasty, Taizu, enjoyed a game of cuju with his brother and his chief ministers. An old painting, copied about 1300 by the artist Qian Xuan, shows them in their tall black caps and long robes, standing in a circle as one man keeps a leather ball in the air with his foot. Cuju means "kick ball," and in 2004 FIFA, world soccer's governing body, recognized it as the earliest known form of football.

How it changed. Cuju began more than two thousand years ago, in the Han dynasty, as training for soldiers, who played with a leather ball stuffed with feathers or hair. Later the ball was made with an air-filled bladder inside, so it bounced. By the Song dynasty (960–1279) there were cuju clubs in the cities, and players of all ranks enjoyed it. Some games had teams kicking the ball through a hole in a net hung high between two posts; others were contests of keeping the ball up with fancy kicks. The smaller game of jianzi, kicking a shuttlecock made of feathers and a coin, is still played in parks all over China. Kites are just as old: Chinese writers tell of a wooden bird that flew more than 2,400 years ago, and by the Tang dynasty, paper kites had become a toy for children.

How it is played. In the keep-up form of cuju, players stand in a circle and pass the ball with their feet, knees, shoulders, back and head, never their hands, and try never to let it touch the ground. Jianzi is the same idea with a shuttlecock: kick it with the inside of the foot, let it rise, and kick it again. Players count their touches out loud. In pairs or circles they pass it to each other, and in a modern game they kick it over a net like volleyball.

Why it matters. Cuju shows that people in many places have loved kicking a ball, long before modern soccer's rules were written in England in 1863 (Lesson 6.1). Keep-up games build balance, timing and control. They also teach cooperation: in a circle, everyone wins when the ball stays up, so each player tries to give the next one an easy kick.

PICTURE STUDY



Emperor Taizu Playing Cuju, Qian Xuan, after an earlier painting attributed to Su Hanchen, about 1300 (Yuan dynasty) · Ink and color on paper, handscroll · Shanghai Museum, China

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

Qian Xuan was a painter who lived when the Mongols ruled China. He copied an older painting of the Song emperor Taizu, who founded the Song dynasty in 960, playing cuju with his brother Taizong, his prime minister Zhao Pu and other officials. The writing on the left and the red seals were added by the painter and by later owners of the scroll.

Look closely

- Find the leather ball. Which player is about to kick it?
- Look at the men's faces. Are they watching the ball or one another?
- Look at the long robes. How might they make kicking harder?
- Find the red seals. Each one was stamped by an owner or a collector.

Talk about it

1. Why might an emperor play a game with his ministers?
2. How is this game like soccer, and how is it different?
3. Why do you think the painting was copied and kept for so many centuries?

Safety first. Play keep-up games on grass or in a clear room with no breakable things nearby. Kick with the inside of the foot, not the toe. Fly kites only in an open field or beach, far from trees, roads and power lines, and never in stormy weather. If a kite catches in a tree or wire, leave it and tell an adult.

PROJECT

Make a Jianzi and Keep It Up

You will make a jianzi shuttlecock from household things, practice the basic kick, keep a record of your keep-up scores over the week, and play a circle game with your family. If you have an open field and a breezy day, you may also build and fly a simple paper kite.

You will need

- Three or four metal washers (about 1 inch or 2.5 centimeters across) or large coins with tape
- A plastic grocery bag or strips of paper, and strong tape
- Scissors
- Optional kite: a sheet of paper, two drinking straws or thin dowels, tape, string and a ribbon tail
- Scorebook and pencil

Steps

1. **Make the jianzi.** Stack the washers. Cut a plastic bag into strips about 1 inch wide and 8 inches long (2.5 by 20 centimeters). Push the middle of six strips down through the hole of the stacked washers and tape them tightly underneath, so the strips stand up like feathers.
2. Drop your jianzi. It should fall washer-first, like a shuttlecock. If it tumbles, add another washer or trim the strips.
3. **Learn the kick.** Hold the jianzi at waist height, drop it, and kick it upward with the inside of your foot, just below the ankle. Catch it. Repeat ten times.
4. **Keep-up.** Kick it up and kick it again before it lands. Count your touches. Try ten times each day for five days and record your best each day.
5. Make a line graph of your daily best. Did practice help?
6. **Circle game.** Stand in a circle with family members and pass the jianzi by kicking it to each other. Count how many kicks your circle makes before it lands.

7. **Optional kite.** Tape two straws in a cross, tape a diamond of paper over them, add a ribbon tail and tie string where the straws cross. Fly it in an open field with an adult.

Tips

- Keep your eyes on the jianzi, not your foot.
- Kick gently: a small, soft kick straight up is easier to follow than a big one.
- Kick with each foot. Players in Chinese parks can kick with either foot.

Check your work

- ☐ I made a jianzi that falls washer-first.
- ☐ I recorded my best keep-up score for five days and made a graph.
- ☐ I can tell the history of cuju and explain why FIFA called it the earliest form of football.

SCOREBOOK

1. Draw your jianzi with labels: washers, tape, feathers.
2. Make a table and line graph of your daily best keep-up score.
3. Write a timeline: Han dynasty cuju (more than 2,000 years ago), Song dynasty cuju clubs (960–1279), 1863 soccer rules in England, 2004 FIFA recognizes cuju.

From history. In the Song dynasty, a skilled cuju player named Gao Qiu is said to have caught the attention of a prince by his fancy kicks and later rose to become a high official. The story shows how famous good cuju players could become.

COMMON MISTAKES

- Kicking with the toe. The inside of the foot gives a flat, steady kick.
- Thinking soccer was the first kicking game. People in China played cuju more than two thousand years ago.
- Flying a kite near power lines. Always choose an open field.

Make it a game • Keep-Up Count. Make a jianzi from paper and a few coins or buttons wrapped in tissue. Keep it in the air with your foot or hand, counting hits aloud. Between rounds, tell your parent one fact about cuju, or how jianzi grew from it. Your parent may slip in one false fact for you to catch. Beat your best count.

4.4 SEPAK TAKRAW AND CRICKET IN INDIA

OBJECTIVES

- Explain how sepak takraw is played and where it comes from.
- Tell how cricket came to India and became the country's favorite sport, including the story of Ranjitsinhji.
- Play balloon takraw over a string net and a game of backyard cricket, and record the scores.

Warm-up. Stand on one foot and lift the other knee as high as you can. Hold for ten seconds. Switch feet. Now try kicking a balloon up to head height with the inside of your foot.

WATCH

What Is Cricket? Get to know the sport

ICC · 3:34

<https://www.youtube.com/watch?v=g-beFHld19c>

WHEN TO WATCH

Before the cricket part of the project. The game's governing body explains bowling, batting, wickets and runs.

BACKUP VIDEO

Sepaktakraw 101 | What is Sepaktakraw ?

MT AHK ISTAF · 1:50

<https://www.youtube.com/watch?v=s7F1z9gYuWQ>

For balloon takraw: the sport's international federation explains the rattan ball, the teams and the rules in under two minutes.

KEY TERMS

sepak takraw

A Southeast Asian game in which players kick a woven ball over a net; the name joins the Malay word for “kick” and the Thai word for “woven ball.”

rattan

A tough, bendy palm stem used to weave takraw balls, baskets and furniture.

regu

A team of three players in sepak takraw.

wicket

In cricket, the set of three upright stumps with two small bails on top that the bowler tries to hit.

Test match

The longest form of international cricket, played over as many as five days.

CORE IDEAS

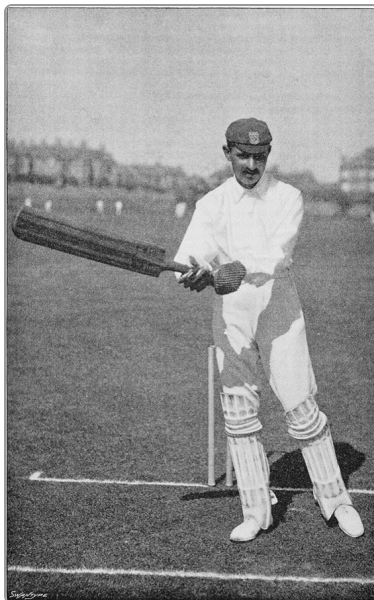
The story. In 1896 a young Indian prince named Kumar Shri Ranjitsinhji, called “Ranji,” walked out to bat for England against Australia at Old Trafford in Manchester and scored 62 and then 154 not out. English crowds had never seen anyone bat like him. Instead of only hitting the ball hard, he used quick wrists to glance it away behind him. He was one of the first great Indian cricketers, and India’s main national championship, the Ranji Trophy, is named for him.

How it changed. British sailors played the first recorded cricket in India in 1721, and soldiers and merchants carried the game across the country. Indians took it up with joy, beginning with the Parsi community of Mumbai, who founded their first cricket club in 1848. India played its first Test match in 1932 at Lord’s in London, and in 1983 India won the Cricket World Cup. Today cricket is followed by hundreds of millions of people in India. Farther east, in Thailand, Malaysia and their neighbors, people had long played keep-up games with a woven rattan ball. In 1960 players from these countries agreed on rules and a name, sepak takraw, and the game now has a world championship.

How it is played. Sepak takraw is played on a court the size of a badminton court, with a net about 1.5 meters (5 feet) high. Each team, called a regu, has three players. They may touch the ball with their feet, knees, chest and head, but never their hands or arms, and each side may touch it three times before sending it over. The best players leap and flip to spike the ball down with their feet. In cricket, a bowler tries to hit the wicket with the ball, and the batsman defends it with a flat bat and scores runs by hitting the ball and running between the wickets.

Why it matters. These two games show how sports travel and change. Cricket came to India from England and became India's own. Sepak takraw grew from an old village keep-up game into an international sport with written rules. Both games need courage, quick reactions and teamwork, and both have a strong tradition of good manners: in cricket, saying something is “not cricket” means it is unfair.

PICTURE STUDY



K. S. Ranjitsinhji Batting, Photograph published in *The Jubilee Book of Cricket*, 1897 · Photograph (book frontispiece) · England

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

In 1897, the year after his famous first Test match, Ranjitsinhji wrote *The Jubilee Book of Cricket*, a guide to how the game should be played, named for Queen Victoria's Diamond Jubilee. It was full of photographs of the great players of the day showing their strokes. This one, at the front of the book, shows Ranji himself playing a hook shot.

Look closely

- Find the wicket behind the batsman. How many stumps can you count?
- Look at the bat. How is it different from a baseball bat?
- Look at his leg pads and gloves. Why does a batsman need them?
- Look at his eyes and the way his body turns. Where do you think the ball is going?

Talk about it

1. Why do you think English crowds were so excited by Ranji's way of batting?
2. Ranji wrote a book to teach the game. Why is writing down how to play a sport useful?
3. Cricket came to India from England. How did Indians make it their own?

Safety first. Play balloon takraw indoors only in a clear room, or outdoors on grass. Never try flip kicks or jumping spikes; kick from the ground. For backyard cricket, use a soft ball or tennis ball and a plastic or homemade bat, keep fielders well away from the batsman, and play only with an adult watching. Wear proper shoes and drink water.

PROJECT

Balloon Takraw and Backyard Cricket

You will set up a string net and play balloon takraw by its real rules, then make a wicket from cups and play a game of backyard cricket, keeping score for both.

You will need

- String or a jump rope tied between two chairs at about chest height, and two or three balloons
- Three plastic cups stacked as a wicket (or three sticks pushed into the lawn)
- A soft ball or tennis ball and a flat bat (a plastic bat, a board or a cardboard bat)
- Scorebook and pencil

Steps

1. **Set up the court.** Tie a string between two chairs about chest high. Mark a court on each side about 3 meters (10 feet) long with tape or shoes.
2. **Balloon takraw.** Play one-on-one or two-on-two. Serve by tossing the balloon to yourself and kicking it over. Each side may touch the balloon up to three times with feet, knees, chest or head, but never hands or arms.
3. A point is scored when the balloon lands on the floor on the other side, or when a player uses a hand. Play to 15 points. Play three games and record the scores.
4. **Make a wicket.** Set up three cups as a wicket. Mark a bowling line about 8 meters (26 feet) away.
5. **Backyard cricket.** The bowler rolls or bowls the soft ball at the wicket underarm. The batsman hits it and runs to the bowling line and back for each run. He is out if the wicket is knocked over or if a fielder catches the ball before it lands.
6. Each player bats until out. Record each player's runs. Play two rounds.
7. Write two sentences: What skill do takraw and cricket share? Which game was harder, and why?

Tips

- In takraw, use the inside of your foot for control and keep the balloon high so your teammate has time.
- In cricket, keep your bat straight and close to your front leg to protect the wicket.
- A balloon moves slowly, so it is a good way to learn the real takraw rules safely.

Check your work

- ☐ I played three games of balloon takraw by the rules, with no hands.
- ☐ I played two rounds of backyard cricket and recorded every player's runs.
- ☐ I can tell the story of Ranjitsinhji and how cricket came to India.

SCOREBOOK

1. Draw a sepak takraw court with the net, the three players on each side and the parts of the body that may touch the ball.
2. Make a scorecard for your cricket game: batsman, runs, how out.
3. Write a timeline of cricket in India: 1721, 1848, 1896, 1932, 1983.

From history. Ranjitsinhji later became the ruling prince of Nawanagar, a state in western India, and represented India at the League of Nations in Geneva in the 1920s. His nephew, K. S. Duleepsinhji, also played cricket for England, and India's Duleep Trophy is named for him.

COMMON MISTAKES

- Using hands in sepak takraw. Only feet, knees, chest and head may touch the ball.
- Thinking cricket is only an English game. It is now most popular in India.
- Swinging a cricket bat like a baseball bat. A cricket bat is usually swung up and down, straight, to protect the wicket.

Make it a game • Takraw and Wicket Talk. Play balloon takraw by keeping a balloon up using only feet, knees and head, with a parent counting. After each round, answer a question in turn: where takraw comes from, what rattan has to do with it, how cricket reached India, and who Ranjitsinhji was. A missed answer gives your parent the point.

UNIT 4

GAMES OF ASIA

Asia gave the world some of its greatest games. Chess began in India about 1,500 years ago as a battle between four kinds of troops, traveled to Persia and the Arab world, and reached Europe, where the queen became the strongest piece. Go, played in China for well over two thousand years, has rules so simple that a child can learn them in five minutes and so deep that masters study it all their lives.

Asia also gave the world active games. Chinese children flew kites and kicked feathered shuttlecocks, and Chinese soldiers and emperors played cuju, a kicking game with a leather ball that FIFA, world soccer's governing body, recognizes as the earliest known form of football. In Southeast Asia players kick a woven rattan ball over a net in sepak takraw, and in India cricket, brought by the British, became the most loved sport in the country. In this unit you will learn the stories, make the boards and the balls, and play them all.

PREREQUISITES

- Can make a game board with a ruler and keep score (Units 1-2)
- Can find India, China, Japan, Persia (Iran) and Thailand on a map
- Knows how to warm up and play safely with a soft ball (Unit 3)

MASTERY CHECKLIST

- ☐ I can trace the journey of chess from chaturanga in India to shatranj in Persia and modern chess in Europe.
- ☐ I can play Go on a small board and explain liberties, capturing and territory.
- ☐ I can tell the history of kites, cuju and the shuttlecock in China, and keep a shuttlecock in the air with my feet.
- ☐ I can explain how sepak takraw is played, and tell how cricket came to India and who Ranjitsinhji was.
- ☐ I can play every game in this unit by the rules and record the results.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Lichess:** Free and without advertising. A nonprofit chess site with lessons, puzzles and a board for playing a parent across the table or online. A parent should set up any account and supervise online play. Fits Lesson 4.1. Ages 8+.

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 Chess: From India to the World	2 sessions of 45 minutes
4.2 Go: Black and White Stones	2 sessions of 45 minutes
4.3 Kites, Shuttlecocks and Cuju	2 sessions of 45 minutes
4.4 Sepak Takraw and Cricket in India	2 sessions of 45 minutes

UNIT 4 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

1. **5 pts**
Why was the Indian game called chaturanga?
2. **5 pts**
Trace the journey of chess from India to Europe.
3. **5 pts**
What change was made to chess about 1475, and why did it matter?
4. **5 pts**
In Go, what is a liberty, and how is a stone captured?
5. **5 pts**
A stone sits in the corner of a Go board. How many liberties does it have? How many on the edge? In the center?

6. 5 pts

What was cuju, and what did FIFA say about it in 2004?

7. 5 pts

How is jianzi played, and how is it related to cuju?

8. 5 pts

Describe the rules of sepak takraw.

9. 5 pts

Who was Ranjitsinhji, and what did he do in 1896?

10. 5 pts

What would happen to Go if stones could be moved after they were placed?

Would it still be the same game?

ANSWER KEY

1. It means “four parts,” for the four parts of an army represented by the pieces: foot soldiers, horsemen, elephants and chariots.
2. From India (chaturanga) to Persia (chatrang) in the 500s, then through the Arab world (shatranj), and into Europe through Spain and Italy by about the year 1000.
3. The queen (once the weak vizier) was allowed to move any distance in any direction, and the bishop to sweep along diagonals. Games became much faster.
4. A liberty is an empty point directly next to a stone (up, down, left or right). A stone or group is captured when all its liberties are filled by the opponent’s stones.
5. Corner: 2. Edge: 3. Center: 4.
6. An ancient Chinese kicking game played with a leather ball (“kick ball”). In 2004 FIFA recognized it as the earliest known form of football.
7. Players keep a weighted, feathered shuttlecock in the air by kicking it, mainly with the inside of the foot, alone or passing in a circle. It is a smaller version of cuju’s keep-up game.
8. Two teams of three (regu) on a badminton-sized court with a net about 1.5 meters high. Players may use feet, knees, chest and head, never hands or arms, and each side may touch the ball three times before sending it over.
9. An Indian prince and one of the first great Indian cricketers. In 1896 he played for England against Australia in his first Test and scored 62 and 154 not out, batting with quick, wristy strokes.
10. Answers will vary. Groups could escape capture by moving away, so surrounding and territory would mean much less; it would become a different game, more like checkers.

PORTFOLIO PIECE: A PASSPORT OF ASIAN GAMES

Make a “passport” booklet with one page for each game in this unit: chess (with shatranj), Go, cuju and jianzi, sepak takraw and cricket. On each page, draw a small map showing where the game began, write the date it began or was first recorded, list the equipment, give the main rules in three to five steps, and paste in your best score or result from the project. Stamp each page with a homemade “visa” stamp after you have taught that game to a family member. Add your jianzi and your 9-by-9 Go board to your games box.

LOOK FOR	WHAT IT MEANS
Five complete pages	Each page has a map, a date, equipment, rules and a result.
Accuracy	Places, dates and rules are correct, using facts from the lessons.
Results	Scores and records from each project are included honestly.
Teaching	At least three games have a “visa” stamp for being taught to someone else.

UNIT 5

GAMES OF AFRICA AND THE AMERICAS

In Unit 2 you played oware, the two-row mancala game of Ghana. In East Africa, players use a board twice as big, with four rows of pits, and play a game called bao that some say is the hardest mancala game of all. Across the ocean, the peoples of Mexico and Central America were playing with bouncing rubber balls more than three thousand years ago, long before anyone in Europe had seen rubber.

Farther north, the Haudenosaunee and other peoples of North America played a fast stick-and-ball game that French visitors named lacrosse, and in the winter cities of Canada a new game on ice took shape in 1875: hockey. In this unit you will learn the history of these four games, make the equipment from household things, and play each one.

PREREQUISITES

- Can play oware by the rules (Lesson 2.3)
- Can find East Africa, Mexico, Central America and Canada on a map
- Knows the safety rules for active games (Units 3–4)

MASTERY CHECKLIST

- ☐ I can describe the bao board and play a beginner's game of bao.
- ☐ I can tell how the people of Mesoamerica made rubber balls, how their ballgame was played, and how Charles Goodyear's vulcanization (1839) led to today's balls.
- ☐ I can tell the history of lacrosse from the Haudenosaunee to William George Beers's rules, and catch and throw with a homemade stick.
- ☐ I can tell the story of the first indoor hockey game in Montreal in 1875 and of the Stanley Cup.
- ☐ I can play each game by the rules and record the results.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Hockey Hall of Fame:** Free. The Hall's website has pages on the history of the Stanley Cup and the early game in Montreal, for Lesson 5.4. A parent should preview it, as it carries advertising. Ages 9+.

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	Bao: East Africa's Great Counting Game	2 sessions of 45 minutes
5.2	The Rubber Ball: From Mesoamerica to Today	2 sessions of 45 minutes
5.3	Lacrosse and the Haudenosaunee	2 sessions of 45 minutes
5.4	Hockey and Canada	2 sessions of 45 minutes

UNIT 5 REVIEW

Answer each question in complete sentences. Show your work for the counting question. The review is worth 50 points.

1. **5 pts**
How is a bao board different from an oware board? Give the number of rows and pits.
2. **5 pts**
A beginner's bao board has 32 pits with 2 seeds in each. How many seeds are there? How many does each player start with on his side?
3. **5 pts**
In bao, from which row do you capture seeds?
4. **5 pts**
How did the peoples of Mesoamerica make rubber, and what did Charles Goodyear add in 1839?

5. (5 pts)

How did players hit the ball in the Mesoamerican ballgame, and why did they wear yokes?

6. (5 pts)

How did lacrosse get its name?

7. (5 pts)

What did William George Beers do in 1867?

8. (5 pts)

What happened at the Victoria Skating Rink on March 3, 1875, and why did the players use a flat piece of wood?

9. (5 pts)

Who gave the Stanley Cup, and when was it first awarded?

10. (5 pts)

What would sports be like today if no one had ever discovered how to make rubber?

