

GRADE 2 PHYSICAL EDUCATION & HEALTH

First edition

5 units

10 lessons • one quarter

A video for every lesson

FIRST EDITION

COURSE GUIDE

This short course follows five strands of health and fitness through one quarter of the school year: keeping active, water, food, strength, and the heart and lungs. Each lesson begins with a true story told simply: James Naismith hanging two peach baskets in a gym in 1891, a health inspector who saw schoolchildren all drinking from one tin cup, the astronaut John Glenn eating applesauce in space, Daniel asking for vegetables and water in Babylon, the old legend of Milo and the calf, a minister skating on a frozen Scottish loch, and the French doctor René Laennec rolling a sheet of paper into the first stethoscope.

Every lesson follows the same path. First comes **the story**. Then **how they figured it out**: what question they had and what they tried. Then **how your body works**, told for a second grader: muscles, bones, heart, lungs, sweat, water and food. Last, **try it**: the child plays a game, counts cups of water, helps make a snack, holds a plank or jumps rope, records it in a fitness journal with a parent's help, and tries to do a little better the next time.

God made our bodies good, and He gave them to us to care for. This course is about joy in moving, growing stronger, and good habits. It is never about size or looks: children are measured only against their own effort and growth. The old Latin saying *Fabricando fit faber*, “by making, one becomes a maker,” fits here too: we grow strong by practicing, a little at a time. The quarter ends with a family fitness day, when the whole household moves, plays and eats together.

Most videos come from trusted teaching and children's health channels: SciShow Kids, Nemours KidsHealth, NASA, the YMCA, and experienced physical education teachers. Every video was previewed for accuracy and for modest dress. A few follow-along videos come from smaller teachers' channels; the lesson notes say so. Some videos end with an invitation to subscribe or a link to a teacher's

shop; you can stop the video when the teaching ends. Watch together, and do the moves along with any follow-along video.

Start with Lesson 1.1 →

WHO IT IS FOR

Written for children in grade 2 (about ages 7–8). A parent or teacher reads the lessons aloud, leads the warm-ups, helps write in the fitness journal and supervises every activity and kitchen task. The child should be able to count to 100 and tell numbers on a timer. Nothing needs to be bought: every activity uses household things such as a towel, a chair, a laundry basket, a soft ball, measuring spoons, a cup and a timer.

HOW TO USE THIS COURSE

1. **The weekly rhythm.** The quarter has 10 lessons, one a week, each with three short sessions of 20–30 minutes. Session 1 is the warm-up, the story, the video and the picture study, with a little movement. Session 2 is the activity (the game, the workout or the kitchen task) and the fitness journal. Session 3 does the activity again and tries to do a little better. In the second week of each unit, use part of Session 3 for the unit review and the unit challenge. On the other days, let your child play actively: children ages 6 to 17 need at least 60 minutes of activity every day, most of it running-and-breathing-hard play, with climbing, jumping and other strength play on at least 3 days a week.
2. **Check with your doctor first.** A parent should know about and supervise every activity. If your child has asthma, a heart condition, diabetes, a recent injury or any other health concern, check with your doctor before starting, and follow the doctor's advice about what to change.
3. **Read it aloud.** The lessons are written for you to read aloud. The paragraphs marked *The story* and *How they figured it out* tell what happened; *How your body works* explains the science; *Try it* explains the activity. After each paragraph, ask your child to tell it back in his or her own words. Short, happy retellings are the goal.
4. **Picture study.** Each lesson has one public-domain painting, drawing or old photograph chosen for what it shows about play, work, food, water or rest. Look at it quietly for one minute, put it away and let your child tell everything he or she

remembers. Then look again and work through the “look for” items and questions together.

5. **The fitness journal.** Use any notebook for the whole quarter. Your child does each activity, records it (with your help writing the numbers), and does it again: baskets made, cups of water, colors on a plate, seconds in a plank, heartbeats, jumps in a row. Date every page. Let your child draw a picture and say how it felt. Honest numbers matter more than big numbers.
6. **Health, not looks.** In this course we talk about what bodies can do and how to care for them, never about size or shape. We do not weigh children, count calories or call foods bad. Foods are “everyday foods” and “sometimes foods,” and treats and feasts are good gifts in their place. Children are praised for effort, good form and doing a little better than last time, never for beating a brother, sister or friend.
7. **Optional books and gear.** Some units list a free web page from a children’s hospital or the government, or simple gear such as a jump rope or a water bottle with ounce marks. They are never required.
8. **Unit review and unit challenge.** Each unit ends with a short oral review: you ask the questions aloud, and your child answers by telling, pointing, drawing or showing a movement. There are no points. Each unit also has a unit challenge done over the unit, such as a week of active play, a water chart or a snack your child makes. Keep the challenge pages in a folder.
9. **Safety.** Read the safety note before each activity. Warm up first and cool down after. Clear a space with a flat, non-slip floor and wear good shoes. Stop and tell an adult right away at chest pain, dizziness, fainting, trouble breathing or sharp pain; tired muscles are normal, but pain in a joint is not. Strength work in this course uses body weight only. A parent handles knives and the stove and checks for food allergies before any tasting. Exercise and food are never used as a reward or a punishment.
10. **The family fitness day.** In the last week, your child helps plan and lead a family fitness day: a warm-up, a favorite activity from each unit, a water table, a healthy snack your child helps make, a jump-rope count and a cool-down. Everyone moves at his or her own pace.