ANSWER KEY

1. Bao has four rows of eight pits (32 pits); oware has two rows of six (12 pits). In bao each player owns two rows.
2. $32 \times 2 = 64$ seeds in all; each player has $16 \text{ pits} \times 2 = 32$ seeds on his side.
3. From the opponent's inner row, the pit directly opposite where your last seed landed in your own inner row.
4. They mixed latex from the rubber tree with juice from a morning glory vine; rubber balls at El Manatí are more than 3,000 years old. In 1839 Goodyear found that heating rubber with sulfur (vulcanization) made it strong and springy in any weather, which led to modern balls.
5. Mainly with their hips (no hands or feet). They wore thick yokes and pads because the solid rubber ball was heavy and hit hard.
6. French visitors, including Jean de Brébeuf in 1637, thought the stick looked like a bishop's curved staff, a crosse.
7. He wrote the first printed rules of lacrosse (twelve players a side, field and goal sizes, a rubber ball) and helped found Canada's National Lacrosse Association.
8. The first organized indoor hockey game, arranged by James Creighton, nine players a side. The flat puck slid instead of bouncing, so it would not fly into the crowd.
9. Lord Stanley of Preston, Governor General of Canada, bought it in 1892; it was first awarded in 1893 to the Montreal Hockey Club.
10. Answers will vary. Balls would be stuffed with hair, feathers or wool, or made from bladders, and would not bounce well; basketball, tennis, volleyball and many other games would be very different or impossible.

PORTFOLIO PIECE: A FIELD GUIDE TO GAMES OF TWO CONTINENTS

Make a four-page field guide, one page for each game in this unit: bao, the Mesoamerican ballgame, lacrosse and hockey. Each page has a map showing where the game began, a drawing of the board, court, field or rink, a list of equipment, the rules in five numbered steps, one important date, and your results from the project. Add your bao board, your homemade lacrosse stick and your best puck to your games box, with a label for each.

LOOK FOR	WHAT IT MEANS
Four complete pages	Each page has a map, a drawing, equipment, rules, a date and a result.
Accuracy	Places, dates and rules are correct, using facts from the lessons.
Equipment	The bao board, lacrosse stick and puck are sturdy, labeled and work.
Care	Neat drawings and handwriting, with captions.

5.1 BAO: EAST AFRICA'S GREAT COUNTING GAME

OBJECTIVES

- Describe the bao board and where bao is played.
- Explain how bao differs from oware, including the four rows and captures from the inner row.
- Make a four-row board from two egg cartons and play a beginner's game of bao.

Warm-up. Set out your oware board from Lesson 2.3 and play one quick game. Count: how many pits and how many seeds did it have? Bao has four rows of eight. How many pits is that? If each pit starts with 2 seeds, how many seeds is that?

WATCH

How Bao Game (Mancala) is Played in Kenya

[OkayAfrica](#) · 2:12

https://www.youtube.com/watch?v=LM_wkSv-cX0

WHEN TO WATCH

Before the core ideas. Bao players in Kenya show the board and talk about why they love the game.

KEY TERMS

bao

A four-row mancala game played in East Africa; the word means “board” in Swahili.

inner row

The row of pits on a player's side that faces the opponent. In bao, captures are made from the opponent's inner row.

Swahili

A language spoken along the coast of East Africa and far inland, in Tanzania, Kenya and their neighbors.

nyumba

The “house,” a square pit in the inner row of a traditional bao board that has special rules in the full game.

Zanzibar

An island off the coast of Tanzania,
famous for bao players in its town
squares.

CORE IDEAS

The story. Walk through the narrow streets of Stone Town on the island of Zanzibar in the evening and you will find men sitting on stone benches called *barazas*, bent over long wooden boards with four rows of pits, moving seeds faster than you can follow. Crowds gather to watch, and good players are famous in their neighborhoods. The game is bao, and it is played across East Africa: in Tanzania, Kenya, Malawi, Uganda and beyond.

How it changed. Bao belongs to the same family as oware, but it grew bigger and more complicated. The board has four rows of eight pits, 32 in all; each player owns the two rows nearest him. The full game, called *bao la kiswahili*, starts with most of the 64 seeds held in the players' hands and fed onto the board one at a time, and it has special rules for the square "house" pit. Many East Africans learn first on a simpler version, sometimes called *bao la kujifunza*, the "learning bao," with all the seeds on the board from the start. Masters of the full game study it for years, and some people consider it the hardest mancala game in the world.

How it is played. In the beginner's game, put 2 seeds in every pit. On your turn, pick up all the seeds from one pit on your side that has at least 2, and sow them one by one around your own two rows only, going counterclockwise. If your last seed lands in a pit in your inner row that already had seeds, look across the board: if the opponent's inner-row pit directly opposite has seeds, capture them and sow them on your side, starting from the end of your inner row. If your last seed lands in an occupied pit but there is nothing to capture, pick up all the seeds there and keep sowing. Your turn ends when your last seed falls into an empty pit. A player who has no pit with 2 or more seeds, or whose inner row is empty, loses.

Why it matters. Bao shows how a simple idea, sowing seeds around a board, can grow into a game of great depth. It is also a social game, played in public with friends watching and talking. Good bao players are admired for quick counting, long planning and calm under pressure, the same skills a good farmer, trader or teacher needs.

PICTURE STUDY



Bao Players in Stone Town, Zanzibar, Moongateclimber (photographer), 2010 · Color photograph · Stone Town, Zanzibar, Tanzania

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

This photograph was taken in Stone Town, the old part of Zanzibar City. Bao is often played outdoors on the stone benches along the streets, and friends stop to watch. The board is carved from a single piece of wood, and the seeds are hard round seeds from a tree.

Look closely

- Count the rows of pits on the board. How many pits can you see in one row?
- Find the player who is moving seeds. Which way is his hand moving?
- Look at the men watching. Are they quiet or talking, do you think?
- Look at the caps two of the men are wearing. They are a kind of embroidered cap common on the Swahili coast.

Talk about it

1. Why do you think bao is played outdoors in public places?
2. How is this board different from your oware egg carton?
3. What do the watchers learn by watching good players?

PROJECT

A Four-Row Bao Board

You will join two egg cartons into a four-row board, play the beginner's game of bao many times, and keep a record of who won and how many seeds were captured.

You will need

- Two 12-cup egg cartons (you will use 8 cups in each row) or 32 small paper cups taped in four rows of eight
- 64 dried beans or small stones
- Scissors and tape
- Scorebook and pencil

Steps

1. **Make the board.** Cut each egg carton so that it has two rows of 6 cups, then tape on extra cups (cut from the leftover pieces or made from paper cups) so that each row has 8. Tape the two cartons side by side: four rows of eight.
2. The two rows nearest you are yours. The row in the middle on your side is your inner row; the row nearest you is your outer row.
3. Put 2 beans in every cup: 64 beans in all.
4. **Play.** Follow the beginner's rules in "How it is played." Sow counterclockwise around your own two rows only.
5. When you capture, take the beans from the opponent's inner-row cup opposite your last bean and sow them on your side, starting from the end of your inner row.
6. Play at least four games. Record the winner and the number of turns.
7. Write two sentences: How is bao different from oware? Which do you like better, and why?

Tips

- Look at the opponent's inner row before every move. Big pits there are worth capturing.

- Long relay sowings can carry you all the way around your side. Count carefully before you start.
- Keep seeds in your inner row; if it becomes empty, you lose.

Check your work

- ☐ I made a four-row board with 32 cups and 64 seeds.
- ☐ I played at least four games by the beginner's rules.
- ☐ I can explain how a capture works in bao.

SCOREBOOK

1. Draw the bao board from above and label the inner and outer rows for each player.
2. Make a table of your four games: game, winner, number of turns, largest capture.
3. Draw a map of East Africa and mark Zanzibar, Tanzania, Kenya and Malawi.

From history. The Dutch scholar Alexander de Voogt spent years in Zanzibar and Tanzania learning bao from master players and wrote about it in the 1990s. He found that the best players were known by name across their towns, like chess champions.

COMMON MISTAKES

- Sowing onto the opponent's side. In bao, you sow only around your own two rows.
- Capturing from the opponent's outer row. Captures come only from the inner row.
- Forgetting to keep sowing when the last seed lands in an occupied pit.

Make it a game • Bao Versus Oware. Lay out two columns on paper labeled oware and bao. Race a one-minute timer to write as many differences as you can from memory, such as the four rows, the inner row and the nyumba. Your parent checks your list and challenges one item. Then name where bao is played, including Zanzibar.

5.2 THE RUBBER BALL: FROM MESOAMERICA TO TODAY

OBJECTIVES

- Explain how the peoples of Mesoamerica made bouncing rubber balls more than 3,000 years ago.
- Tell how rubber came to Europe and how Charles Goodyear's vulcanization (1839) led to the balls we play with today.
- Describe the ballcourts and how the game was played with the hips, and test which balls bounce best.

Warm-up. Drop three different balls (a rubber ball, a tennis ball and a sock ball) from the same height, about 1 meter. Which bounces highest? Why do you think so?

WATCH

How is RUBBER made? | Maddie Moate

Maddie Moate • 6:23

<https://www.youtube.com/watch?v=tpAFPJ8pEdA>

WHEN TO WATCH

After “How it changed.” Visit a rubber plantation in Thailand at night, watch the latex being tapped from the trees, and see it pressed into sheets.

BACKUP VIDEO

How It's Made: Rubber Balls

Science Channel • 4:54

<https://www.youtube.com/watch?v=K1VfdXmqjN8>

After the core ideas. See how rubber sheets become basketballs and other inflated balls in a modern factory.

KEY TERMS

Mesoamerica

The region of ancient civilizations in what is now Mexico and Central America, home of the Olmec, Maya and Aztec peoples.

latex

A milky sap that oozes from certain trees; it is the raw material of natural rubber.

ballcourt

A long, narrow playing alley with sloping or straight walls on each side, built for the ballgame.

yoke

A thick, padded belt worn around the hips to hit the heavy ball.

vulcanization

Heating rubber with sulfur to make it strong, springy and steady in heat and cold; Charles Goodyear discovered it in 1839.

CORE IDEAS

The story. When Spanish soldiers arrived in Mexico in 1519, they saw something they had never seen before: balls that bounced. The Aztecs played a fast game with a solid rubber ball, and the Spaniards were so amazed that in 1528 the conqueror Hernán Cortés brought a team of ballplayers back to Spain to show the emperor Charles V. In Europe, balls were stuffed with hair, wool or feathers, or made from blown-up animal bladders. Rubber was unknown.

How it changed. The Mesoamerican ball was already ancient. Archaeologists have found rubber balls at a site called El Manatí in Mexico that are more than 3,000 years old. People made rubber by mixing the milky latex of the rubber tree with juice from a morning glory vine, which turned the sticky sap into a strong, springy solid. In 1999 the archaeologist Dorothy Hosler and the engineer Michael Tarkanian and their team at the Massachusetts Institute of Technology tested the old recipe in the laboratory and found that changing the mix changed the rubber: more morning glory juice made a bouncier ball. Raw rubber taken to Europe was a disappointment at first: it turned sticky in summer and cracked in winter. Then in 1839 an American inventor, Charles Goodyear, found that heating rubber with sulfur made it strong and elastic in any weather. The process came to be called vulcanization. Vulcanized rubber made possible the balls of nearly every modern sport, from basketballs and tennis balls to soccer balls with rubber bladders.

How it is played. The Mesoamerican game was played in long, narrow stone courts; more than a thousand have been found, and the largest, the Great Ball Court at Chichen Itza, is longer than a modern soccer field, with stone rings set high in its walls. In the most common form, two teams kept the heavy ball moving back and

forth without letting it bounce twice, striking it mainly with their hips. Hands and feet were not allowed. Players wore thick padded belts called yokes and pads on their knees, because the solid ball could weigh several pounds. Sending the ball through one of the high stone rings was so hard that it could end the game at once.

Why it matters. The ballgame shows how much a people's skill and knowledge can shape a sport. Without rubber there could be no bouncing balls, and the Mesoamericans discovered how to make rubber thousands of years before anyone else. Goodyear's discovery carried that gift into the modern world. Today almost every ball we play with depends on it, and some of the world's natural rubber is still tapped by hand from rubber trees, just as the latex was gathered long ago.

PICTURE STUDY



The Great Ball Court at Chichen Itza, Jerome O. Kilmartin, U.S. Geological Survey, February 13, 1924 ·

Photograph · Chichen Itza, Yucatán, Mexico

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

In 1924 a team from the U.S. Geological Survey made maps of Chichen Itza, and their photographer took this picture of the Great Ball Court before it was restored. His notes say that the stone ring on the east wall was still in place, but the one on the west wall had fallen to the ground. He also named the workers standing under the ring: Pablo Pantoja and Juan Olalde.

Look closely

- Find the two long walls of the court. How tall are they compared with the men standing beneath them?
- Look high on the wall for the stone ring. Can you find it?
- Find the small temple at the far end of the court.
- Look at the stones scattered on the ground. What had happened to the court over the centuries?

Talk about it

1. Why do you think the stone rings were placed so high?
2. Why did the photographer include people in the picture?

3. How would you feel playing a game in a court this big, with crowds watching from the walls?

Safety first. Play hip-ball outdoors on grass with a light, soft ball such as a foam ball or a beach ball. Never use a heavy or hard ball. Keep clear space around the players, wear proper shoes, and stop if anything hurts.

PROJECT

The Bounce Test and Hip-Ball

You will test how well different balls bounce, the way the Spanish visitors were surprised by rubber, and then play a game of hip-ball with a soft ball in a court marked out in the yard.

You will need

- Four or five different balls: a rubber ball, a tennis ball, a foam ball, a sock ball and a beach ball
- A tape measure or a meter stick taped to a wall
- Chalk, rope or shoes to mark a court
- Scorebook and pencil

Steps

1. **Bounce test.** Hold each ball beside the meter stick at 100 centimeters and drop it (don't throw it) onto a hard floor. Have a helper watch how high it bounces.
2. Drop each ball three times and record all three heights. Find the average for each ball.
3. Make a bar graph of the average bounce heights. Which ball is most like the Mesoamerican rubber ball?
4. **Mark the court.** On grass, mark a long, narrow court about 10 meters long and 3 meters wide, with a center line.
5. **Hip-ball.** Play one-on-one or two-on-two with a beach ball or foam ball. Keep the ball moving over the center line using only hips, thighs and shoulders, no hands or feet. The ball may bounce once on your side. If it bounces twice or goes out, the other side scores.
6. Play to 7 points. Play three games and record the scores.
7. Write two sentences: Why was it so hard to hit the ball with your hips? Why did players wear yokes and pads?

Tips

- Bend your knees and turn your body so the ball meets the side of your hip.

- A beach ball is slow and light, which makes it easier for beginners.
- Try a hanging hoop as a “ring” for a bonus: send the ball through and win the game at once.

Check your work

- ☐ I tested at least four balls three times each and made a bar graph.
- ☐ I played three games of hip-ball by the rules and recorded the scores.
- ☐ I can explain how Mesoamericans made rubber and why the Spanish were amazed.

SCOREBOOK

1. Draw the shape of a ballcourt from above, with its walls, the center line and the stone rings.
2. Make the bounce-test table (ball, three heights, average) and a bar graph.
3. Draw a map of Mexico and Central America and mark Chichen Itza, El Manatí and Sinaloa.

From history. Charles Goodyear spent years in debt and was even jailed for his debts while he experimented with rubber. He made little money from vulcanization, but his discovery changed the world. The Goodyear Tire and Rubber Company, founded in 1898, was named in his honor; he had no connection with it.

COMMON MISTAKES

- Thinking the players kicked the ball like soccer. They struck it mainly with their hips.
- Thinking Europeans invented rubber. Mesoamericans were making rubber balls more than 3,000 years ago.
- Throwing the ball down in the bounce test. Drop it from the same height every time.

Make it a game • Bounce Height Duel. Drop a ball from the same height, guess how high it will bounce, and measure with a ruler. Closest guess wins a point. Between drops, tell your parent a fact about Mesoamerican rubber balls or Charles Goodyear's vulcanization of 1839. Try a ball made of paper and compare it with a rubber one. Explain why the rubber bounces.

5.3 LACROSSE AND THE HAUDENOSAUNEE

OBJECTIVES

- Tell the history of lacrosse among the Haudenosaunee and other peoples of North America.
- Explain how William George Beers wrote the first rules in 1867 and how the game changed.
- Make a lacrosse stick from household things and practice catching and throwing.

Warm-up. Toss a tennis ball up and catch it in a plastic cup ten times. Then try catching it in a bowl. Which is easier? Why?

WATCH

The History of Lacrosse | Honoring the Native American Heritage

Premier Lacrosse League • 3:16

https://www.youtube.com/watch?v=_e5Gs_oywbk

WHEN TO WATCH

After the story paragraph. Haudenosaunee players and stick makers talk about the game's history.

KEY TERMS

Haudenosaunee

The people of the Six Nations (Mohawk, Oneida, Onondaga, Cayuga, Seneca and Tuscarora) in what is now New York State and Canada; the name means “people of the longhouse.”

crosse

The lacrosse stick. The French word described its shape, like a bishop's curved staff.

lacrosse

A team game played with a ball and long sticks that have a netted pocket, used to catch, carry and throw the ball into a goal.

cradling

Gently rocking the stick to keep the ball in the pocket while running.

Kahnawake

A Mohawk community near Montreal whose players were among the best lacrosse teams of the 1800s.

CORE IDEAS

The story. In 1637 a French missionary named Jean de Brébeuf, living among the Huron people near the Great Lakes, wrote about a ball game played with curved sticks. The stick reminded the French of a bishop's curved staff, or *crosse*, and the game came to be called lacrosse. The Haudenosaunee, the Six Nations of the Iroquois, and many other peoples had been playing it for a very long time. Games were often enormous: hundreds of players on a field that could stretch for a mile or more, lasting from morning until sunset. The game was important in the life of a community, sometimes played to settle disputes between villages and to train young men to be strong and brave.

How it changed. In the 1800s, settlers in Montreal learned the game from Mohawk players at Kahnawake and Akwesasne. In 1867 a Montreal dentist named William George Beers wrote the first printed rules, setting the number of players at twelve a side, fixing the size of the field and the goals, and making a rubber ball standard instead of a deer-hide one. That same year he helped found Canada's National Lacrosse Association. In 1876 the Kahnawake team and the Montreal Lacrosse Club traveled to Britain and played before Queen Victoria. Today the Haudenosaunee have their own national team, which plays in world championships. Many of the best wooden sticks are still carved by Haudenosaunee craftsmen from hickory, steamed and bent into shape.

How it is played. In modern field lacrosse, ten players on each side try to send a small, hard rubber ball into the other team's goal, which is 6 feet (1.8 meters) square. Players may not touch the ball with their hands, except the goalie. They scoop it up from the ground, cradle it as they run, pass it through the air to a teammate and shoot it at the goal. Players wear helmets, gloves and pads because the ball moves very fast. Girls' and women's lacrosse has its own rules with less contact.

Why it matters. Lacrosse is one of the oldest team sports in North America and one of the few that began with the native peoples of this continent. Its story shows how a

game can be shared between peoples, and how written rules can help a game spread while the people who first played it keep its traditions alive.

PICTURE STUDY



The Kahnawake Lacrosse Team, William Notman, 1876 · Photograph, wet collodion glass negative ·
McCord Stewart Museum, Montreal
Image: [Wikimedia Commons](#), public domain

William Notman was Canada's most famous photographer in the 1800s, and his Montreal studio photographed many sports teams. This picture shows the lacrosse team from the Mohawk community of Kahnawake in 1876, the year they traveled to Britain. Studio photographs took several seconds to expose, so the players had to hold their poses very still.

Look closely

- Look at the sticks. Find the netted pocket at the end of each one. How is it made?
- Look at the team's striped uniforms. Why might a team wear matching clothes?
- Find the player wearing a feathered headdress. Why might the team include it in a photograph for a trip to Britain?
- Look at the young man lying in front. How did the photographer arrange the team?

Talk about it

1. How is this stick different from a hockey stick?
2. Why do you think British crowds wanted to see this team play?

3. What does this photograph tell you about how proud the team was?

Safety first. Use only a tennis ball or a soft ball, never a hard lacrosse ball. Practice outdoors in an open space with no windows nearby. Throw only to a partner who is ready, and swing the stick only in front of you, never around near other people's heads.

PROJECT

A Homemade Lacrosse Stick

You will make a lacrosse stick from a plastic jug and a broom handle or a stick, practice the basic skills, and keep a record of your catches and goals.

You will need

- A clean 1-gallon (4-liter) plastic milk jug with a handle
- A broom handle, a dowel or a straight stick about 3 feet (1 meter) long
- Strong tape (duct tape) and scissors (with an adult)
- A tennis ball
- A bucket, a laundry basket or a box on its side as a goal
- Scorebook and pencil

Steps

1. **Make the stick.** With an adult, cut the bottom and one side off the milk jug so that the handle and a curved scoop are left. Push the stick into the jug's handle and tape it tightly. Make two if you have a partner.
2. **Scoop.** Put the ball on the grass and scoop it up with one smooth motion. Try 20 times and count your successes.
3. **Throw and catch.** Stand 5 meters from a partner (or a wall) and throw the ball by snapping the stick forward. Catch it back in the scoop. Count catches out of 20.
4. **Cradle.** Walk, then jog, across the yard while cradling the ball. Count how many steps you can go before it drops.
5. **Shoot.** Set up the goal 6 meters away. Take 20 shots and count the goals.
6. Make a table of your results. Do each skill again two days later and record whether you improved.
7. Write two sentences about which skill was hardest and how lacrosse players get so good.

Tips

- Keep your top hand near the scoop and your bottom hand near the end of the stick.

- “Give” with the stick when you catch, letting it move back with the ball, so the ball doesn’t bounce out.
- When cradling, rock the stick gently from side to side.

Check your work

- ☐ I made a working stick and can scoop, throw, catch, cradle and shoot.
- ☐ I recorded my results twice and compared them.
- ☐ I can tell the history of lacrosse from 1637 to 1876.

SCOREBOOK

1. Draw your homemade stick and label its parts: handle, shaft, scoop (pocket).
2. Make a table: skill, first try, two days later. Circle the skill that improved most.
3. Write a timeline: 1637 Brébeuf’s description, 1867 Beers’s rules, 1876 the tour of Britain.

From history. Lacrosse was played at the Olympic Games in 1904 and 1908. In 1904, in St. Louis, one of the three teams was a team of Mohawk players from Canada, who won the bronze medal.

COMMON MISTAKES

- Thinking lacrosse was invented in Canada in the 1800s. Native peoples played it long before; Beers wrote the first printed rules.
- Catching with a stiff stick. Let the stick “give” as the ball arrives.
- Using a hard ball at home. A tennis ball is safe for practice.

Make it a game • Lacrosse History Relay. Pass a rolled sock between you and your parent while telling the story of lacrosse in one sentence each. Start with the Haudenosaunee, then Kahnawake, then William George Beers and the rules of 1867. If a pass is dropped, the other person asks one question. Finish by naming the parts of the crosse.

5.4 HOCKEY AND CANADA

OBJECTIVES

- Tell the story of the first organized indoor hockey game in Montreal in 1875.
- Explain how hockey's rules and equipment changed, and the history of the Stanley Cup.
- Play floor hockey with a homemade puck and record the results.

Warm-up. Slide a coin, a bottle cap and a rubber ball across a smooth floor with a ruler as a stick. Which goes straightest? Which is easiest to control? Why might hockey players use a flat puck?

WATCH

The Entire 130 Year History of the Stanley Cup

Hectic Hockey · 8:48

<https://www.youtube.com/watch?v=6NBXX5RTrQ8>

WHEN TO WATCH

After “How it changed.” The first minutes tell how Lord Stanley bought the cup in 1892; the rest follows it to the present day.

BACKUP VIDEO

The Father of Hockey - James Creighton

Beechwood Cemetery · 1:42

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

A short slide show about James Creighton and the game of March 3, 1875.

KEY TERMS

puck

The flat, round disk used in hockey instead of a ball.

rink

A sheet of ice for skating or hockey, often with boards around it.

Stanley Cup

The trophy given since 1893 to the champion hockey team; today it goes to the winner of the National Hockey League playoffs.

Governor General

The representative of the British monarch in Canada.

face-off

The way play starts in hockey: the referee drops the puck between two players.

CORE IDEAS

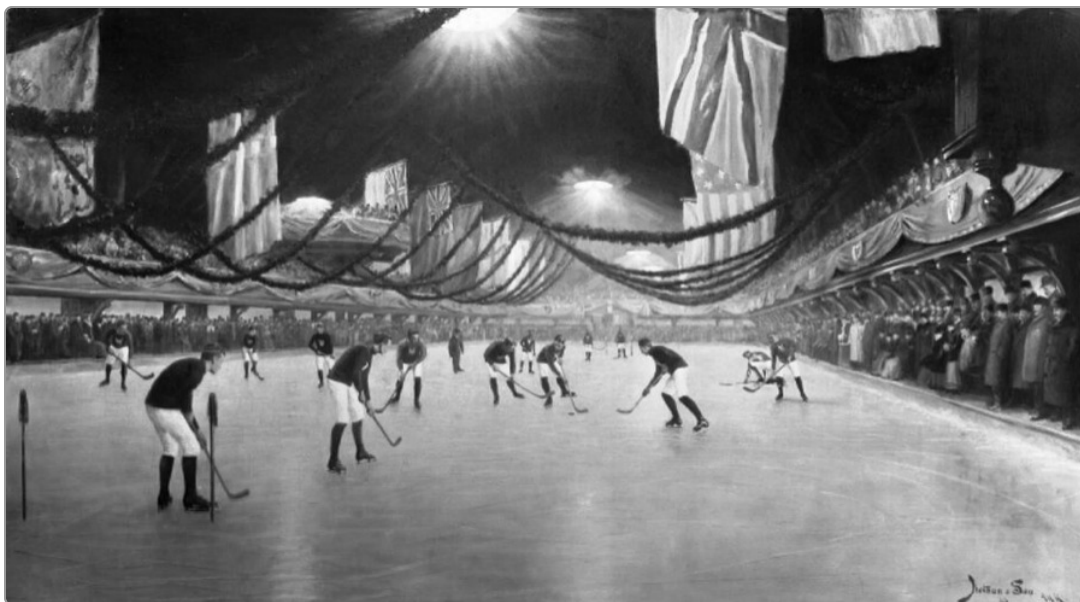
The story. On March 3, 1875, a crowd gathered at the Victoria Skating Rink in Montreal to watch something new: an organized game of hockey played indoors, with two teams of nine players. The game was arranged by James Creighton, a young engineer from Halifax, Nova Scotia, who had played stick-and-ball games on frozen ponds there. To keep the game from injuring the spectators, the players used a flat, round piece of wood instead of a ball, so that it would slide instead of bouncing into the crowd. A Montreal newspaper wrote about it the next day.

How it changed. People had played games with sticks and balls on ice for centuries, in Britain, the Netherlands and Canada. But the Montreal game, and the rules written by students at McGill University in 1877, turned those games into modern hockey. The flat puck soon became rubber. In 1892 the Governor General of Canada, Lord Stanley of Preston, whose sons loved the game, bought a silver bowl as a trophy for the best amateur team in Canada. It was first awarded in 1893 to the Montreal Hockey Club. Teams were cut from nine players to seven, and later to six. The National Hockey League was founded in Montreal in 1917, and it took over the Stanley Cup for its champions.

How it is played. In hockey today, each team has six players on the ice: a goalie, two defensemen and three forwards. Players skate and pass the puck with their sticks and try to shoot it into the other team's goal, which is 6 feet wide and 4 feet high (1.8 by 1.2 meters). Play starts with a face-off. Players wear helmets, gloves and pads, and the goalie wears a mask and large pads. Floor hockey, played in gyms and driveways with a soft ball or a plastic puck, uses the same basic rules without skates.

Why it matters. Hockey grew out of a cold country's long winters and frozen ponds, and it became one of the things Canadians love most. It shows how rules can make a game safer and fairer for both players and spectators: the flat puck was invented partly to protect the crowd. It is also a game of teamwork and speed, where no player can win alone.

PICTURE STUDY



Hockey Match at the Victoria Rink, William Notman & Son, 1893 · Composite photograph · McCord Stewart Museum, Montreal

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

This picture of a hockey game at the Victoria Skating Rink, where the 1875 game was played, was made by the Notman studio in 1893, the year the Stanley Cup was first awarded. It is a “composite”: in those days cameras could not stop fast movement in a dim hall, so the studio photographed each player separately and pasted the figures onto a picture of the rink, then photographed the whole thing again.

Look closely

- Find the goal at the left side of the picture. How is it different from a modern hockey net?
- Look at the players’ clothes. What protective equipment can you see, or not see?
- Look up at the flags and the lights hanging from the ceiling.
- Find the crowds along the sides. How close are they to the ice?

Talk about it

1. Why would a flat puck be safer than a ball for the people standing so close?
2. Why do you think the Notman studio made a composite picture instead of one quick photograph?

3. What equipment do modern players wear that these players did not?

Safety first. Play floor hockey only on a smooth floor or a driveway with a soft ball, a rolled pair of socks or a plastic puck. Keep sticks below the waist at all times, never swing them high, and play with an adult watching. Wear shoes with good grip. Never go onto frozen ponds or lakes unless an adult has checked that the ice is safe.

PROJECT

Floor Hockey with a Homemade Puck

You will make pucks from household things, test which one slides best, set up a small rink, and play floor hockey with the rules of 1875 and today.

You will need

- Two brooms or plastic hockey sticks
- Several possible pucks: a rolled pair of socks, a plastic jar lid, a bottle cap taped to cardboard, a soft ball
- Two boxes or laundry baskets on their sides as goals
- Masking tape or chalk to mark a center line
- Scorebook and pencil

Steps

1. **Puck test.** Give each puck the same gentle push with a stick across a smooth floor. Measure how far it slides and whether it goes straight. Try each three times and record the results.
2. Choose the safest puck that slides well.
3. **Set up the rink.** Mark a center line and place the goals at each end, about 5 meters apart.
4. **Face-off.** Start each game with a parent dropping the puck between two players at the center line.
5. Play one-on-one or two-on-two. Keep sticks low. A goal counts when the puck goes into the box. Play three games of five minutes each.
6. Record the score of each game and the number of shots each player took.
7. Write two sentences: Which puck worked best, and why? Why did James Creighton use a flat puck in 1875?

Tips

- Keep your stick on the floor; it makes passing and shooting easier and safer.
- Pass to a teammate instead of trying to go around everyone yourself.
- A goalie can use a small bucket lid as a blocker.

Check your work

- ☐ I tested at least three pucks and recorded the results.
- ☐ I played three games of floor hockey with face-offs and recorded the scores.
- ☐ I can tell the story of the 1875 game and the Stanley Cup.

SCOREBOOK

1. Draw a hockey rink from above with the goals, the center line and the face-off spot.
2. Make a puck-test table: puck, three distances, average, straight or not.
3. Write a timeline: 1875 first indoor game, 1877 McGill rules, 1893 first Stanley Cup, 1917 the National Hockey League.

From history. The Stanley Cup is one of the few trophies on which the names of the winning players are engraved. The original small bowl that Lord Stanley bought in 1892 for about ten guineas is kept at the Hockey Hall of Fame in Toronto, and a copy sits on top of the tall cup used today.

COMMON MISTAKES

- Thinking hockey began in 1875. People played stick games on ice long before; 1875 was the first organized indoor game.
- Thinking the Stanley Cup has always been a professional trophy. It began as a prize for amateur teams.
- Raising the stick high in floor hockey. Keep it low for safety.

Make it a game • Puck Facts Face-Off. Slide a homemade puck back and forth between you and your parent on a smooth floor. Each slide, the sender must state one fact about the first indoor hockey game in Montreal in 1875, the Stanley Cup or Governor General Lord Stanley. No repeating facts. The first to run out of facts loses the face-off.

UNIT 5

GAMES OF AFRICA AND THE AMERICAS

In Unit 2 you played oware, the two-row mancala game of Ghana. In East Africa, players use a board twice as big, with four rows of pits, and play a game called bao that some say is the hardest mancala game of all. Across the ocean, the peoples of Mexico and Central America were playing with bouncing rubber balls more than three thousand years ago, long before anyone in Europe had seen rubber.

Farther north, the Haudenosaunee and other peoples of North America played a fast stick-and-ball game that French visitors named lacrosse, and in the winter cities of Canada a new game on ice took shape in 1875: hockey. In this unit you will learn the history of these four games, make the equipment from household things, and play each one.

PREREQUISITES

- Can play oware by the rules (Lesson 2.3)
- Can find East Africa, Mexico, Central America and Canada on a map
- Knows the safety rules for active games (Units 3–4)

MASTERY CHECKLIST

- ☐ I can describe the bao board and play a beginner's game of bao.
- ☐ I can tell how the people of Mesoamerica made rubber balls, how their ballgame was played, and how Charles Goodyear's vulcanization (1839) led to today's balls.
- ☐ I can tell the history of lacrosse from the Haudenosaunee to William George Beers's rules, and catch and throw with a homemade stick.
- ☐ I can tell the story of the first indoor hockey game in Montreal in 1875 and of the Stanley Cup.
- ☐ I can play each game by the rules and record the results.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Hockey Hall of Fame:** Free. The Hall's website has pages on the history of the Stanley Cup and the early game in Montreal, for Lesson 5.4. A parent should preview it, as it carries advertising. Ages 9+.

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	Bao: East Africa's Great Counting Game	2 sessions of 45 minutes
5.2	The Rubber Ball: From Mesoamerica to Today	2 sessions of 45 minutes
5.3	Lacrosse and the Haudenosaunee	2 sessions of 45 minutes
5.4	Hockey and Canada	2 sessions of 45 minutes

UNIT 5 REVIEW

Answer each question in complete sentences. Show your work for the counting question. The review is worth 50 points.

1. **5 pts**
How is a bao board different from an oware board? Give the number of rows and pits.
2. **5 pts**
A beginner's bao board has 32 pits with 2 seeds in each. How many seeds are there? How many does each player start with on his side?
3. **5 pts**
In bao, from which row do you capture seeds?
4. **5 pts**
How did the peoples of Mesoamerica make rubber, and what did Charles Goodyear add in 1839?

5. (5 pts)

How did players hit the ball in the Mesoamerican ballgame, and why did they wear yokes?

6. (5 pts)

How did lacrosse get its name?

7. (5 pts)

What did William George Beers do in 1867?

8. (5 pts)

What happened at the Victoria Skating Rink on March 3, 1875, and why did the players use a flat piece of wood?

9. (5 pts)

Who gave the Stanley Cup, and when was it first awarded?

10. (5 pts)

What would sports be like today if no one had ever discovered how to make rubber?

ANSWER KEY

1. Bao has four rows of eight pits (32 pits); oware has two rows of six (12 pits). In bao each player owns two rows.
2. $32 \times 2 = 64$ seeds in all; each player has $16 \text{ pits} \times 2 = 32$ seeds on his side.
3. From the opponent's inner row, the pit directly opposite where your last seed landed in your own inner row.
4. They mixed latex from the rubber tree with juice from a morning glory vine; rubber balls at El Manatí are more than 3,000 years old. In 1839 Goodyear found that heating rubber with sulfur (vulcanization) made it strong and springy in any weather, which led to modern balls.
5. Mainly with their hips (no hands or feet). They wore thick yokes and pads because the solid rubber ball was heavy and hit hard.
6. French visitors, including Jean de Brébeuf in 1637, thought the stick looked like a bishop's curved staff, a crosse.
7. He wrote the first printed rules of lacrosse (twelve players a side, field and goal sizes, a rubber ball) and helped found Canada's National Lacrosse Association.
8. The first organized indoor hockey game, arranged by James Creighton, nine players a side. The flat puck slid instead of bouncing, so it would not fly into the crowd.
9. Lord Stanley of Preston, Governor General of Canada, bought it in 1892; it was first awarded in 1893 to the Montreal Hockey Club.
10. Answers will vary. Balls would be stuffed with hair, feathers or wool, or made from bladders, and would not bounce well; basketball, tennis, volleyball and many other games would be very different or impossible.

PORTFOLIO PIECE: A FIELD GUIDE TO GAMES OF TWO CONTINENTS

Make a four-page field guide, one page for each game in this unit: bao, the Mesoamerican ballgame, lacrosse and hockey. Each page has a map showing where the game began, a drawing of the board, court, field or rink, a list of equipment, the rules in five numbered steps, one important date, and your results from the project. Add your bao board, your homemade lacrosse stick and your best puck to your games box, with a label for each.

LOOK FOR	WHAT IT MEANS
Four complete pages	Each page has a map, a drawing, equipment, rules, a date and a result.
Accuracy	Places, dates and rules are correct, using facts from the lessons.
Equipment	The bao board, lacrosse stick and puck are sturdy, labeled and work.
Care	Neat drawings and handwriting, with captions.

UNIT 6

GAMES OF EUROPE

Many of the world's favorite sports were first written down as rules in Britain and France. For centuries, villages played rough, crowded games of football with few rules, and every school and town played its own way. In 1863 a group of men met in a London tavern to agree on one set of laws, and modern soccer was born. Scotland gave the world golf, played for more than five hundred years on the sandy links of St Andrews, and curling, played on frozen lochs with heavy granite stones.

France gave the world the *jeu de paume*, the indoor “game of the palm,” which became royal tennis and, in 1877, lawn tennis at Wimbledon. In this unit you will learn how each of these games grew from local custom to written rules, and you will play a version of each at home: a small-sided soccer match by the 1863 laws, a putting course, a paper-plate tennis match, and a game of curling on the kitchen floor.

PREREQUISITES

- Can measure distances and keep score in tables (Units 1–5)
- Can find England, Scotland and France on a map
- Knows the safety rules for active games

MASTERY CHECKLIST

- ☐ I can tell how the Football Association wrote the first laws of soccer in 1863 and why rugby went its own way.
- ☐ I can describe golf at St Andrews and explain why a round has 18 holes.
- ☐ I can trace tennis from the *jeu de paume* to the first Wimbledon Championship in 1877.
- ☐ I can describe curling and the Highland games of Scotland.
- ☐ I can set up and play a home version of each game with clear rules and keep score.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Harry Vardon, *The Complete Golfer* (Project Gutenberg):** Free. The 1905 book by Harry Vardon, one of the great champions of early golf, on clubs, the grip, the swing and putting. Fits Lesson 6.2. A parent may read selected chapters aloud. Ages 10+.

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 Soccer's First Rules, 1863	2 sessions of 45 minutes
6.2 Golf at St Andrews	2 sessions of 45 minutes
6.3 Tennis: From the Jeu de Paume to Wimbledon	2 sessions of 45 minutes
6.4 Curling and the Highland Games	2 sessions of 45 minutes

UNIT 6 REVIEW

Answer each question in complete sentences. Show your work for the scoring question. The review is worth 50 points.

1. **5 pts**

What happened at the Freemasons' Tavern in London in October 1863?

2. **5 pts**

Why did soccer and rugby become separate games?

3. **5 pts**

Why does a round of golf have 18 holes?

4. **5 pts**

A golfer takes 4, 3, 5 and 3 strokes on four holes with pars of 4, 3, 4 and 3. What is his total, and how does it compare with par?

5. (5 pts)

What was the jeu de paume, and how did it become tennis?

6. (5 pts)

Why did the All England Croquet Club hold the first Wimbledon Championship in 1877?

7. (5 pts)

A tennis game is at 40–40. What is this called, and what must a player do to win the game?

8. (5 pts)

What is one of the earliest written records of curling, and what is the Stirling Stone?

9. (5 pts)

In curling, Team A has stones 20 cm and 50 cm from the button. Team B's closest stone is 40 cm away. How many points does Team A score?

10. (5 pts)

What would happen if every school in England today still played its own kind of football with its own rules?

ANSWER KEY

1. Men from about a dozen London clubs and schools, invited by Ebenezer Cobb Morley, met to found the Football Association and write one set of laws for football. The thirteen laws were published in December 1863.
2. At the 1863 meetings the majority voted to ban carrying the ball and hacking. The clubs that wanted to carry the ball left and founded the Rugby Football Union in 1871.
3. In 1764 the golfers at St Andrews combined the first four short holes into two, reducing the Old Course from 22 holes to 18. Other courses copied St Andrews.
4. $4 + 3 + 5 + 3 = 15$ strokes. Par is $4 + 3 + 4 + 3 = 14$. He is one over par.
5. The French “game of the palm,” hitting a ball with the hand. Players added gloves and then rackets, and it became real tennis in walled courts. In the 1870s lawn tennis was invented for outdoor lawns, and Wimbledon’s rules of 1877 became the basis of modern tennis.
6. To raise money to buy a pony-drawn roller for its croquet lawns.
7. Deuce. A player must win two points in a row (advantage, then game).
8. A challenge recorded at Paisley Abbey in 1541. The Stirling Stone is a curling stone carved with the date 1511.
9. One point: only the 20 cm stone is closer than Team B’s best stone (40 cm).
10. Answers will vary. Teams from different schools and towns could hardly play one another, there would be arguments about rules, and there could be no leagues or international matches.

PORTFOLIO PIECE: A SPORTS MUSEUM OF EUROPE

Make a four-panel display (on poster board or four sheets of card) for the games of this unit: soccer, golf, tennis and curling with the Highland games. Each panel needs a title, a map showing where the game began, three important dates, a drawing of the field, course, court or sheet, and the rules in five numbered steps. Add your putting course scorecard, your tennis set score and your curling scoreboard as “exhibits,” and your paper-plate racket and one curling “stone” as objects on a table in front of the display.

LOOK FOR	WHAT IT MEANS
Four panels	Each panel has a map, three correct dates, a drawing and rules.
Accuracy	Names, places and dates match the lessons.
Exhibits	Scorecards and results from the projects are included and labeled.
Presentation	Neat, readable and arranged so a visitor could learn from it.

6.1 SOCCER'S FIRST RULES, 1863

OBJECTIVES

- Describe the old village football games and why written rules were needed.
- Tell the story of the Football Association's meeting in 1863 and the split with rugby.
- Play a small-sided soccer game by a few of the 1863 laws and compare them with today's rules.

Warm-up. Pass a soft ball back and forth with a partner using only the inside of your foot. Count how many passes you make in one minute without losing control.

WATCH

Football Explained: Episode One

Tifo Football by The Athletic • 8:22

<https://www.youtube.com/watch?v=-30p6S6JZf8>

WHEN TO WATCH

After “How it changed.” An illustrated history of the 1863 meetings, the argument over hacking and the split with rugby.

Note: Begins and ends with short promotions for the sports news service that makes it.

BACKUP VIDEO

The original football rule book from 1863 unveiled @ the British Library

England • 1:54

<https://www.youtube.com/watch?v=X5kIZ73JE58>

See the original 1863 minute book with the first laws, shown at the British Library in 2013.

KEY TERMS

association football

The full name of soccer; the word “soccer” comes from a short form of “association.”

Football Association

The governing body of English soccer, founded in London in 1863; it wrote the first laws of the game.

laws of the game

The official rules of soccer, still called “laws” today.

hacking

Kicking an opponent’s shins, allowed in some old football games and banned by the Football Association.

rugby football

The kind of football in which players carry the ball in their hands, named after Rugby School in England.

CORE IDEAS

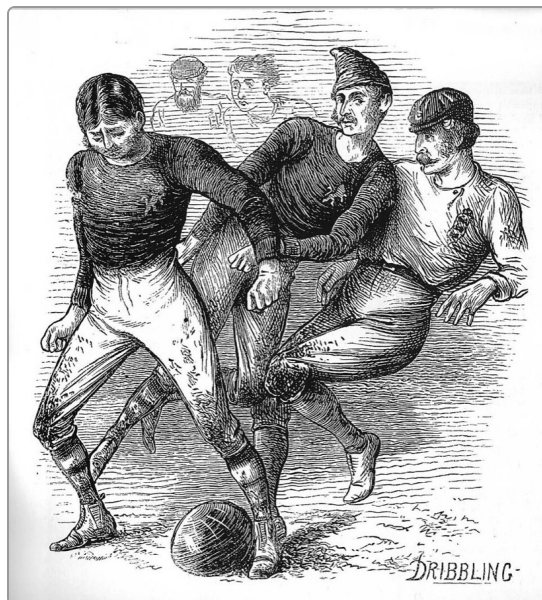
The story. On the evening of October 26, 1863, men from about a dozen London football clubs and schools met at the Freemasons’ Tavern in Great Queen Street, London. They had been invited by Ebenezer Cobb Morley, a lawyer and the captain of a club in the village of Barnes, who had written to a newspaper asking for one set of rules that everyone could play by. Over six meetings that autumn they founded the Football Association and wrote its first thirteen laws, published in December 1863.

How it changed. For hundreds of years, football in Britain had been a rough village game with huge crowds of players and few rules. Kings had even tried to ban it because it was so wild. In the 1800s the great schools such as Eton, Harrow and Rugby each played their own version. Some let players catch and carry the ball; some allowed hacking. At the 1863 meetings the members argued hardest about these two things. When the majority voted to ban carrying the ball and hacking, the Blackheath club walked out. The clubs that liked to carry the ball founded the Rugby Football Union in 1871, and the two games went their separate ways. On November 30, 1872, Scotland and England played the first official international soccer match in Glasgow. It ended 0–0.

How it is played. Under the 1863 laws there was no crossbar, only two posts 8 yards apart and a tape or nothing above them; a goal counted if the ball went between the posts at any height. Players could catch the ball if they made a “fair catch” but could not run with it. There was no goalkeeper with special powers, no penalty kick and no referee in the middle; the two captains settled disputes. Within a few years most of these rules changed. Today a team has eleven players, including a goalkeeper, and the game is run by a referee.

Why it matters. The 1863 meeting shows how written rules let a game spread. Once everyone played by the same laws, clubs from different towns could play each other, then countries could, and today soccer is played in every nation on earth. It also shows that making rules means some people will be disappointed. The Rugby men were outnumbered, but rather than quarrel they went off and built a fine game of their own.

PICTURE STUDY



The First International Football Match: Scotland v England, William Ralston, 1872 · Wood engraving from drawings made at the match, published in a London illustrated newspaper · Hamilton Crescent, Partick, Glasgow

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

William Ralston was a Scottish artist who drew for newspapers. He went to the first international match on November 30, 1872, and his drawings were printed in a London illustrated newspaper. Photographs of moving players were not possible then, so these drawings are one of the best records of how the first internationals looked.

Look closely

- Look at the word written near the bottom of the picture. What skill is the artist showing?
- Look at the players' clothes. How are they different from a modern soccer uniform?
- Find the ball. Who do you think will get it?
- Look at the faces drawn in the background. Who might they be?

Talk about it

1. Players in 1872 mostly dribbled the ball rather than passing. Why might dribbling have been the main way to play?
2. Why did the first international end 0–0, do you think?

3. What would a modern soccer player find strange about this match?

Safety first. Play on grass with a soft ball or a size 3 or 4 soccer ball, with shin guards if you have them. No hacking or tripping: these were banned in 1863 and are banned in your game too. Do not head the ball; young players should not head a soccer ball. Warm up, drink water and stop if anything hurts.

PROJECT

A Match by the 1863 Laws

You will play a small-sided soccer game using some of the original 1863 laws, then play again by modern rules, and compare the two.

You will need

- A soft soccer ball or playground ball
- Four markers (cones, shoes or water bottles) for two goals, about 2 meters wide
- A stopwatch
- Scorebook and pencil

Steps

1. **Set up.** Mark a field about 20 by 12 meters with a goal at each end. For the 1863 game, the goal has no crossbar: any ball that passes between the markers counts, at any height.
2. **1863 rules.** No goalkeeper may use hands, but any player who catches the ball cleanly in the air may take a free kick (a “fair catch”). No one may run with the ball in his hands. No hacking or tripping. The two captains settle disputes; there is no referee.
3. Play for ten minutes. Record the score and every argument the captains had to settle.
4. **Modern rules.** Now add a goalkeeper who may use hands, count only goals below a rope or an imaginary bar at waist height, and choose a referee.
5. Play for ten minutes. Record the score and the number of fouls the referee called.
6. Make a table comparing the two games: goals, arguments or fouls, and which was more fun.
7. Write three sentences: Which rule from 1863 would you bring back? Which modern rule is the biggest improvement? Why do rules keep changing?

Tips

- Pass with the inside of your foot for accuracy.

- Keep the ball close when you dribble, as the players in 1872 did.
- Captains should decide disputes quickly and fairly, then play on.

Check your work

- ☐ I played one game by the 1863 rules and one by modern rules, ten minutes each.
- ☐ I recorded scores, arguments and fouls in a table.
- ☐ I can tell the story of the Freemasons' Tavern meeting and the split with rugby.

SCOREBOOK

1. Draw a goal from 1863 (two posts, no crossbar) beside a modern goal, with measurements.
2. Make the comparison table of your two games.
3. Write a timeline: October 26, 1863 (first meeting); December 1863 (laws published); 1871 (Rugby Football Union); November 30, 1872 (first international).

From history. Morley's handwritten minute book with the first laws is kept by the Football Association. In 2013, for the Association's 150th anniversary, it was displayed at the British Library in London. The crossbar was added to the laws in 1882, and the penalty kick in 1891.

COMMON MISTAKES

- Thinking soccer and rugby have always been different games. They split over carrying the ball and hacking in 1863.
- Thinking the 1863 laws are the same as today's. There was no crossbar, no penalty kick and no referee at first.
- Heading the ball. Young players should not head a soccer ball.

Make it a game • Rules Rewrite. Pretend you are at the Football Association meeting in 1863 with a ball made of paper. Write three short rules, from memory, that fix problems like hacking or carrying the ball. Your parent plays the old village football team and argues for the old way. Then explain what split with rugby. Read your three rules aloud.

6.2 GOLF AT ST ANDREWS

OBJECTIVES

- Tell the history of golf in Scotland and at St Andrews, the “home of golf.”
- Explain why a round of golf has 18 holes and what par means.
- Build a nine-hole putting course at home and record scores against par.

Warm-up. Lay a cup on its side on the floor. From 2 meters away, roll a ball into it with a broom handle or a putter. How many tries does it take? Now try from 4 meters.

WATCH

St Andrews: The History of the Old Course

Stow TV • 9:12

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

WHEN TO WATCH

After “How it changed.” A tour of the Old Course with old maps and photographs.

KEY TERMS

links

Sandy, rolling land along the sea coast, where golf was first played in Scotland.

par

The number of strokes a good golfer is expected to take to finish a hole or a course.

stroke

Each swing at the ball, whether it moves far or not at all.

green

The smooth, short grass around each hole, where players putt.

putt

A gentle stroke on the green that rolls the ball toward the hole.

CORE IDEAS

The story. On the coast of eastern Scotland, the town of St Andrews looks out over a stretch of sandy links where people have played golf for more than six hundred

years. In 1457 King James II of Scotland grew so worried that his subjects were playing golf instead of practicing archery that he banned it. The ban did not last. In 1552 the Archbishop of St Andrews confirmed the right of the townspeople to play on the links. In 1754 twenty-two gentlemen founded the Society of St Andrews Golfers, which later became the Royal and Ancient Golf Club and for many years made the rules of golf for most of the world.

How it changed. In the early days the number of holes on a course was whatever the land allowed. The Old Course at St Andrews once had 22 holes. In 1764 the golfers decided that the first four holes were too short and combined them into two, leaving 18. Other courses copied St Andrews, and 18 holes became the standard round. Balls changed too: first wooden, then the “featherie,” a leather case stuffed tightly with boiled goose feathers, then about 1848 the “guttie,” made of a hard rubbery gum called gutta-percha, which was cheaper and lasted longer. Old Tom Morris, who was born in St Andrews in 1821, won the Open Championship four times and cared for the Old Course as its keeper of the green for nearly forty years.

How it is played. Golf is simple to explain and hard to do. Each player hits his own ball from the tee toward a hole on a distant green, counting every stroke. The aim is to get the ball into the hole in as few strokes as possible. Each hole has a par: three strokes for a short hole, four or five for longer ones. A round of 18 holes on the Old Course has a par of 72. Golfers play the ball as it lies, keep their own score honestly, and wait quietly while others play.

Why it matters. Golf is a game of patience and self-control. One angry swing can ruin a whole round. Paul listed self-control, which he called “temperance,” as part of the fruit of the Spirit (Galatians 5:22-23). Golf is also a game played on the honor system: players count their own strokes and call their own penalties, as Bobby Jones did in 1925 (Lesson 1.4).

PICTURE STUDY



The Golfers: A Grand Match at St Andrews, Charles Lees, 1847 · Oil on canvas · Scottish National Portrait Gallery, Edinburgh

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

Charles Lees painted this picture of a famous match played on the Old Course at St Andrews in 1841. Nearly every face in the crowd is a portrait of a real person: golfers, caddies, gentlemen and ladies of the town. Many golfers in those days wore red coats so that other people walking on the public links could see them and keep out of the way of flying balls.

Look closely

- Find the golfer who is putting. Everyone is watching him. How can you tell?
- Find the red coats. Why did golfers wear them?
- Look for the caddies carrying clubs. How many clubs can you see under their arms?
- Find the town of St Andrews on the horizon.

Talk about it

1. Why do you think so many people came to watch one match?
2. Why must the crowd stand still and keep quiet during a putt?
3. How is this scene different from golf on television today?

Safety first. Putt only; do not take full swings indoors. Use a light ball (a plastic golf ball or a tennis ball) and a putter, broom handle or yardstick. Keep other people well away from anyone holding a club, and never swing toward a person, a window or a lamp. Full swings with a real club belong outdoors only, with an adult watching and a clear circle around you.

PROJECT

A Nine-Hole Putting Course

You will design and build a nine-hole putting course at home or in the yard, give each hole a par, and play several rounds with your family, keeping a proper scorecard.

You will need

- Nine plastic cups or tin cans laid on their sides as holes
- Books, boxes, pillows and pool noodles for walls and hazards
- A putter, broom handle or yardstick, and a plastic golf ball or other small ball
- A tape measure
- Paper for scorecards, and the scorebook

Steps

1. **Design.** Draw a map of your nine holes in your scorebook. Make some short and straight, some long, and some with a bend or a “bunker” (a box to go around).
2. **Build.** Set out the cups, tees (a piece of tape for the starting spot) and hazards. Measure the length of each hole and write it on your map.
3. **Par.** Putt each hole three times and give it a par of 2, 3 or 4, depending on how hard it is. Add the pars for the course total.
4. Make a scorecard with columns for each hole, par, and each player’s strokes.
5. **Play.** Play at least three rounds with family members. Count every stroke honestly, including misses.
6. Add up each player’s total and compare it with par. Who finished closest to par?
7. Write two sentences: Which hole was hardest, and why? Was your par fair, or should you change it?

Tips

- Keep your head still and look at the ball as you putt.

- Swing the putter back and through like a pendulum, the same distance each way.
- On a long putt, aim to get the ball close to the hole, not necessarily in it.

Check your work

- ☐ I built a nine-hole course with measured holes and a par for each.
- ☐ I played at least three rounds and kept an honest scorecard.
- ☐ I can explain why a round of golf has 18 holes.

SCOREBOOK

1. Draw the map of your nine-hole course with lengths and pars.
2. Paste or copy your scorecards and circle your best hole.
3. Write a timeline: 1457 (James II's ban), 1552 (townspeople's right to play), 1754 (the Society of St Andrews Golfers), 1764 (18 holes).

From history. The Open Championship, the oldest of golf's major championships, was first played in 1860 at Prestwick on Scotland's west coast, with eight players. It first came to St Andrews in 1873 and has returned there more often than to any other course.

COMMON MISTAKES

- Not counting a missed stroke. Every swing counts, even a miss.
- Thinking golf began in America. It began in Scotland, on the links.
- Swinging hard when a gentle putt is needed.

Make it a game • Par Predictions. Set up a three-hole putting course with cups on a rug. Before each hole, state a par and guess how many strokes you will need. Count your strokes and compare. Closest guess wins a point. Tell your parent why St Andrews is called the home of golf, and why a round has 18 holes.

Scripture. "But the fruit of the Spirit is love, joy, peace, longsuffering, gentleness, goodness, faith, Meekness, temperance: against such there is no law." (Galatians 5:22-23, KJV)

Golf tests patience and self-control (temperance) on every hole. Paul names these as fruit that God's Spirit grows in His people.

6.3 TENNIS: FROM THE JEU DE PAUME TO WIMBLEDON

OBJECTIVES

- Trace tennis from the French “game of the palm” to real tennis and lawn tennis.
- Tell the story of the first Wimbledon Championship in 1877 and how tennis is scored.
- Play a paper-plate tennis match over a string net and keep score the tennis way.

Warm-up. Hit a balloon back and forth with a partner using only the palms of your hands. Count how many hits you make before it touches the floor. This is how tennis began.

WATCH

The History of Tennis

[International Tennis Hall of Fame](#) • 7:53

<https://www.youtube.com/watch?v=PWM6v7XLyeg>

WHEN TO WATCH

After the core ideas. The International Tennis Hall of Fame tells the story from real tennis to today.

BACKUP VIDEO

Real Tennis explained by a tour guide who plays the game!

[Cycle Cities](#) • 5:14

<https://www.youtube.com/watch?v=ui2n5KbKzuk>

See inside a real-tennis court in England, with its sloping roofs and galleries, explained by a guide who plays the game.

KEY TERMS

jeu de paume

French for “game of the palm,” the indoor ball game, first played with the hand, from which tennis came.

real tennis

The old indoor game of tennis, played in walled courts with sloping roofs; “real” meaning “royal.”

lawn tennis

The outdoor game of tennis on grass, invented in England in the 1870s; the tennis we play today.

love

In tennis, a score of zero.

deuce

A tie at 40–40; a player must then win two points in a row to win the game.

CORE IDEAS

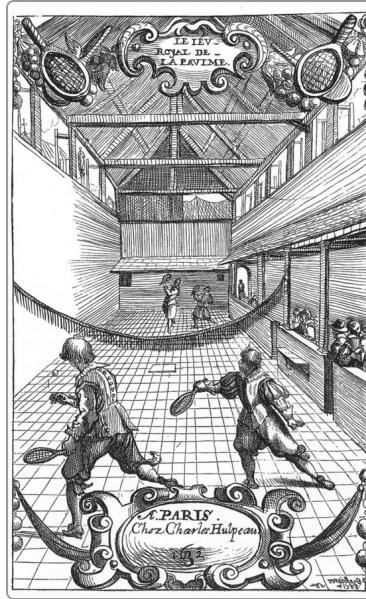
The story. In July 1877 the All England Croquet and Lawn Tennis Club, in the London suburb of Wimbledon, held a tournament for a new game: lawn tennis. Twenty-two men paid an entry fee of one guinea each, and about two hundred spectators paid a shilling each to watch the final. The club wanted to raise money to buy a pony-drawn roller for its croquet lawns. It could not have guessed that its little tournament would become the most famous tennis championship in the world.

How it changed. Tennis began long before, in France. In the 1100s and 1200s, people played a game of hitting a ball over a rope or against a wall with the palm of the hand, the *jeu de paume*. Players soon wore gloves, and by the 1500s they used rackets strung with gut. Kings loved it: King Henry VIII had a tennis court built at Hampton Court Palace near London, and a court on that spot is still played on today. This indoor game, now called real tennis, was played in walled courts with sloping roofs. In 1874 an English army officer, Major Walter Clopton Wingfield, patented an outdoor version that could be played on any lawn. In 1877 the Wimbledon club wrote its own rules for the championship, with a rectangular court and the old real-tennis way of scoring, and those rules became the basis of tennis everywhere.

How it is played. Two players (or two pairs) stand on either side of a net and hit the ball back and forth with rackets. The ball may bounce once before you hit it, or none. You win a point when your opponent cannot return the ball into the court. Points are counted in an odd way that comes from old France: love (0), 15, 30, 40, game. If the score reaches 40–40, it is “deuce,” and a player must win two points in a row. Six games win a set. Players serve by tossing the ball up and hitting it diagonally into the service box.

Why it matters. Tennis shows how a game can move from palace to backyard. Real tennis needed a costly walled court; lawn tennis needed only a lawn, a net and two rackets, so families everywhere could play. Tennis also has a tradition of courtesy: players shake hands at the net, and in friendly games they call their own lines honestly.

PICTURE STUDY



A French Jeu de Paume Court, Charles Hulpeau, 1632 · Copper engraving · Published in Paris

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

Charles Hulpeau was a Paris tennis master who wrote one of the first books on the rules of the jeu de paume, in 1632. This engraving shows a covered court of the kind built all over Paris in his day; the city had well over a hundred of them. The printer made one mistake: the picture is printed backward, like a mirror image, which you can tell because the signature in the corner is reversed.

Look closely

- Find the net across the middle of the court. Is it high or low?
- Look at the players' rackets. How are they different from modern rackets?
- Find the sloping roof along the side wall. In real tennis, the ball could bounce off it.
- Find the spectators. Where are they watching from?

Talk about it

1. Why would an indoor court have been useful in rainy northern France?
2. Why were courts like this so expensive to build?
3. What did Major Wingfield change so that ordinary families could play?

Safety first. Play with a balloon or a soft foam ball indoors in a clear room, or outdoors on grass. Keep your partner at a safe distance and never swing toward someone's face. Wear proper shoes.

PROJECT

Paper-Plate Tennis with Real Scoring

You will make rackets from paper plates, set up a string net, and play matches using real tennis scoring: love, 15, 30, 40, deuce and advantage.

You will need

- Two sturdy paper plates and two paint stirrers or rulers, and strong tape
- A balloon or a soft foam ball
- String or a jump rope tied between two chairs at about knee to waist height
- Masking tape to mark the court
- Scorebook and pencil

Steps

1. **Make rackets.** Tape a paint stirrer to the back of each paper plate as a handle.
2. **Set up the court.** Tie the string net across the middle of a clear space. Mark a court about 3 meters long on each side and 2 meters wide.
3. **Learn the scoring.** Write the sequence in your scorebook: love, 15, 30, 40, game. At 40–40 it is deuce; the next point gives “advantage,” and the player must win the following point too, or it goes back to deuce.
4. **Play.** Serve underhand diagonally across the net. The ball (or balloon) may bounce once. Win the point if your opponent misses or hits it out.
5. Play a set: the first to win six games, ahead by two. Keep score aloud, saying the server’s score first.
6. Record every game in your scorebook: who served, the score, who won.
7. Write two sentences: Was the tennis scoring hard to learn? Why do you think the old French scoring was kept?

Tips

- Watch the ball all the way onto your racket.
- Turn sideways to hit, the way real tennis players do.
- Say the score out loud before every serve, and agree on it.

Check your work

- ☐ I made a racket and set up a court with a net.
- ☐ I played at least one set with correct tennis scoring, including deuce.
- ☐ I can tell the story of tennis from the jeu de paume to Wimbledon in 1877.

SCOREBOOK

1. Draw a tennis court from above, with the net, the service boxes and the baselines.
2. Write out a whole game score by score, including deuce and advantage.
3. Write a timeline: 1100s–1200s (jeu de paume), 1500s (Henry VIII's court at Hampton Court), 1632 (Hulpeau's rule book), 1874 (Wingfield's patent), 1877 (first Wimbledon).

From history. No one knows for certain why tennis is scored 15, 30, 40. One idea is that the scores came from the quarters of a clock face (15, 30, 45), with 45 later shortened to 40. The word “deuce” probably comes from the French *à deux*, “two more” points needed to win.

COMMON MISTAKES

- Counting 1, 2, 3 instead of 15, 30, 40.
- Forgetting that you must win by two at deuce.
- Thinking tennis began as an outdoor game. It began indoors in France.

Make it a game • Score the Rally. Rally a balloon with a paper-plate racket, and keep score aloud in tennis style: love, fifteen, thirty, forty, deuce. Whoever misses first loses the point. After each game, tell one fact about the jeu de paume or the first Wimbledon of 1877. First to win two games wins the match.

6.4 CURLING AND THE HIGHLAND GAMES

OBJECTIVES

- Tell the history of curling on the frozen lochs of Scotland and how it became an Olympic sport.
- Describe the events of the Highland games, including the caber toss.
- Play a game of floor curling and hold a small Highland games, recording the results.

Warm-up. Slide a full water bottle along a smooth floor toward a coin. How close can you stop it? Try five times and measure your closest slide.

WATCH

Throwing Stones - History of Curling

World Curling · 3:58

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

WHEN TO WATCH

After the story paragraph. Scottish curlers show old stones and records.

BACKUP VIDEO

Scottish Highland Games: Explained

VisitScotland · 5:34

https://www.youtube.com/watch?v=Wj_8RqT6Vfg

For the Highland games part of the lesson: the caber, the stones, the dancing and the pipes.

KEY TERMS

curling

A game in which players slide heavy granite stones across ice toward a target, called the house.

house

The circular target at the end of a curling sheet; the center is called the button.

sweeping

Brushing the ice in front of a moving stone to make it slide farther and straighter.

loch

The Scottish word for a lake.

caber

A long, heavy wooden pole tossed end over end at the Highland games.

CORE IDEAS

The story. On a winter's day in 1541, a monk of Paisley Abbey, near Glasgow, and a friend challenged each other to throw stones along the ice, and the challenge was written down in the abbey's records. It is one of the earliest written records of curling. An even older curling stone, the Stirling Stone, has the date 1511 carved on it. In the cold winters of those centuries, the lochs and ponds of Scotland froze hard, and whole villages came out to play.

How it changed. The first curling stones were rough boulders from riverbeds, with a notch or a handle for gripping. Over time, curlers began to shape their stones into smooth, round granite stones with handles. In 1838 the Grand Caledonian Curling Club was founded in Edinburgh to write common rules; after Queen Victoria and Prince Albert watched curlers play on the polished ballroom floor of Scone Palace in 1842, it became the Royal Caledonian Curling Club. Scottish settlers carried the game to Canada, which is now the strongest curling nation in the world. Many of the finest curling stones are still made from granite quarried on Ailsa Craig, a small island off the coast of Scotland.

How it is played. Two teams of four take turns sliding stones, each weighing about 42 pounds (19 kilograms), down a sheet of ice about 45 meters long toward the house. As the stone slides, two teammates sweep the ice in front of it to help it travel farther and straighter. Players try to leave their stones closest to the button and knock the other team's stones away. After all sixteen stones are thrown, the team with the closest stone scores one point for each of its stones nearer than the other team's best. At the Highland games, in summer, Scots compete in tossing the caber, throwing heavy stones and hammers, running hill races, piping and dancing.

Why it matters. Curling is called "the roaring game" because of the sound the stones make on the ice, and it is famous for its good manners. Curlers shake hands before and after every game, and the two teams often sit down together afterward as friends. There are few referees: players are trusted to call their own fouls. The Highland games, too, are a festival of community, where families gather to watch strength, speed, music and dancing.

PICTURE STUDY



The Curlers, Sir George Harvey, 1835 · Oil on panel · National Galleries of Scotland, Edinburgh
Image: [Wikimedia Commons](#), public domain

Sir George Harvey was a Scottish painter who loved scenes of Scottish life. This painting shows a curling match on a frozen loch at the end of a winter day. It was so popular that engravings of it were sold all over Scotland. Notice how many different kinds of people are playing together: farmers, gentlemen and even the minister.

Look closely

- Find the curling stones on the ice. How many can you count?
- Find the players with brooms. What are they doing?
- Find the man lying flat on the ice. Why might he be lying there?
- Find the minister in black at the right. How is he different from the other players?

Talk about it

1. Why do you think whole villages came out to curl in winter?
2. How can you tell that everyone is very interested in this one shot?
3. Curling is known for its good manners. What clues of friendship can you see in this picture?

Safety first. Slide water bottles or beanbags on a smooth floor only; do not throw them. For the Highland games, use light, safe objects: a pool noodle or a cardboard tube as the caber, a beanbag as the stone. Toss only in an open yard, away from people and windows, and with an adult watching. Never go onto frozen ponds unless an adult has checked that the ice is safe.

PROJECT

Floor Curling and a Family Highland Games

You will make a curling house on the floor, play a game of floor curling with two teams, and then hold a small Highland games with three safe events, recording all the results.

You will need

- Eight full plastic water bottles or beanbags (four for each team, two colors)
- Masking tape or a string and chalk to make the house
- A long cardboard tube or a pool noodle (the caber), and a beanbag (the stone)
- A tape measure and a stopwatch
- Scorebook and pencil

Steps

1. **Make the house.** On a smooth floor, tape three circles one inside another, about 1.2 meters, 80 centimeters and 30 centimeters across. Mark a throwing line 5 meters away.
2. **Curling.** Teams take turns sliding one bottle at a time from the throwing line toward the house. You may knock the other team's bottles away.
3. After all eight are thrown (one "end"), find the team with the bottle closest to the center. It scores one point for each of its bottles closer than the other team's best. Measure if it is close.
4. Play six ends and record the score of each in your scorebook.
5. **Highland games.** Outdoors, hold three events: the caber toss (toss the tube so it flips end over end; score by how straight it lands), the stone put (push the beanbag from the shoulder; measure the distance), and a short hill run or a 50-meter dash (time it).
6. Record every result in a table and award a winner in each event.
7. Write two sentences: What skill helped most in curling? Which Highland event was hardest?

Tips

- In curling, a gentle, smooth push is better than a hard shove.
- Hold the caber from the bottom, run a few steps, and lift it up and forward.
- Shake hands with the other team before and after the game, as real curlers do.

Check your work

- ☐ I made a house and played six ends of floor curling with correct scoring.
- ☐ I held three Highland events and measured every result.
- ☐ I can tell the history of curling from 1511 to the Royal Caledonian Curling Club.

SCOREBOOK

1. Draw the curling house from above and show where each bottle stopped in your best end.
2. Make the curling scoreboard: end, team A, team B, total.
3. Make a Highland games results table: athlete, caber, stone put, dash.

From history. Curling was played at the first Winter Olympic Games in Chamonix, France, in 1924, where Great Britain won the gold medal. It became a full Olympic sport again in 1998. The Braemar Gathering, one of the most famous Highland games, has been attended by members of the royal family since Queen Victoria's visit in 1848.

COMMON MISTAKES

- Scoring every stone in the house. Only the stones closer than the other team's best stone score.
- Throwing the stones. Curling stones slide; they are never thrown in the air.
- Thinking the caber toss is about distance. It is about flipping the caber end over end and landing it straight.

Make it a game • Stone Slide Showdown. Slide a flat bottle cap or button across a smooth floor toward a house made from a drawn circle. Your parent guesses whether it will stop inside. Closest to the center scores. Between slides, explain what sweeping does, or name a Highland games event, such as the caber toss. Ten slides each. Beat your own total.

UNIT 6

GAMES OF EUROPE

Many of the world's favorite sports were first written down as rules in Britain and France. For centuries, villages played rough, crowded games of football with few rules, and every school and town played its own way. In 1863 a group of men met in a London tavern to agree on one set of laws, and modern soccer was born. Scotland gave the world golf, played for more than five hundred years on the sandy links of St Andrews, and curling, played on frozen lochs with heavy granite stones.

France gave the world the *jeu de paume*, the indoor “game of the palm,” which became royal tennis and, in 1877, lawn tennis at Wimbledon. In this unit you will learn how each of these games grew from local custom to written rules, and you will play a version of each at home: a small-sided soccer match by the 1863 laws, a putting course, a paper-plate tennis match, and a game of curling on the kitchen floor.

PREREQUISITES

- Can measure distances and keep score in tables (Units 1–5)
- Can find England, Scotland and France on a map
- Knows the safety rules for active games

MASTERY CHECKLIST

- ☐ I can tell how the Football Association wrote the first laws of soccer in 1863 and why rugby went its own way.
- ☐ I can describe golf at St Andrews and explain why a round has 18 holes.
- ☐ I can trace tennis from the *jeu de paume* to the first Wimbledon Championship in 1877.
- ☐ I can describe curling and the Highland games of Scotland.
- ☐ I can set up and play a home version of each game with clear rules and keep score.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Harry Vardon, *The Complete Golfer* (Project Gutenberg):** Free. The 1905 book by Harry Vardon, one of the great champions of early golf, on clubs, the grip, the swing and putting. Fits Lesson 6.2. A parent may read selected chapters aloud. Ages 10+.

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 Soccer's First Rules, 1863	2 sessions of 45 minutes
6.2 Golf at St Andrews	2 sessions of 45 minutes
6.3 Tennis: From the Jeu de Paume to Wimbledon	2 sessions of 45 minutes
6.4 Curling and the Highland Games	2 sessions of 45 minutes

UNIT 6 REVIEW

Answer each question in complete sentences. Show your work for the scoring question. The review is worth 50 points.

1. **5 pts**

What happened at the Freemasons' Tavern in London in October 1863?

2. **5 pts**

Why did soccer and rugby become separate games?

3. **5 pts**

Why does a round of golf have 18 holes?

4. **5 pts**

A golfer takes 4, 3, 5 and 3 strokes on four holes with pars of 4, 3, 4 and 3. What is his total, and how does it compare with par?

5. (5 pts)

What was the jeu de paume, and how did it become tennis?

6. (5 pts)

Why did the All England Croquet Club hold the first Wimbledon Championship in 1877?

7. (5 pts)

A tennis game is at 40–40. What is this called, and what must a player do to win the game?

8. (5 pts)

What is one of the earliest written records of curling, and what is the Stirling Stone?

9. (5 pts)

In curling, Team A has stones 20 cm and 50 cm from the button. Team B's closest stone is 40 cm away. How many points does Team A score?

10. (5 pts)

What would happen if every school in England today still played its own kind of football with its own rules?

ANSWER KEY

1. Men from about a dozen London clubs and schools, invited by Ebenezer Cobb Morley, met to found the Football Association and write one set of laws for football. The thirteen laws were published in December 1863.
2. At the 1863 meetings the majority voted to ban carrying the ball and hacking. The clubs that wanted to carry the ball left and founded the Rugby Football Union in 1871.
3. In 1764 the golfers at St Andrews combined the first four short holes into two, reducing the Old Course from 22 holes to 18. Other courses copied St Andrews.
4. $4 + 3 + 5 + 3 = 15$ strokes. Par is $4 + 3 + 4 + 3 = 14$. He is one over par.
5. The French “game of the palm,” hitting a ball with the hand. Players added gloves and then rackets, and it became real tennis in walled courts. In the 1870s lawn tennis was invented for outdoor lawns, and Wimbledon’s rules of 1877 became the basis of modern tennis.
6. To raise money to buy a pony-drawn roller for its croquet lawns.
7. Deuce. A player must win two points in a row (advantage, then game).
8. A challenge recorded at Paisley Abbey in 1541. The Stirling Stone is a curling stone carved with the date 1511.
9. One point: only the 20 cm stone is closer than Team B’s best stone (40 cm).
10. Answers will vary. Teams from different schools and towns could hardly play one another, there would be arguments about rules, and there could be no leagues or international matches.

PORTFOLIO PIECE: A SPORTS MUSEUM OF EUROPE

Make a four-panel display (on poster board or four sheets of card) for the games of this unit: soccer, golf, tennis and curling with the Highland games. Each panel needs a title, a map showing where the game began, three important dates, a drawing of the field, course, court or sheet, and the rules in five numbered steps. Add your putting course scorecard, your tennis set score and your curling scoreboard as “exhibits,” and your paper-plate racket and one curling “stone” as objects on a table in front of the display.

LOOK FOR	WHAT IT MEANS
Four panels	Each panel has a map, three correct dates, a drawing and rules.
Accuracy	Names, places and dates match the lessons.
Exhibits	Scorecards and results from the projects are included and labeled.
Presentation	Neat, readable and arranged so a visitor could learn from it.

UNIT 7

AMERICA'S GAMES

Four of the world's great team sports took their modern shape in the United States in the 1800s. Baseball grew from English bat-and-ball games into the "national game," with written rules from a New York club in 1845. Basketball and volleyball were invented on purpose, in the space of four years, by two teachers at YMCA gymnasiums in Massachusetts who needed an indoor game for the long New England winters. American football grew out of English rugby, and one man, Walter Camp of Yale, shaped it more than any other.

In this unit you will learn the true stories of these four games, including a famous legend about baseball that turned out to be false. You will play each one in a backyard version, keep score, and look at how good rules make a game safer and fairer. Two of the inventors, James Naismith and William G. Morgan, were Christian teachers who saw sport as a way to build strong bodies and good character.

PREREQUISITES

- Can keep a score table and a simple scorecard (Units 1–6)
- Can find Massachusetts, New York and Connecticut on a map
- Knows the safety rules for active games

MASTERY CHECKLIST

- ☐ I can tell the real history of baseball, from the Knickerbocker rules of 1845 to the Doubleday myth.
- ☐ I can tell how James Naismith invented basketball in 1891 and name several of his original rules.
- ☐ I can tell how William G. Morgan invented volleyball in 1895 and why he wanted a gentler game.
- ☐ I can explain how Walter Camp turned rugby into American football, and how the rules of 1906 made it safer.
- ☐ I can play backyard versions of all four games and keep score.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Retrosheet:** Free. A volunteer website with box scores and play-by-play records of baseball games going back more than a century, useful for comparing old and modern games in Lesson 7.1. A parent should help navigate it. Ages 10+.
- **Volleyball Hall of Fame:** Free. The museum in Holyoke, Massachusetts, where volleyball was invented, with pages on William G. Morgan and the early game, for Lesson 7.3. Ages 9+.

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	Baseball: The Knickerbocker Rules of 1845	2 sessions of 45 minutes
7.2	Naismith's Basketball, 1891	2 sessions of 45 minutes
7.3	Morgan's Volleyball, 1895	2 sessions of 45 minutes
7.4	Walter Camp's Football	2 sessions of 45 minutes

UNIT 7 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

1. **5 pts**
What did the Knickerbocker Base Ball Club do on September 23, 1845?
2. **5 pts**
What is the Doubleday myth, and why do historians reject it?
3. **5 pts**
Why did Luther Gulick ask James Naismith to invent a new game?
4. **5 pts**
Name three of Naismith's original rules.

5. (5 pts)

Why did William G. Morgan invent volleyball, and what did he first call it?

6. (5 pts)

In volleyball, how many times may a team touch the ball before sending it over, and what is the rule about one player?

7. (5 pts)

What did Walter Camp change in 1880 and in 1882?

8. (5 pts)

What reforms were made to football in 1906, and why?

9. (5 pts)

Basketball and volleyball were both invented at YMCAs. What was the YMCA, and what did it believe about sport?

10. (5 pts)

What would basketball be like if Naismith had put the goal on the floor instead of 10 feet up?

ANSWER KEY

1. It agreed on twenty written rules for baseball, including a diamond of bases, three outs per inning, foul lines, and putting runners out by tagging or throwing to a base rather than hitting them with the ball.
2. The claim, announced in 1907, that Abner Doubleday invented baseball at Cooperstown in 1839. There is no good evidence for it; Doubleday never claimed it, and older bat-and-ball games and the 1845 rules show the game grew over time.
3. The young men at the Springfield YMCA training school were bored and restless indoors in winter, and he needed an indoor game for them.
4. Any three: the ball may be thrown in any direction with one or both hands; no fists; a player may not run with the ball; no shouldering, holding, pushing, tripping or striking; a goal is made when the ball is thrown into the basket and stays there; three fouls in a row by one side give the other side a goal.
5. Because basketball was too rough and tiring for the businessmen in his classes at the Holyoke YMCA. He called it mintonette.
6. Up to three times, and no player may touch it twice in a row.
7. In 1880 he replaced rugby's scrum with the line of scrimmage. In 1882 he added downs: a team had three tries to gain five yards or lose the ball.
8. The worst mass plays were banned, teams had to gain ten yards in three downs, and the forward pass was made legal. The game had become so rough that many players were badly hurt.
9. The Young Men's Christian Association, founded in London in 1844. It believed sport should build strong bodies and Christian character together.
10. Answers will vary. Defenders could crowd in front of the goal and block it, the game would be rougher, and accurate shooting would matter less.

PORTFOLIO PIECE: THE INVENTORS' HALL OF FAME

Make a small “hall of fame” with one plaque for each person who shaped America’s games: Alexander Cartwright and the Knickerbocker committee, James Naismith, William G. Morgan and Walter Camp. Each plaque (a sheet of card) needs a drawing or a copied picture, the person’s dates, the year and place of his contribution, three rules or ideas he gave the game, and one sentence about his character. Add a fifth plaque about the Doubleday myth called “Not in the Hall: A Legend Checked by Historians.” Include your box score, your rules comparison from Lesson 7.2 and your play diagrams.

LOOK FOR	WHAT IT MEANS
Four plaques	Each has a picture, dates, place, three rules or ideas and a sentence about character.
The myth plaque	Explains the Doubleday legend and the evidence against it clearly.
Accuracy	Names, dates and rules match the lessons.
Project records	The box score, rules comparison and play diagrams are included.
Care	Neat, readable plaques arranged for visitors.

7.1 BASEBALL: THE KNICKERBOCKER RULES OF 1845

OBJECTIVES

- Tell how baseball grew from older bat-and-ball games and how the Knickerbocker club wrote its rules in 1845.
- Explain the Doubleday myth and how historians showed it was not true.
- Play a game of backyard baseball and keep a simple box score.

Warm-up. Play a quick game of catch with a soft ball. Count how many catches in a row you and your partner can make without a drop.

WATCH

Who Created Baseball? - American Story with Bob Dotson

Bob Dotson • 3:53

<https://www.youtube.com/watch?v=q5iStY9JXFE>

WHEN TO WATCH

After “How it changed.” A veteran television reporter tells how the Doubleday legend began and what really happened.

Note: A short 1985 television story re-posted by the reporter. Parents may wish to preview it.

KEY TERMS

Knickerbocker Base Ball Club

A club of young men in New York City who wrote down rules for baseball in 1845.

rounders

An English bat-and-ball game with bases, one of baseball’s ancestors.

inning

A part of a baseball game in which each team bats until three of its players are out.

foul ball

A ball hit outside the lines of the field; the Knickerbocker rules were among the first to have foul lines.

box score

A table that records what each player did in a game: at bats, runs and hits.

CORE IDEAS

The story. On September 23, 1845, the members of the Knickerbocker Base Ball Club of New York agreed on twenty rules for their game. The committee that wrote them included a young bank clerk and volunteer fireman named Alexander Cartwright. The rules set out a diamond of bases, three outs to an inning, foul lines, and a rule that a runner could be put out by tagging him or throwing to a base, not by hitting him with the ball. On June 19, 1846, the Knickerbockers played under their rules against another New York team at the Elysian Fields in Hoboken, New Jersey, and lost 23–1.

How it changed. People had played games with a bat, a ball and bases for a long time. An English children’s book of 1744 has a rhyme about “base-ball,” and English children played rounders. But the Knickerbocker rules made the game faster and safer, and clubs all around New York adopted them. Soldiers on both sides of the Civil War played baseball in camp and carried it home. In 1905 a committee led by A. G. Spalding set out to prove that baseball was purely American, and in 1907 it announced that Abner Doubleday had invented the game at Cooperstown, New York, in 1839. Historians have since shown that there is no good evidence for this. Doubleday was a real Civil War general, but he never claimed to have invented baseball. The legend lives on, though: the National Baseball Hall of Fame opened in Cooperstown in 1939.

How it is played. Two teams of nine take turns batting and fielding. The pitcher throws the ball toward home plate, and the batter tries to hit it into fair territory and run around the bases. A batter is out if he strikes out, if a fielder catches his hit in the air, or if he is tagged or forced out before reaching a base. Each team bats until three are out; that is a half-inning. A run scores when a player touches all four bases. After nine innings, the team with more runs wins. In the Knickerbockers’ day, the pitcher threw underhand and tried to give the batter a ball he could hit.

Why it matters. The story of baseball teaches a lesson about history itself: a good story is not the same as a true one. Historians check the evidence, even when the legend is more exciting. Baseball also became a game that brought Americans together, and in 1947, when Jackie Robinson joined the Brooklyn Dodgers under Branch Rickey, the courage and self-control of those two Christian men opened the game to every player.

PICTURE STUDY



The American National Game of Base Ball, Currier and Ives, 1866 · Hand-colored lithograph ·
Metropolitan Museum of Art, New York
Image: [Wikimedia Commons](#), public domain

Currier and Ives were New York printmakers who sold inexpensive colored pictures of American life to families across the country. This print, made the year after the Civil War ended, shows a championship match at the Elysian Fields in Hoboken, where the Knickerbockers had played twenty years before. Its title calls baseball “the American national game.”

Look closely

- Find the batter and the pitcher. How is the pitcher throwing the ball?
- Find the catcher. Is he wearing a mask or a glove?
- Look at the fielders. Where are they standing?
- Look at the crowd. How many people do you think came to watch?

Talk about it

1. Why do you think baseball became so popular after the Civil War?
2. What protective equipment do players wear today that you cannot see here?
3. Why might a family want to hang this print in their home?

Safety first. Use a soft ball or a plastic ball and a plastic bat. Swing only outdoors with a clear circle around the batter, and with an adult watching. Everyone except the batter stands well away from the swing. Drop the bat gently after hitting; never throw it.

PROJECT

Backyard Baseball and a Box Score

You will play a short game of backyard baseball with a soft ball and plastic bat, keep a real box score, and compare it with a box score from a real game.

You will need

- A plastic bat and a soft or plastic ball
- Four bases (pillows, paper plates or pieces of cardboard)
- Family members or friends (at least four players)
- Scorebook and pencil

Steps

1. **Set up.** Lay out a small diamond with bases about 10 meters (33 feet) apart.
2. **Rules.** Use the Knickerbocker rules: three outs to an inning, foul lines, and runners put out by tagging or throwing to the base, never by hitting them with the ball. Pitch underhand.
3. **Play.** Play at least three innings. If you have only a few players, the fielding team can include one pitcher and one or two fielders.
4. **Keep a box score.** Make a table with a row for each player and columns for at bats, runs and hits. Fill it in during the game.
5. Add up each team's runs. Who won?
6. With a parent, look up a box score from a real game in a newspaper or on a baseball website, and compare it with yours.
7. Write two sentences: What did you learn from keeping a box score? Why did the Knickerbockers ban hitting a runner with the ball?

Tips

- Keep your eye on the ball until it meets the bat.
- Catch with two hands, with your fingers pointing up for a high ball and down for a low one.
- Run through first base; you may overrun it without being tagged out.

Check your work

- ☐ I played at least three innings by the Knickerbocker rules.
- ☐ I kept a box score with at bats, runs and hits for each player.
- ☐ I can explain the Doubleday myth and what really happened in 1845.

SCOREBOOK

1. Draw a baseball diamond with the bases, the pitcher's spot and the foul lines.
2. Copy your box score neatly.
3. Write a timeline: 1744 ("base-ball" in an English book), 1845 (Knickerbocker rules), 1846 (Elysian Fields game), 1907 (the Doubleday report), 1939 (Hall of Fame opens).

From history. Alexander Cartwright later traveled west in the California Gold Rush of 1849 and settled in Honolulu, Hawaii, where he lived for the rest of his life. He was elected to the Baseball Hall of Fame in 1938, though historians now think the rules of 1845 were the work of the whole Knickerbocker committee.

COMMON MISTAKES

- Believing that Abner Doubleday invented baseball. The evidence does not support it.
- Thinking baseball appeared from nothing. It grew from older English games.
- Throwing the ball at a runner. That was banned by the Knickerbocker rules and is never safe.

Make it a game • Doubleday Debunked. Be the historian. Tell your parent how Knickerbocker rules of 1845 began baseball and why the Doubleday story is a myth. Your parent plays someone who still believes the myth and pushes back. Hold your ground using facts, and win if you can explain rounders, the box score and the inning. Then swap and play again.

7.2 NAISMITH'S BASKETBALL, 1891

OBJECTIVES

- Tell the story of how James Naismith invented basketball at the YMCA training school in Springfield in December 1891.
- Name several of Naismith's thirteen original rules and explain why he chose them.
- Play peach-basket basketball by the original rules and compare it with modern basketball.

Warm-up. Toss a soft ball into a laundry basket from 2 meters, ten times. Count your baskets. Now try from 3 meters. What changed?

WATCH

James Naismith and the First Basketball Game Ever — TOSF (ep. 5)

Velodus · 18:32

<https://www.youtube.com/watch?v=al73avaV2So>

WHEN TO WATCH

After the story paragraph. The story of December 1891, told with Naismith's own writings and old newspapers.

BACKUP VIDEO

1891 Inventor of Basketball Tells His Story: Radio Broadcast in 1939 - Enhanced Audio

Life in the 1800s · 2:47

<https://www.youtube.com/watch?v=JBgyWV8btp4>

Hear James Naismith himself tell the story in a radio broadcast from 1939.

KEY TERMS

YMCA

The Young Men's Christian Association, founded in London in 1844 to help young men grow strong in body, mind and spirit.

Springfield College

The YMCA training school in Springfield, Massachusetts, where basketball was invented; then called the International YMCA Training School.

peach basket

The kind of basket nailed up as the first basketball goal.

foul

Breaking a rule, especially by pushing, holding or striking another player.

muscular Christianity

A movement in the 1800s that taught that Christians should be strong and healthy as well as good.

CORE IDEAS

The story. In the winter of 1891, the young men at the YMCA training school in Springfield, Massachusetts, were bored and restless. Outdoor football and baseball were over for the season, and indoor marching and exercises bored them. Their teacher, Luther Gulick, gave a young instructor named James Naismith fourteen days to invent a new indoor game. Naismith was a Canadian who had studied to be a Presbyterian minister before deciding he could serve God by teaching young men through sport. He asked the janitor for two boxes to use as goals; the janitor brought two peach baskets instead. Naismith nailed them to the railing of the gym's balcony, 10 feet above the floor, and in December 1891 his class of eighteen men played the first game of basketball. The score was 1–0.

How it changed. Naismith typed up thirteen rules and pinned them to the bulletin board. The players used a soccer ball. Each time someone scored, a person had to climb up and take the ball out of the basket; a few years later the bottoms were cut out of baskets, and nets replaced them. Dribbling was not in the first rules; players could only pass. The game spread at once through YMCAs across America and around the world. Naismith later became a doctor and a professor at the University of Kansas, where he started its basketball program.

How it is played. Naismith designed the game to be safe for indoor play and to reward skill rather than strength. The ball may be thrown in any direction with one or both hands, but a player may not run with it. There is no tackling: shouldering, holding, pushing, tripping or striking an opponent is a foul. A goal is scored when the ball is thrown into the basket and stays there. Because the goal was high above the players' heads, it could not be blocked by crowding in front of it, so the game rewarded accurate shooting.

Why it matters. Basketball shows how a game can be designed on purpose to solve a problem. Naismith wanted a game that could be played indoors, in a small space, in winter, without the injuries of football. He also believed that sport should build Christian character: self-control, courage and fair play. He lived to see his game played in every part of the world.

PICTURE STUDY



Dr. James Naismith with a Ball and a Peach Basket, Unknown photographer, 1930s · Photograph · Lawrence, Kansas

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

Late in his life, when he was a professor at the University of Kansas, James Naismith posed for this photograph with the two things that started basketball: a ball like the soccer ball of 1891 and a peach basket. By then basketball was played by millions of people, but Naismith remained a modest man who never made money from his invention.

Look closely

- Look at the basket. How is it different from a modern basketball hoop and net?
- Look at the ball. How is it different from a modern basketball?
- Look at Naismith's clothes. What do they tell you about the time?
- Look at his face. Does he look proud, or modest?

Talk about it

1. Why did someone have to climb up after every basket in 1891?
2. Why do you think Naismith chose a goal high above the players' heads?
3. Naismith never made money from basketball. Why might he not have minded?

Safety first. Use a soft ball and a laundry basket or bucket set on a chair or hung safely, never on a wobbly stand. Play in a clear room or outdoors. There is no pushing, holding or tripping: these were fouls in 1891 and they are fouls in your game. Wear proper shoes.

PROJECT

Peach-Basket Basketball by the 1891 Rules

You will set up a peach-basket goal, play a game by Naismith's original rules (no dribbling, no running with the ball), then play by modern rules and compare.

You will need

- A laundry basket, bucket or box, set high on a sturdy shelf or chair (or two if you have space)
- A soft ball or a soccer ball
- Family members or friends (at least two per team if possible)
- Scorebook and pencil

Steps

1. **Set up.** Place the basket as high as you safely can, on a sturdy chair or shelf. Mark a shooting line 2 meters away.
2. **Learn the 1891 rules.** 1. Throw or bat the ball with your hands, never your fists. 2. You may not run with the ball; throw it from where you catch it. 3. No holding, pushing, tripping or striking: three fouls in a row by one team give the other team a goal. 4. A goal counts when the ball goes into the basket and stays there.
3. **Play.** Play two ten-minute halves by the 1891 rules. Someone must take the ball out of the basket after each goal. Record the score and the number of fouls.
4. **Modern rules.** Now allow dribbling and play two more ten-minute halves. Record the score.
5. Compare in a table: points scored, fouls, and which game was more fun.
6. Write two sentences: Why did dribbling change the game? Why did Naismith not allow running with the ball?

Tips

- Without dribbling, you must pass quickly and move to open space to get the ball.

- Shoot with a gentle arc; the ball should drop into the basket, not slam against it.
- Count fouls honestly. Naismith made fouls costly to keep the game safe.

Check your work

- ☐ I set up a peach-basket goal and played by the 1891 rules.
- ☐ I played by modern rules too and compared the two in a table.
- ☐ I can tell the story of December 1891 and name four of Naismith's rules.

SCOREBOOK

1. Draw the Springfield gym in 1891 with the baskets nailed to the balcony 10 feet up.
2. Copy four of Naismith's original rules in your own words.
3. Make the comparison table of your two games.

From history. Naismith's typed rules, two pages long, were sold at auction in 2010 and are now kept at the University of Kansas.

COMMON MISTAKES

- Thinking basketball always had dribbling. Players could only pass at first.
- Thinking Naismith was American. He was born in Almonte, Ontario, Canada, in 1861.
- Thinking the first baskets had holes in the bottom. They did not; the ball had to be taken out.

Make it a game • Thirteen Rules Draft. Write as many of Naismith's thirteen original rules as you can from memory in two minutes, without looking. Your parent reads them and says guess or true for each. Then explain why Naismith chose them, such as no running with the ball. Toss a paper ball into a bucket to score a bonus point.

Scripture. "And whatsoever ye do, do it heartily, as to the Lord, and not unto men;" (Colossians 3:23, KJV)

Naismith and Morgan believed that games, too, could be played heartily for God, building strong bodies and good character.

7.3 MORGAN'S VOLLEYBALL, 1895

OBJECTIVES

- Tell how William G. Morgan invented “mintonette” at the Holyoke YMCA in 1895 and why it was renamed volleyball.
- Explain the basic rules of volleyball: three touches, rotation and the net.
- Play balloon or beach-ball volleyball over a string net and keep score.

Warm-up. Keep a balloon in the air with your hands for as long as you can, counting the touches. Then try it with a partner, alternating touches.

WATCH

9th February 1895: Volleyball invented by William G. Morgan

HistoryPod • 2:32

<https://www.youtube.com/watch?v=EclLnVJ1rlw>

WHEN TO WATCH

After the story paragraph. A short history of Morgan's invention with old photographs of the Holyoke YMCA.

KEY TERMS

volleyball

A team game in which players hit a ball over a high net with their hands and arms, trying to make it land on the other side.

volley

To hit a ball before it touches the ground.

rotation

Players moving one position around the court each time their team wins back the serve.

mintonette

Morgan's first name for volleyball, borrowed from badminton.

serve

The hit that starts each point, made from behind the back line.

CORE IDEAS

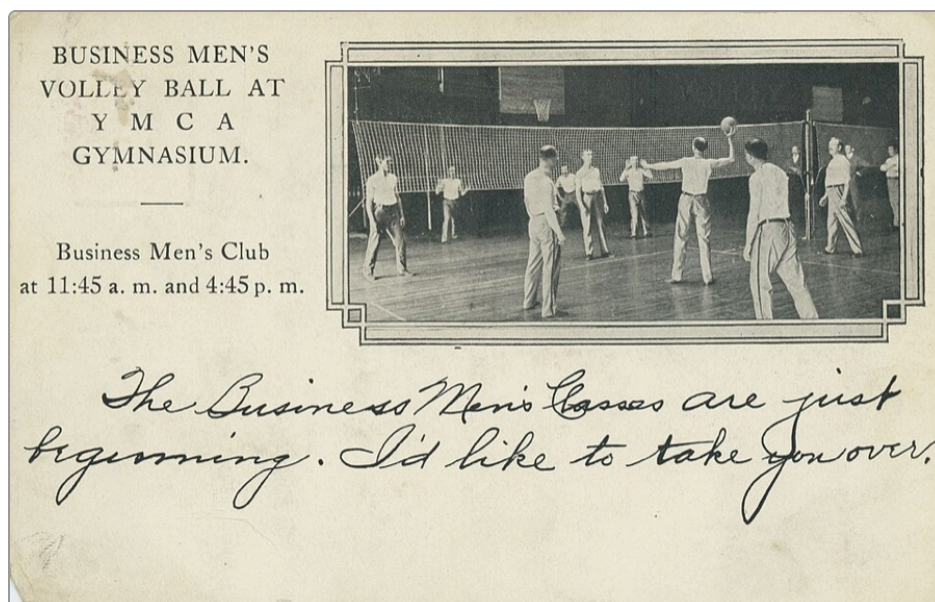
The story. In 1895 William G. Morgan was the physical director of the YMCA in Holyoke, Massachusetts, a few miles north of Springfield. He had studied at the Springfield training school, where he had met James Naismith. Many of the men in his classes were businessmen who found basketball too rough and tiring. So on February 9, 1895, Morgan put up a tennis net at 6 feet 6 inches high, took the inner bladder of a basketball as a light ball, and invented a gentler game that he called mintonette.

How it changed. The next year Morgan showed the game at a conference at the Springfield training school. A teacher named Alfred Halstead watched the players volleying the ball back and forth and suggested the name “volley ball.” The Spalding company made the first official volleyball in 1900. The game spread through YMCAs to Canada, Asia and South America, and American soldiers carried it to Europe during the First World War. Players in the Philippines are often credited with developing the set and the spike, which turned volleyball into a fast attacking game. It became an Olympic sport in 1964.

How it is played. Two teams of six players face each other across a high net. A player serves the ball over the net from behind the back line. Each team may touch the ball up to three times to return it, usually with a pass, a set and an attack, but no player may touch it twice in a row. A point is won when the ball lands on the other team’s side, or when they hit it out or into the net. When a team wins back the serve, its players rotate one position clockwise. Today games are played to 25 points, and a team must win by two.

Why it matters. Morgan designed volleyball so that people of different ages and strengths could play together. There is no contact between players, and the net keeps the teams apart, so the game rewards teamwork and timing more than size. It is played in gyms, schoolyards and backyards all over the world, by young and old alike.

PICTURE STUDY



Business Men's Volley Ball at the YMCA Gymnasium, Unknown photographer (picture postcard), early 1900s · Photographic postcard · Toledo, Ohio (Ken Levin Toledo Postcard Collection)

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

Early in the 1900s many YMCAs held volleyball classes for businessmen at lunchtime and after work, just as Morgan had in Holyoke. This postcard advertised the Business Men's Club at a YMCA in Toledo, Ohio. Someone wrote a message across the bottom before mailing it to a friend.

Look closely

- Find the net. How high is it compared with the players?
- Look at the players' clothes. What are they wearing to play?
- Read the times printed on the card. When did the classes meet, and why then?
- Read the handwritten message. What was the writer inviting his friend to do?

Talk about it

1. Why was volleyball a good game for busy businessmen?
2. How is the game in this picture like the one you play, and how is it different?
3. Why might a YMCA advertise its classes with a postcard?

Safety first. Use a balloon indoors or a beach ball outdoors. Hit with open hands or forearms, never with fists toward someone's face. Keep a clear space around the net, wear proper shoes, and no diving on hard floors.

PROJECT

Mintonette in the Living Room

You will set up a net, play volleyball with a balloon or beach ball using the real rules (three touches, no double touches, rotation), and keep a scoresheet.

You will need

- A string, rope or a sheet hung between two chairs or posts at about head height (or higher for older players)
- A balloon (indoors) or a beach ball (outdoors)
- Masking tape or shoes to mark the court
- Scorebook and pencil

Steps

1. **Set up.** Hang the net across the middle of a clear space. Mark a court about 3 meters long on each side.
2. **Learn the touches.** Practice three kinds of hits: a forearm pass (hands together, arms straight), a set (fingertips above your forehead) and a hit over the net with an open hand.
3. **Rules.** Up to three touches per side; no player may touch the ball twice in a row; the ball may not touch the floor; serve from the back line.
4. **Play.** Play to 15 points, winning by two. Rotate the server each time your team wins back the serve.
5. Play three games and record each score in your scorebook.
6. **Count teamwork.** In one game, count how many points your team won using all three touches compared with points won using just one touch.
7. Write two sentences: Why are three touches better than one? Why did Morgan's businessmen like this game?

Tips

- Call "Mine!" before you hit, so teammates don't collide.
- Bend your knees and get under the ball before you pass it.
- A balloon moves slowly, so you can practice real teamwork safely.

Check your work

- ☐ I set up a court and played three games with correct volleyball rules.
- ☐ I counted points won with three touches and with one.
- ☐ I can tell the story of Morgan's mintonette in 1895.

SCOREBOOK

1. Draw a volleyball court with the net and six players on each side, numbered for rotation.
2. Make a scoresheet for your three games.
3. Write a timeline: 1891 (basketball), 1895 (mintonette), 1896 (renamed volleyball), 1900 (first official ball), 1964 (Olympic sport).

From history. The Volleyball Hall of Fame is in Holyoke, Massachusetts, where Morgan invented the game, and the Naismith Memorial Basketball Hall of Fame is in nearby Springfield. Two of the world's most popular sports were invented within a few miles and four years of each other.

COMMON MISTAKES

- Letting one player hit the ball twice in a row.
- Using more than three touches before sending the ball over.
- Thinking volleyball was invented for beach play. It began as an indoor game for businessmen at a YMCA.

Make it a game • Name Change Quiz. Your parent asks quick questions about William Morgan's invention and you answer in under five seconds each: where, when, what was it first called, why renamed volleyball. Then show the three touches with a balloon, rotating one spot after each rally. Miss a question, and your parent gets to serve the next point.

7.4 WALTER CAMP'S FOOTBALL

OBJECTIVES

- Explain how American football grew out of rugby and how Walter Camp shaped its rules.
- Describe the line of scrimmage, downs and the reforms of 1906, including the forward pass.
- Design and run a few backyard plays and play a game of flag football.

Warm-up. With a partner, take turns throwing a soft football (or a rolled-up sock ball) 5 meters. Count how many spirals you can throw, where the ball spins on its long axis.

WATCH

Does Walter Camp Deserve To Be Called "The Father Of American Football"?

Hardcore College Football History · 12:59

<https://www.youtube.com/watch?v=2Nd0gjPF2nQ>

WHEN TO WATCH

After the story paragraph. A college-football historian explains Camp's rule changes with old photographs and Camp's own words.

BACKUP VIDEO

1906 Football Newsreel: A Tribute to the Forward Pass

teamissue · 1:19

<https://www.youtube.com/watch?v=6Wmpxkd1CR8>

A short newsreel tribute to 1906, the year the forward pass became legal.

KEY TERMS

line of scrimmage

The imaginary line where the ball is placed at the start of each play; the two teams line up on either side of it.

down

One play in American football; a team gets a set number of downs to gain enough yards to keep the ball.

scrum

In rugby, a pushing contest in which both packs struggle for the ball; Camp replaced it with the line of scrimmage.

forward pass

A throw of the ball toward the opponent's goal line, made legal in American football in 1906.

flag football

A safe form of football in which a player is “tackled” by pulling a flag or cloth from his belt.

CORE IDEAS

The story. Walter Camp entered Yale College in 1876, the year after Yale and Harvard first played each other at football, under rules borrowed largely from rugby. He played halfback, became captain, and studied medicine for a time. More important, he went to every meeting where college men decided the rules, for nearly fifty years. Camp is called the “Father of American Football” because so many of the game’s rules were his ideas.

How it changed. In rugby, play restarted with a scrum, a shoving contest in which nobody knew who would get the ball. In 1880 Camp persuaded the colleges to replace it with the line of scrimmage: one team kept the ball and started each play by snapping it back. That created a new problem, because a team could keep the ball forever. So in 1882 Camp added downs: a team had three tries to gain five yards, or it lost the ball. He also set the number of players at eleven and helped create the scoring system. But by the early 1900s football had become dangerously rough, with players linking arms in mass formations, and many were badly hurt. In October 1905 the President of the United States called college leaders to the White House and urged them to make the game safer. In 1906 new rules banned the worst mass plays, required ten yards in three downs, and made the forward pass legal.

How it is played. Two teams of eleven face each other at the line of scrimmage. The offense has four downs (today) to move the ball ten yards forward, by running with it or passing it. If it succeeds, it gets four new downs; if not, the other team takes over. A touchdown, carrying or catching the ball in the opponent’s end zone, is worth six points, and a kick through the goalposts after it is worth one more. The coach and quarterback plan each play in advance and call it in the huddle.

Why it matters. Football shows how rules can be changed to protect players. The reforms of 1906 saved the game and made it more skillful, rewarding passing and planning instead of only weight and force. Camp himself believed that football should build courage, teamwork and sportsmanship, and he wrote books for boys about playing hard but fairly.

PICTURE STUDY



The Yale Football Team of 1879, Unknown photographer, 1879 · Photograph · New Haven, Connecticut

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

This is the Yale team of 1879, when Walter Camp was its captain. The players wore tight canvas jackets laced up the front, sometimes called “smocks,” which were hard for opponents to grab. There were no helmets or pads. The ball in the middle of the picture is rounder than a modern football, closer to a rugby ball.

Look closely

- Find the ball. How is its shape different from a modern football?
- Look at the laced jackets. Why would a jacket that is hard to grab be useful?
- Look for any helmets or pads. What do you notice?
- Count the players. Why are there more than eleven?

Talk about it

1. How might the game in 1879 have been different from rugby and from modern football?
2. Why were the rules changed in 1906 to make the game safer?
3. Walter Camp was the captain. What makes a good captain?

Safety first. Play flag football only: no tackling, no blocking with hands to the head, no diving. Use a soft football or a sock ball, play on grass, and have an adult watch. Wear proper shoes and drink water.

PROJECT

Draw Up a Play, Then Play Flag Football

You will design three plays on paper as a coach would, then play a game of flag football with downs and a line of scrimmage, and record which plays worked.

You will need

- A soft football or a sock ball
- Strips of cloth or old socks tucked into waistbands as flags
- Cones or shoes to mark a field about 30 meters long, with end zones
- Scorebook and pencil

Steps

1. **Draw plays.** In your scorebook, draw three plays with X's for your players and arrows for their paths: one run, one short pass and one long pass.
2. **Set up.** Mark a field with end zones. Mark lines every 10 meters to show when a team has gained a first down.
3. **Rules.** The offense has four downs to reach the next line. A player is “tackled” when an opponent pulls his flag. One forward pass is allowed per play, from behind the line of scrimmage.
4. **Play.** Play at least four drives for each team. Before each down, the quarterback calls one of the planned plays in the huddle.
5. Record every play: which play was called, yards gained, and the result.
6. Add up the touchdowns (6 points each).
7. Write two sentences: Which of your plays worked best, and why? How did the forward pass change the game?

Tips

- Keep plays simple: one or two players running clear paths.
- Hold the football near its laces to throw a spiral.
- Pull the flag, never the player's shirt.

Check your work

- ☐ I drew three plays with clear paths.

- ☐ I played flag football with downs and a line of scrimmage, and recorded every play.
- ☐ I can explain how Walter Camp changed rugby into American football.

SCOREBOOK

1. Draw your three plays neatly with X's, O's and arrows.
2. Make a play chart: down, play called, yards gained, result.
3. Write a timeline: 1876 (Camp enters Yale), 1880 (line of scrimmage), 1882 (downs), 1905 (the White House meeting), 1906 (the forward pass).

From history. Walter Camp chose the first “All-America” team in 1889, naming the best college players at each position. He later created the “Daily Dozen,” a set of twelve simple exercises that millions of Americans, including soldiers and office workers, did every morning.

COMMON MISTAKES

- Thinking the forward pass was always allowed. It became legal only in 1906.
- Thinking football and rugby were always different. American football grew out of rugby.
- Tackling in a backyard game. Always play flag football.

Make it a game · Draw the Play. Draw a football play on paper with the line of scrimmage, down count and a forward pass route. Hold it up for five seconds and then hide it. Your parent tries to draw it back. Compare. Then explain how Walter Camp changed rugby and how the reforms of 1906 brought in the forward pass.

AMERICA'S GAMES

Four of the world's great team sports took their modern shape in the United States in the 1800s. Baseball grew from English bat-and-ball games into the “national game,” with written rules from a New York club in 1845. Basketball and volleyball were invented on purpose, in the space of four years, by two teachers at YMCA gymnasiums in Massachusetts who needed an indoor game for the long New England winters. American football grew out of English rugby, and one man, Walter Camp of Yale, shaped it more than any other.

In this unit you will learn the true stories of these four games, including a famous legend about baseball that turned out to be false. You will play each one in a backyard version, keep score, and look at how good rules make a game safer and fairer. Two of the inventors, James Naismith and William G. Morgan, were Christian teachers who saw sport as a way to build strong bodies and good character.

PREREQUISITES

- Can keep a score table and a simple scorecard (Units 1–6)
- Can find Massachusetts, New York and Connecticut on a map
- Knows the safety rules for active games

MASTERY CHECKLIST

- ☐ I can tell the real history of baseball, from the Knickerbocker rules of 1845 to the Doubleday myth.
- ☐ I can tell how James Naismith invented basketball in 1891 and name several of his original rules.
- ☐ I can tell how William G. Morgan invented volleyball in 1895 and why he wanted a gentler game.
- ☐ I can explain how Walter Camp turned rugby into American football, and how the rules of 1906 made it safer.
- ☐ I can play backyard versions of all four games and keep score.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Retrosheet:** Free. A volunteer website with box scores and play-by-play records of baseball games going back more than a century, useful for comparing old and modern games in Lesson 7.1. A parent should help navigate it. Ages 10+.
- **Volleyball Hall of Fame:** Free. The museum in Holyoke, Massachusetts, where volleyball was invented, with pages on William G. Morgan and the early game, for Lesson 7.3. Ages 9+.

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	Baseball: The Knickerbocker Rules of 1845	2 sessions of 45 minutes
7.2	Naismith's Basketball, 1891	2 sessions of 45 minutes
7.3	Morgan's Volleyball, 1895	2 sessions of 45 minutes
7.4	Walter Camp's Football	2 sessions of 45 minutes

UNIT 7 REVIEW

Answer each question in complete sentences. The review is worth 50 points.

1. **5 pts**
What did the Knickerbocker Base Ball Club do on September 23, 1845?
2. **5 pts**
What is the Doubleday myth, and why do historians reject it?
3. **5 pts**
Why did Luther Gulick ask James Naismith to invent a new game?
4. **5 pts**
Name three of Naismith's original rules.

5. (5 pts)

Why did William G. Morgan invent volleyball, and what did he first call it?

6. (5 pts)

In volleyball, how many times may a team touch the ball before sending it over, and what is the rule about one player?

7. (5 pts)

What did Walter Camp change in 1880 and in 1882?

8. (5 pts)

What reforms were made to football in 1906, and why?

9. (5 pts)

Basketball and volleyball were both invented at YMCAs. What was the YMCA, and what did it believe about sport?

10. (5 pts)

What would basketball be like if Naismith had put the goal on the floor instead of 10 feet up?

ANSWER KEY

1. It agreed on twenty written rules for baseball, including a diamond of bases, three outs per inning, foul lines, and putting runners out by tagging or throwing to a base rather than hitting them with the ball.
2. The claim, announced in 1907, that Abner Doubleday invented baseball at Cooperstown in 1839. There is no good evidence for it; Doubleday never claimed it, and older bat-and-ball games and the 1845 rules show the game grew over time.
3. The young men at the Springfield YMCA training school were bored and restless indoors in winter, and he needed an indoor game for them.
4. Any three: the ball may be thrown in any direction with one or both hands; no fists; a player may not run with the ball; no shouldering, holding, pushing, tripping or striking; a goal is made when the ball is thrown into the basket and stays there; three fouls in a row by one side give the other side a goal.
5. Because basketball was too rough and tiring for the businessmen in his classes at the Holyoke YMCA. He called it mintonette.
6. Up to three times, and no player may touch it twice in a row.
7. In 1880 he replaced rugby's scrum with the line of scrimmage. In 1882 he added downs: a team had three tries to gain five yards or lose the ball.
8. The worst mass plays were banned, teams had to gain ten yards in three downs, and the forward pass was made legal. The game had become so rough that many players were badly hurt.
9. The Young Men's Christian Association, founded in London in 1844. It believed sport should build strong bodies and Christian character together.
10. Answers will vary. Defenders could crowd in front of the goal and block it, the game would be rougher, and accurate shooting would matter less.

PORTFOLIO PIECE: THE INVENTORS' HALL OF FAME

Make a small “hall of fame” with one plaque for each person who shaped America’s games: Alexander Cartwright and the Knickerbocker committee, James Naismith, William G. Morgan and Walter Camp. Each plaque (a sheet of card) needs a drawing or a copied picture, the person’s dates, the year and place of his contribution, three rules or ideas he gave the game, and one sentence about his character. Add a fifth plaque about the Doubleday myth called “Not in the Hall: A Legend Checked by Historians.” Include your box score, your rules comparison from Lesson 7.2 and your play diagrams.

LOOK FOR	WHAT IT MEANS
Four plaques	Each has a picture, dates, place, three rules or ideas and a sentence about character.
The myth plaque	Explains the Doubleday legend and the evidence against it clearly.
Accuracy	Names, dates and rules match the lessons.
Project records	The box score, rules comparison and play diagrams are included.
Care	Neat, readable plaques arranged for visitors.

UNIT 8

FAMILY GAMES AND A WORLD GAMES FESTIVAL

Board games for families became a business in America in the 1800s. In 1843 a printer in Salem, Massachusetts, published *The Mansion of Happiness*, a journey toward a heavenly mansion past squares of virtues and vices, and in 1860 a young lithographer named Milton Bradley invented *The Checkered Game of Life*, the game that started one of the most famous toy companies in America. Meanwhile, two very old games, checkers and dominoes, were being played on porches, in parlors and in town squares all over the world.

In this last unit you will learn the history of family games, play checkers and dominoes, and then become a game inventor yourself, designing, testing and improving a game with fair rules. The year ends with a world games festival: you will set out the games you have made all year, teach them to your family and friends, run a tournament, and show what you have learned about playing well, winning well and losing well.

PREREQUISITES

- Has made and played games from every unit of the year
- Can keep a scorebook with score tables and tallies
- Knows the fair-play rules from Lesson 1.4

MASTERY CHECKLIST

- ☐ I can tell the history of *Th* and Milton Bradley's *e* *M* *an* *sio* *n* *of* *Ha* *pp* *ine* *ss* *Ch* . *eck* *ere* *d* *Ga* *me* *of* *Lif* *e*
- ☐ I can play checkers and the block game of dominoes by the rules and explain their histories.
- ☐ I can invent a game with a clear goal, fair rules and balanced chances, and improve it by playtesting.
- ☐ I can plan and run a games festival with a fair tournament schedule.
- ☐ I can win and lose with grace, as Proverbs 16:32 teaches.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Checkers rules and lessons (American Checker Federation)**: Free. The official rules of checkers and articles for beginners from the American Checker Federation. Fits Lesson 8.2. Ages 8+.

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 The Mansion of Happiness and the Checkered Game of Life

2 sessions of 45 minutes

8.2 Checkers and Dominoes

2 sessions of 45 minutes

8.3 Inventing a Game with Fair Rules

2 sessions of 45 minutes

8.4 A World Games Festival

2 sessions of 45 minutes

UNIT 8 REVIEW

Answer each question in complete sentences. Show your work for the counting questions. The review is worth 50 points.

1. **5 pts**

What was *The Mansion of Happiness*, and when was it published?

2. **5 pts**

Who invented *The Checkered Game of Life*, and how was it different from *The Mansion of Happiness*?

3. **5 pts**

Why did these games use a teetotum instead of dice?

4. **5 pts**

Name two rules of checkers that beginners often forget.

5. (5 pts)

How many tiles are in a double-six domino set? Show how you know.

6. (5 pts)

Where did dominoes come from, and when did they reach Europe?

7. (5 pts)

What is playtesting, and why do game designers do it?

8. (5 pts)

In a playtest, the first player won 8 of 10 games. What does this tell you, and what could you do?

9. (5 pts)

How many games are needed for a round robin with 6 players? Show your work.

10. (5 pts)

What would happen at a games festival if nobody followed Proverbs 16:32? What does the verse teach?

ANSWER KEY

1. One of the first board games printed in America, published in 1843 by W. and S. B. Ives of Salem, Massachusetts. Players moved along a spiral path, helped by virtues and set back by vices, toward the Mansion of Happiness at the center.
2. Milton Bradley, in 1860. It was played on a checkerboard, and players could choose which way to move after spinning, so it mixed choice with chance.
3. Many Christian families of the time thought dice belonged to games of chance played for money, so they preferred a numbered spinning top.
4. Any two: jumps are compulsory; you must keep jumping if you can; only kings may move backward; pieces move only on dark squares diagonally.
5. 28: 7 tiles with a 0 (0–0 to 0–6), 6 more with a 1 (1–1 to 1–6), then 5, 4, 3, 2 and 1. $7 + 6 + 5 + 4 + 3 + 2 + 1 = 28$.
6. From China, where they were described by the 1200s. They appeared in Italy and France in the 1700s.
7. Playing a new game many times with different players to find problems. It shows whether the game is fair, clear and fun, so the designer can improve the rules.
8. The game probably has a first-player advantage. You could give the second player a bonus (extra points, an extra piece or an extra move) and test again.
9. $6 \times 5 \div 2 = 15$ games.
10. Answers will vary: quarrels, sulking and boasting would spoil the fun. The verse teaches that ruling your own spirit and being slow to anger is greater than any victory.

PORTFOLIO PIECE: MY YEAR OF GAMES

Put together the finished portfolio for the whole year: your games box with every board and piece you made, labeled; your best scorebook pages; the portfolio projects from Units 1–7; and, from this unit, your invented game with its final rules and designer’s note, photographs from the games festival, and the tournament standings. Add a one-page letter to a younger child explaining the three games you would most like him or her to learn and why.

LOOK FOR	WHAT IT MEANS
Complete games box	At least one working game from every unit, labeled with its name and origin.
Invented game	Clear rules, a decorated board, a playtest record and a designer’s note showing at least one improvement.
Festival record	Photographs, the round-robin schedule and standings, and the reflection page.
Letter	Recommends three games with accurate history and clear reasons.
Care and organization	Everything is neat, labeled and in order.

8.1 THE MANSION OF HAPPINESS AND THE CHECKERED GAME OF LIFE

OBJECTIVES

- Tell the history of early American family board games, from *The Mansion of Happiness* (1843) to *The Checkered Game of Life* (1860).
- Explain how these games taught lessons about virtue and why they used a spinner instead of dice.
- Make a teetotum spinner, test whether it is fair, and play a homemade “game of life.”

Warm-up. List three board games your family owns. For each one, write whether you move by dice, a spinner, cards or choice. Why might some families long ago have preferred a spinner to dice?

WATCH

The Evolution of Board Games in America | The Henry Ford’s Innovation Nation

The Henry Ford • 3:31

<https://www.youtube.com/watch?v=9QBWw8qNKP0>

WHEN TO WATCH

After the story paragraph. A curator at The Henry Ford museum shows old American board games, including *The Mansion of Happiness*.

BACKUP VIDEO

Collections Video: The Checkered Game of Life

Vermont Historical Society • 1:43

https://www.youtube.com/watch?v=_FH40THKzbc

A museum curator shows an original copy of *The Checkered Game of Life*.

KEY TERMS

board game

A game played by moving pieces on a printed or marked board according to rules.

teetotum

A small spinning top with numbered sides, spun instead of throwing dice.

fair

In a spinner or die, giving every number the same chance of coming up.

lithograph

A print made from a flat stone or plate; Milton Bradley was a lithographer, a printer of pictures.

virtue

A good quality of character, such as honesty, diligence or kindness.

CORE IDEAS

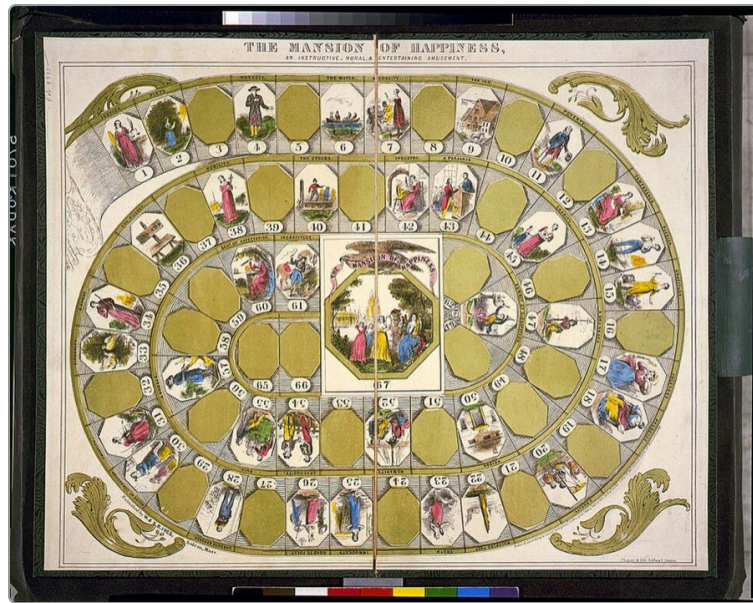
The story. In 1860 Milton Bradley, a 23-year-old lithographer in Springfield, Massachusetts, was looking for something new to print. A friend showed him an English board game, and Bradley decided to invent one of his own. He laid out a checkerboard of 64 squares and filled some with good and bad stops on life's journey: Honesty led to Happiness, Bravery to Honor, Industry to Wealth, while Idleness led to Disgrace. He called it *The Checkered Game of Life*, and by the end of its first year he had sold tens of thousands of copies. It was the start of the Milton Bradley Company.

How it changed. Bradley's game had an older American cousin. In 1843 W. and S. B. Ives of Salem, Massachusetts, published *The Mansion of Happiness*, one of the first board games printed in America. Players moved along a spiral path toward the Mansion of Happiness at the center; landing on a virtue such as Piety, Honesty or Gratitude moved you ahead, and landing on a vice such as Cruelty or Sabbath-breaking sent you back. Many Christian families of the time thought dice belonged to games of chance played for money, so both games used a teetotum, a little numbered top, instead. During the Civil War Bradley made small travel kits of his game for Union soldiers. A century later, in 1960, his company brought out a new *Game of Life* for its 100th birthday.

How it is played. In *The Checkered Game of Life*, players spun the teetotum and then chose which way to move on the checkerboard, so the game mixed chance with choice. They gathered points from good squares, aimed for Happy Old Age, and tried to avoid the squares that led to ruin. The first to reach 100 points won. In *The Mansion of Happiness*, there was no choice at all: you spun and moved, following the instructions on each square, and the first player to reach the center won.

Why it matters. These games show how families once used play to teach children right from wrong. They also show the beginning of a big change: Bradley's game let players choose their path, which made it more like real life, where our choices matter. Board games became a way for families to spend evenings together, and they still are.

PICTURE STUDY



The Mansion of Happiness, B. W. Thayer and Co., lithographers (game published by W. and S. B. Ives), 1843 · Hand-colored lithograph (game board) · Library of Congress, Washington, D.C.

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

This is one of the first board games printed in America. Its title calls it “an instructive, moral and entertaining amusement.” The path spirals inward through 66 numbered spaces to the Mansion of Happiness, number 67, at the center. The pictures on the spaces show virtues that help a player forward and vices that send him back.

Look closely

- Find the start and follow the path with your finger. Which way does it spiral?
- Find the picture at the center. What is happening there?
- Find some of the small pictures on the spaces. Can you guess which show virtues and which show vices?
- Look at the decorations in the corners. Why might a printer make a board so beautiful?

Talk about it

1. Why might parents in 1843 have liked a game that taught lessons about character?
2. How is this game different from a game where you choose your moves?

3. If you made a game about good choices today, which virtues would you put on the board?

PROJECT

A Teetotum and a Homemade Game of Life

You will make a six-sided teetotum, test whether it is fair by spinning it 60 times, and then play a homemade “game of life” on a checkerboard, choosing your path as Bradley’s players did.

You will need

- A square of card stock, a ruler, scissors and a short pencil or toothpick
- A checkerboard (or an 8-by-8 grid drawn on paper) and small paper squares or sticky notes
- Two or three playing pieces (buttons or beans)
- Scorebook and pencil

Steps

1. **Make the teetotum.** Draw a regular hexagon about 2 inches (5 centimeters) across on card stock (draw a circle, then mark six points around it, each one radius apart). Cut it out, number the edges 1 to 6, and push a short pencil through the exact center.
2. **Test it.** Spin it 60 times and tally which edge lands down. A fair teetotum should land on each number about 10 times. Record your tally.
3. If one number came up much more than the others, check that the pencil is in the center and try again.
4. **Make the board.** On your checkerboard, label about 12 squares with virtues and their rewards (for example, Diligence → +10 points, Kindness → +5) and about 8 with faults and their costs (for example, Laziness → lose 5 points, Boasting → go back 3 squares). Mark one corner “Start” and the opposite corner “Happy Old Age.”
5. **Play.** Spin, then move that many squares in any direction you choose, up, down, left or right. Follow the instructions on the square where you land. Reaching Happy Old Age is worth 20 points. The first to 50 points wins.
6. Play at least three games and record each player’s points.

7. Write two sentences: Was your teetotum fair? How did choosing your path change the game?

Tips

- A teetotum spins straighter if the pencil is pushed exactly through the center and sticks out only a little at the bottom.
- Make the rewards and costs balanced so that no one wins too quickly.
- Use kind words for the squares; Bradley's game taught lessons without being gloomy.

Check your work

- ☐ I made a teetotum and spun it 60 times with a tally.
- ☐ I made a game-of-life board with virtues and faults and played at least three games.
- ☐ I can tell the history of

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SCOREBOOK

1. Make a tally chart and bar graph of your 60 teetotum spins.
2. Draw your game-of-life board, with each virtue and fault square labeled.
3. Write a timeline: 1843 (*The Mansion of Happiness*), 1860 (*The Checkered Game of Life*), 1861–1865 (travel kits for soldiers), 1960 (the new *Game of Life*).

From history. Milton Bradley also became a strong supporter of kindergartens, the new idea of schools for young children, and his company made blocks, colored papers and other teaching materials for them. He believed that play was one of the best ways for small children to learn.

COMMON MISTAKES

- Thinking board games began in the 1900s. Printed family board games were sold in America by the 1840s, and board games are thousands of years old (Unit 2).
- Testing a spinner with only a few spins. You need many spins to see whether it is fair.
- Making a game where one choice always wins. A good game gives players real choices with different risks.

Make it a game • Teetotum Spin and Tell. Make a spinner from a paper circle and a pencil. Each spin picks a question about early American family games: the Mansion of Happiness, the Checkered Game of Life, virtue, or why the spinner replaced dice. Answer from memory for a point. If you cannot answer, your parent shares the answer, and you try again later.

8.2 CHECKERS AND DOMINOES

OBJECTIVES

- Tell the histories of checkers (draughts) and dominoes.
- Play checkers by the standard American rules, including forced jumps and kings.
- Make a set of 28 dominoes and play the block game, keeping score.

Warm-up. Look at a checkerboard. How many squares does it have? How many are dark? On how many squares can a checker ever stand? Then count the dots on a double-six domino set (or work it out): how many tiles are there?

WATCH

A brief history of checkers and checkers tournaments

[azcheckers](#) · 8:03

<https://www.youtube.com/watch?v=iFhsoicLH3o>

WHEN TO WATCH

After the story paragraph. A checkers player tells the history of the game, including William Payne's 1756 book.

BACKUP VIDEO

How To Play Checkers

[Gather Together Games](#) · 2:19

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

A clear, short tutorial on the rules of checkers, seen from above.

KEY TERMS

checkers

A two-player game on the dark squares of an 8-by-8 board; in Britain it is called draughts.

jump

Capturing an opponent's piece by hopping diagonally over it to an empty square.

king

A checker that reaches the far row and is crowned with a second checker; it may move backward as well as forward.

domino

A flat rectangular tile divided into two ends, each marked with 0 to 6 dots (pips).

block game

The simplest domino game, in which players match ends and the first to play all his tiles wins.

CORE IDEAS

The story. Checkers grew from an old game called alquerque, played on a board of lines in Spain and the Arab world and pictured in King Alfonso's *Book of Games* of 1283 (Lesson 2.4). In France, perhaps in the 1100s or a little later, people began playing a jumping game with flat round pieces on the squares of a chessboard. It spread across Europe; the English called it draughts, and the Americans called it checkers. In 1756 an English mathematics teacher, William Payne, published one of the first books on how to play it well.

How it changed. Dominoes came from China, where tiles marked like pairs of dice were described in books by the 1200s. Dominoes appeared in Italy and France in the 1700s and soon spread to England and the Americas. The European set has 28 tiles, one for each pair of numbers from double blank to double six. Both games became favorites in homes, cafés and town squares. In the 1950s an American computer scientist, Arthur Samuel, wrote one of the first computer programs that could learn, and he taught it to play checkers. In 2007 a team at the University of Alberta in Canada proved with computers that if both players make no mistakes, a game of checkers always ends in a draw.

How it is played. In checkers, each player sets 12 pieces on the dark squares of the three rows nearest him. Pieces move one square diagonally forward. If an opponent's piece is next to yours with an empty square beyond it, you must jump it and take it off the board, and keep jumping if you can. A piece that reaches the far row becomes a king and can move backward. You win by taking all your opponent's pieces or leaving him with no move. In the block game of dominoes, each player draws seven tiles. Players take turns matching a tile to an open end of the line; a

player who cannot play passes. The first to play all his tiles wins, scoring the pips left in the other players' hands.

Why it matters. Checkers and dominoes need only a board, a few pieces and a friend, and they have been played by kings and children, soldiers and grandparents. Checkers teaches looking ahead and noticing traps; dominoes teaches counting and remembering which tiles have been played. Both are good games to teach a younger brother or sister, because the rules are simple but the game is never quite the same twice.

PICTURE STUDY



Checker Players, Thomas Anshutz, about 1895 · Oil on canvas · Smithsonian American Art Museum, Washington, D.C.

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

Thomas Anshutz was a painter and teacher in Philadelphia. He liked to paint ordinary people at work and at rest. In this painting two boys are deep in a game of checkers at a plain table. The background is dark, so all our attention goes to the boys, their hands and the board.

Look closely

- Look at the boy on the left. How does he show that he is thinking hard?
- Look at the boy on the right. What is he doing with his hand?
- Look at where the light falls in the painting. Why did the artist light the boys and the board?
- Can you see the board and the pieces? What is hidden in shadow?

Talk about it

1. What do you think each boy is feeling at this moment of the game?
2. Why is checkers a good game for two friends on a quiet afternoon?
3. How should you act when your opponent is thinking about a move?

PROJECT

A Checkers Tournament and a Homemade Domino Set

You will play a small checkers tournament against family members, keeping a record of every game, then make a set of 28 dominoes from card and play the block game.

You will need

- A checkers set, or a homemade 8-by-8 board and 24 bottle caps or coins (12 of each kind)
- Card stock, a ruler, scissors and a marker for dominoes
- Scorebook and pencil

Steps

1. **Checkers.** Set up the board with the dark square in each player's lower-left corner. Review the rules: diagonal moves on dark squares, forced jumps, multiple jumps and kings.
2. Play at least four games, against at least two different opponents if you can. Record each game: opponent, who moved first, winner, and how it ended.
3. **Make dominoes.** Cut 28 rectangles of card about 1 by 2 inches (2.5 by 5 centimeters). Draw a line across the middle of each.
4. List all 28 pairs from 0-0 to 6-6 (0-0, 0-1 ... 0-6, 1-1 ... 1-6, and so on up to 6-6). Mark the dots on each tile. Check that every pair appears exactly once.
5. **Play dominoes.** Turn the tiles face down and shuffle. Each player draws seven. The player with the highest double plays first. Match ends to build the line. If you cannot play, pass.
6. When a player plays his last tile, he scores the total pips left in the other players' hands. Play to 50 points.
7. Write two sentences: How did you work out that a domino set has 28 tiles? What did checkers teach you about looking ahead?

Tips

- In checkers, keep your back row filled as long as you can; it stops your opponent from making kings.

- Look for forced jumps you can set up: sometimes giving away one piece lets you jump two.
- In dominoes, play your high tiles early so they are not left in your hand at the end.

Check your work

- ☐ I played at least four games of checkers by the rules and recorded them.
- ☐ I made a complete set of 28 dominoes and checked every pair.
- ☐ I played dominoes to 50 points and kept score.

SCOREBOOK

1. Draw the starting position of checkers with all 24 pieces.
2. Write the list of all 28 domino pairs in a triangle: seven in the first row (0–0 to 0–6), six in the next, and so on.
3. Make a tournament table of your checkers games and your domino scores.

From history. William Payne’s 1756 book on draughts had a preface written by the famous Dr. Samuel Johnson, who wrote the great English dictionary. Johnson praised the game because it rewards careful thought rather than luck.

COMMON MISTAKES

- Skipping a jump. In standard checkers, if you can jump, you must.
- Moving an ordinary checker backward. Only kings may move backward.
- Making two of the same domino or leaving one out. Check your list of 28 pairs.

Make it a game • Forced Jump Puzzle. Set up a few pieces on a checkerboard and challenge your parent to find the forced jump. Say the rule aloud and explain what happens when a piece becomes a king. Then switch and set a puzzle for them. For a history round, take turns telling a fact about dominoes or checkers draughts. Play to five points.

8.3 INVENTING A GAME WITH FAIR RULES

OBJECTIVES

- Name the parts every good game needs: a goal, components, turns, rules and an ending.
- Explain what makes a game fair and how designers test and improve their games.
- Invent an original game, playtest it at least five times, and improve its rules.

Warm-up. Play one game of tic-tac-toe in which the first player moves twice on the first turn. Then switch. Is that game fair? How could you fix it?

WATCH

Game Designing – Playtesting Tips

HABA USA • 4:41

<https://www.youtube.com/watch?v=dr5nLXL0pA>

WHEN TO WATCH

Before you playtest your game. A game designer working with a children's game company gives playtesting tips.

KEY TERMS

game designer

A person who invents games and writes their rules.

balance

When no player, piece or strategy has an unfair advantage.

prototype

A rough first version of a game, made quickly to test the idea.

playtest

To play a new game many times to find problems and improve the rules.

first-player advantage

An unfair edge that comes simply from going first; good designers measure it and fix it.

CORE IDEAS

The story. Every game in this course was invented by someone: a Babylonian, an Egyptian, an Indian, a Scot, a YMCA teacher in Massachusetts. Some inventors, like James Naismith and Milton Bradley, are known by name. Most are forgotten. But each one did the same thing you will do in this lesson: thought of a goal, chose some pieces, wrote some rules, played the game, noticed what went wrong, and changed it.

How it changed. Games rarely come out right the first time. Naismith's basketball had no dribbling and no nets with holes. The early rules of soccer had no crossbar and no penalty kick. Chess took a thousand years to give the queen her modern power. Game designers today call this process playtesting: you play your game again and again, with different people, and you watch carefully. Is one strategy always best? Does the first player win too often? Do games take too long or end too quickly? Then you change one rule at a time and test again, just as an engineer tests a bridge.

How it is played. A good game needs a few clear parts. A **goal**: what are players trying to do? **Components**: the board, pieces, cards, dice or ball. **Turns**: who goes first and what may a player do on a turn? **Rules** for what is allowed and what happens when something goes wrong. An **ending**: how does the game end, and who wins? And above all, **fairness**: every player should have a real chance to win by playing well. Designers often fix first-player advantage by giving the second player a small bonus, as Go does by giving White extra points.

Why it matters. Scripture says, "A false balance is abomination to the LORD: but a just weight is his delight" (Proverbs 11:1). A merchant's scales had to be fair, or customers were cheated. A game's rules are its scales. When you design a game, you are making a small world of rules, and you are responsible for making it fair to everyone who plays it. That is a good thing to practice.

PICTURE STUDY



Girl Building with Dominoes, Albert Anker, second half of the 1800s · Oil on canvas · Painted in Switzerland

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

Albert Anker was a Swiss painter who loved to paint children in his village of Ins, learning, playing and helping at home. Here a little girl has found a new use for a box of dominoes: instead of playing the game, she is building a tower. Every time she adds a piece she is testing her idea to see whether it will stand.

Look closely

- Count the dominoes in her tower. How has she arranged them?
- Look at her face. How careful is she being?
- Find the box the dominoes came from.
- Look at the dominoes lying on the table. Which ones might she use next?

Talk about it

1. How is building a domino tower like testing a new game?
2. What will she learn if the tower falls?
3. Have you ever invented a new way to play with an old toy or game? What was it?

PROJECT

Design, Playtest and Improve Your Own Game

You will invent an original game, using pieces from your games box if you like, write the rules, playtest it at least five times with a record of every game, and make it fairer and more fun.

You will need

- Paper, card, markers and scissors for a board or cards
- Pieces from your games box: beans, coins, bottle caps, dice, a teetotum, dominoes
- At least two playtesters (family members or friends)
- Scorebook and pencil

Steps

1. **Idea.** Write one sentence about your game: what is the goal? (For example: “Be the first to carry all your seeds across the river.”) You may borrow ideas from any game in this course.
2. **Prototype.** Make a quick, rough board and pieces. Don’t decorate yet.
3. **Rules.** Write the rules in numbered steps: setup, how a turn works, special squares or actions, how the game ends, and who wins.
4. **Playtest.** Play at least five games with different players. For each game, record who went first, who won, how long it took, and any rule questions that came up.
5. **Check fairness.** Count how often the first player won. If it is much more than half, change a rule to help the second player. Look for any strategy that always wins, and fix it.
6. Change one rule at a time and test again. Write each change in your scorebook with the reason.
7. Make a final, decorated copy of your board and a clean copy of your rules for the games festival.
8. Write a short “designer’s note”: what you changed during testing and why.

Tips

- Keep the first version simple. It is easier to add a rule than to take a confusing one away.
- Watch your playtesters' faces. If they look bored or confused, something needs to change.
- Ask testers, "What would you change?" and write down every answer, even if you don't use it.

Check your work

- ☐ My game has a clear goal, written numbered rules and a definite ending.
- ☐ I playtested it at least five times and recorded the results, including first-player wins.
- ☐ I changed at least one rule to make the game fairer or more fun, and explained why.

SCOREBOOK

1. Draw your prototype board and your final board side by side.
2. Make a playtest table: game, players, first player, winner, minutes, problems found.
3. Write your designer's note and copy Proverbs 11:1 above it.

From history. The game Parcheesi, sold in America since the 1860s, was adapted from *pachisi*, a game played in India for centuries on a cross-shaped cloth board. Like many inventors, its American makers improved an old idea rather than starting from nothing.

COMMON MISTAKES

- Making a game that is all luck, so choices don't matter, or all strength, so the oldest player always wins.
- Changing many rules at once. Then you can't tell which change helped.
- Skipping playtesting. Every great game was tested and changed many times.

Make it a game • Fix the Broken Game. Your parent invents a game with one deliberate flaw: the first player always wins, or there is no ending. You play two quick rounds, then find the flaw and name it using terms such as playtest and first-player advantage. Suggest one rule change that fixes it. Swap roles. A correct diagnosis earns two points.

Scripture. “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)

A game’s rules are like a merchant’s scales: they must be fair to everyone.

8.4 A WORLD GAMES FESTIVAL

OBJECTIVES

- Plan a family games festival with stations from every unit of the year.
- Make a fair tournament schedule and keep accurate results.
- Teach games to guests and show good sportsmanship in winning and losing.

Warm-up. If four players each play every other player once, how many games are there in all? Draw four dots and connect every pair with a line, then count the lines.

WATCH

Children's Games Around the World | Storytime | Cricket Media

Cricket Media Children's Learning • 3:15

<https://www.youtube.com/watch?v=RjZ5aPpq98c>

WHEN TO WATCH

During planning. A read-aloud of a children's magazine story about games played around the world; it may give you ideas for festival stations.

KEY TERMS

festival

A day of celebration, often with food, music and games, shared by a family or a community.

station

A table or area set up for one game, where guests can come and play.

sportsmanship

Playing fairly, respecting opponents and officials, and winning or losing with grace.

round robin

A tournament in which every player plays every other player once.

standings

A table showing each player's wins, losses and points during a tournament.

CORE IDEAS

The story. People have always gathered for festivals of games. The Greeks met at their great Games, Scots gather at the Highland games, Haudenosaunee communities hold lacrosse festivals, and towns all over the world hold fairs with races and contests. In 1866 the American painter Winslow Homer painted a group of friends playing croquet on a summer lawn, one of the new family games of his day. Today you will hold your own festival, with games from all around the world and from four and a half thousand years of history.

How it changed. This year you have traveled from the royal tombs of Ur to the gyms of Springfield. You made boards from paper and egg cartons, balls from socks and balloons, a lacrosse stick from a milk jug and a shuttlecock from washers. You learned that games travel from people to people and change as they go, that written rules help a game spread, and that the best rules are fair to everyone.

How it is played. A games festival has stations, each with one game, its rules and its equipment. Guests move from station to station, and the student who made the game teaches it. For a tournament, a round robin is the fairest format: every player plays every other player once. With 4 players there are 6 games; with 5 players, 10 games; with 6 players, 15 games. You can find the number by multiplying the number of players by one less than that number, and dividing by 2. Keep the standings on a big chart so everyone can see.

Why it matters. Proverbs says, “He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city” (Proverbs 16:32). The greatest victory in any game is over your own temper. A good winner shakes hands and thanks his opponent; a good loser congratulates the winner and plays on cheerfully. Zechariah’s vision of streets “full of boys and girls playing” (Lesson 1.1) is a picture of a happy, peaceful people. A games festival played with kindness is a small picture of that peace.

PICTURE STUDY



Croquet Scene, Winslow Homer, 1866 · Oil on canvas · Art Institute of Chicago

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

In the 1860s croquet arrived in America from England and became a favorite family game, because men and women, young and old, could all play it together on a lawn. Winslow Homer, who painted *Snap the Whip* in Lesson 1.1, painted several pictures of croquet games. In this one a young man crouches to help set up a shot while the women wait their turns.

Look closely

- Find the wickets (hoops) in the grass and the colored balls.
- Look at the crouching man. What do you think he is doing?
- Look at the women's dresses and hats. What do they tell you about the time?
- Look at how the players stand. Is this a fierce contest or a friendly game?

Talk about it

1. Why was croquet a good game for families and friends to play together?
2. How is this painting like the picture you saw at the very start of the year, *Snap the Whip*?
3. Which game from this year would you most like to see painted, and why?

Safety first. Set up active stations (hip-ball, floor hockey, takraw, lacrosse) outdoors or in a large clear space, away from the board-game tables. Use only soft balls and balloons, keep sticks low, and have an adult supervise each active station. Provide water and shade.

PROJECT

The World Games Festival

This is the family game day for the whole year. You will plan and run a games festival with at least six stations, teach the games to guests, run a round-robin tournament in one game, and keep a festival scorebook.

You will need

- Your games box: boards, pieces, balls and sticks from every unit
- The museum cards, passport, field guide and plaques from your portfolios
- Large paper for a festival map and standings chart
- Paper medals or ribbons
- Scorebook and pencil

Steps

1. **Plan.** Choose at least six games, one from at least six different units, including the game you invented in Lesson 8.3. Make a festival map showing where each station will be.
2. **Prepare stations.** At each station, put the game, its equipment, a card with the rules in five steps and a card with its history.
3. **Invite guests.** Invite family, grandparents, neighbors or friends. Make a simple program listing the stations.
4. **Teach.** As guests come to each station, teach them the game, play a round, and record the result in your festival scorebook.
5. **Tournament.** Choose one quick game (checkers, Nine Men's Morris or capture Go work well) and run a round robin. Work out the number of games, make a schedule so every player plays every other player once, and keep the standings on the big chart.
6. Award medals to the tournament winner and ribbons for the best sportsmanship, chosen by the guests.
7. **Reflect.** After the festival, write a page in your scorebook: Which game did guests enjoy most? What did you learn this year about games, history and

fair play?

Tips

- Make the schedule before guests arrive so the tournament runs smoothly.
- Let younger guests win sometimes, and be a cheerful loser when you lose.
- Take photographs of every station for your portfolio.

Check your work

- ☐ I planned and ran at least six stations, each with rules and history cards.
- ☐ I ran a round robin with a correct schedule and standings.
- ☐ I taught at least three games to guests and wrote a reflection afterward.

SCOREBOOK

1. Draw your festival map with every station labeled.
2. Make the round-robin schedule and the final standings table.
3. Write your reflection on the year: your favorite game, the most surprising history you learned, and one way you grew in fair play.

From history. The name “round robin” was used in the 1700s for a petition signed with the names in a circle, so that no one’s name came first. In a round-robin tournament, likewise, no player gets an easier schedule than another.

COMMON MISTAKES

- Running out of time because the tournament had too many games. Count the games before you start: $\text{players} \times (\text{players} - 1) \div 2$.
- Forgetting the rules cards. Guests need to read the rules too.
- Forgetting that the guests are the point. A festival is about giving others the joy of a game, not about winning.

Make it a game • Festival Planner Pitch. Plan a festival schedule on paper in three minutes: one station from each of the seven units you studied, with the game name and one rule. Present it to your parent as if you were the host. They ask two questions, such as how to score fairly. Then draw a round-robin chart for four players.

Scripture. “He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city.” (Proverbs 16:32, KJV)

The hardest opponent in any game is your own temper. Ruling your spirit is a greater victory than winning.

UNIT 8

FAMILY GAMES AND A WORLD GAMES FESTIVAL

Board games for families became a business in America in the 1800s. In 1843 a printer in Salem, Massachusetts, published *The Mansion of Happiness*, a journey toward a heavenly mansion past squares of virtues and vices, and in 1860 a young lithographer named Milton Bradley invented *The Checkered Game of Life*, the game that started one of the most famous toy companies in America. Meanwhile, two very old games, checkers and dominoes, were being played on porches, in parlors and in town squares all over the world.

In this last unit you will learn the history of family games, play checkers and dominoes, and then become a game inventor yourself, designing, testing and improving a game with fair rules. The year ends with a world games festival: you will set out the games you have made all year, teach them to your family and friends, run a tournament, and show what you have learned about playing well, winning well and losing well.

PREREQUISITES

- Has made and played games from every unit of the year
- Can keep a scorebook with score tables and tallies
- Knows the fair-play rules from Lesson 1.4

MASTERY CHECKLIST

- ☐ I can tell the history of *Th* and Milton Bradley's *e* *M* *an* *sio* *n* *of* *Ha* *pp* *ine* *ss* *Ch* . *eck* *ere* *d* *Ga* *me* *of* *Lif* *e*
- ☐ I can play checkers and the block game of dominoes by the rules and explain their histories.
- ☐ I can invent a game with a clear goal, fair rules and balanced chances, and improve it by playtesting.
- ☐ I can plan and run a games festival with a fair tournament schedule.
- ☐ I can win and lose with grace, as Proverbs 16:32 teaches.

OPTIONAL BOOKS AND GAMES FOR THIS UNIT

- **Checkers rules and lessons (American Checker Federation)**: Free. The official rules of checkers and articles for beginners from the American Checker Federation. Fits Lesson 8.2. Ages 8+.

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 The Mansion of Happiness and the Checkered Game of Life

2 sessions of 45 minutes

8.2 Checkers and Dominoes

2 sessions of 45 minutes

8.3 Inventing a Game with Fair Rules

2 sessions of 45 minutes

8.4 A World Games Festival

2 sessions of 45 minutes

UNIT 8 REVIEW

Answer each question in complete sentences. Show your work for the counting questions. The review is worth 50 points.

1. **5 pts**

What was *The Mansion of Happiness*, and when was it published?

2. **5 pts**

Who invented *The Checkered Game of Life*, and how was it different from *The Mansion of Happiness*?

3. **5 pts**

Why did these games use a teetotum instead of dice?

4. **5 pts**

Name two rules of checkers that beginners often forget.

5. (5 pts)

How many tiles are in a double-six domino set? Show how you know.

6. (5 pts)

Where did dominoes come from, and when did they reach Europe?

7. (5 pts)

What is playtesting, and why do game designers do it?

8. (5 pts)

In a playtest, the first player won 8 of 10 games. What does this tell you, and what could you do?

9. (5 pts)

How many games are needed for a round robin with 6 players? Show your work.

10. (5 pts)

What would happen at a games festival if nobody followed Proverbs 16:32? What does the verse teach?

ANSWER KEY

1. One of the first board games printed in America, published in 1843 by W. and S. B. Ives of Salem, Massachusetts. Players moved along a spiral path, helped by virtues and set back by vices, toward the Mansion of Happiness at the center.
2. Milton Bradley, in 1860. It was played on a checkerboard, and players could choose which way to move after spinning, so it mixed choice with chance.
3. Many Christian families of the time thought dice belonged to games of chance played for money, so they preferred a numbered spinning top.
4. Any two: jumps are compulsory; you must keep jumping if you can; only kings may move backward; pieces move only on dark squares diagonally.
5. 28: 7 tiles with a 0 (0–0 to 0–6), 6 more with a 1 (1–1 to 1–6), then 5, 4, 3, 2 and 1. $7 + 6 + 5 + 4 + 3 + 2 + 1 = 28$.
6. From China, where they were described by the 1200s. They appeared in Italy and France in the 1700s.
7. Playing a new game many times with different players to find problems. It shows whether the game is fair, clear and fun, so the designer can improve the rules.
8. The game probably has a first-player advantage. You could give the second player a bonus (extra points, an extra piece or an extra move) and test again.
9. $6 \times 5 \div 2 = 15$ games.
10. Answers will vary: quarrels, sulking and boasting would spoil the fun. The verse teaches that ruling your own spirit and being slow to anger is greater than any victory.

PORTFOLIO PIECE: MY YEAR OF GAMES

Put together the finished portfolio for the whole year: your games box with every board and piece you made, labeled; your best scorebook pages; the portfolio projects from Units 1–7; and, from this unit, your invented game with its final rules and designer’s note, photographs from the games festival, and the tournament standings. Add a one-page letter to a younger child explaining the three games you would most like him or her to learn and why.

LOOK FOR	WHAT IT MEANS
Complete games box	At least one working game from every unit, labeled with its name and origin.
Invented game	Clear rules, a decorated board, a playtest record and a designer’s note showing at least one improvement.
Festival record	Photographs, the round-robin schedule and standings, and the reflection page.
Letter	Recommends three games with accurate history and clear reasons.
Care and organization	Everything is neat, labeled and in order.