SCOPE AND SEQUENCE

UNIT 1 • WEEKS 1–2

Keeping Active

James Naismith invents basketball in a cold Massachusetts winter of 1891 and why God made us to move every day; then why we warm up before play and cool down after, with a warm-up we learn by heart.

- 1.1 James Naismith and the Peach Baskets
- 1.2 Warm Up, Cool Down

UNIT 3 • WEEKS 5–6

Nutrition

Food is fuel: John Glenn’s applesauce in space, the food groups, and foods that give energy, build and protect; then Daniel and the king’s food and a ten-day colorful-plate challenge.

- 3.1 Food Is Fuel
- 3.2 Daniel and the King’s Food

UNIT 5 • WEEKS 9–10

Aerobic Training

René Laennec’s paper tube and finding your pulse at the wrist and neck before and after play; then the jump rope, a jump-rope challenge, and the family fitness day.

- 5.1 Count Your Heartbeat
- 5.2 Jump Rope

UNIT 2 • WEEKS 3–4

Hydration

How much water a child needs and where it goes, with a water log of cups; then water or a sugary drink, with sugar measured from labels and shown in teaspoons.

- 2.1 How Much Water?
- 2.2 Water or Sugary Drink?

UNIT 4 • WEEKS 7–8

Strength

The legend of Milo and the calf and growing stronger little by little; then the core and balance, from the Skating Minister on the ice to planks, side planks and the stork stand.

- 4.1 Milo and the Calf
- 4.2 Core and Balance

WEEKLY PACING CALENDAR

WEEK	PLAN
1	• Session 1: Lesson 1.1 James Naismith and the Peach Baskets: warm-up, video, teaching and picture study • Session 2: Lesson 1.1 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it <i>Three short sessions a week is the usual rhythm: one to learn, two to move. Keep moving every day, even on days with no lesson.</i>
2	• Session 1: Lesson 1.2 Warm Up, Cool Down: warm-up, video, teaching and picture study • Session 2: Lesson 1.2 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it • Session 3 (end of unit): Unit 1 review and unit challenge
3	• Session 1: Lesson 2.1 How Much Water?: warm-up, video, teaching and picture study • Session 2: Lesson 2.1 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it
4	• Session 1: Lesson 2.2 Water or Sugary Drink?: warm-up, video, teaching and picture study • Session 2: Lesson 2.2 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it • Session 3 (end of unit): Unit 2 review and unit challenge
5	• Session 1: Lesson 3.1 Food Is Fuel: warm-up, video, teaching and picture study • Session 2: Lesson 3.1 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it
6	• Session 1: Lesson 3.2 Daniel and the King's Food: warm-up, video, teaching and picture study • Session 2: Lesson 3.2 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it • Session 3 (end of unit): Unit 3 review and unit challenge
7	• Session 1: Lesson 4.1 Milo and the Calf: warm-up, video, teaching and picture study • Session 2: Lesson 4.1 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it

WEEK	PLAN
8	• Session 1: Lesson 4.2 Core and Balance: warm-up, video, teaching and picture study • Session 2: Lesson 4.2 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it • Session 3 (end of unit): Unit 4 review and unit challenge
9	• Session 1: Lesson 5.1 Count Your Heartbeat: warm-up, video, teaching and picture study • Session 2: Lesson 5.1 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it
10	• Session 1: Lesson 5.2 Jump Rope: warm-up, video, teaching and picture study • Session 2: Lesson 5.2 activity and fitness journal • Session 3: Repeat the activity, try to improve, and log it • Session 3 (end of unit): Unit 5 review and unit challenge <i>Last week. Hold a family fitness day: the student leads the family through a warm-up, a favorite activity from each unit and a cool-down, serves a healthy snack and water, and shows the fitness journal.</i>

MATERIALS

Fitness journal (any notebook) and crayons or colored pencils

One for the quarter: tallies, water cups, plate drawings, heartbeat counts, seconds and how it felt.

A timer or stopwatch (a phone timer works)

For holds, game times, pulse counts and jump-rope rounds.

Good athletic shoes and comfortable, modest clothes for exercise

Every activity lesson.

A towel or mat, a sturdy chair pushed against a wall, and a clear space

For warm-ups, planks and balance work.

A laundry basket or bucket and a soft ball (or a rolled pair of socks)

For the peach-basket game in Lesson 1.1.

A cup or water bottle of your own and a measuring cup

For the water log in Unit 2. A bottle with ounce marks is handy but not needed.

A teaspoon, sugar, small clear cups or bags, and a few drink labels

For the sugar display in Lesson 2.2.

Fruits and vegetables of many colors and simple snack foods

For the snack plate and the colorful-plate challenge in Unit 3.

A sheet of stiff paper and tape

To roll a Laennec paper tube in Lesson 5.1.

A jump rope, or a length of clothesline

For Lesson 5.2. A rope that reaches from armpit to armpit when you stand on its middle is the right length.

GRADING

No letter grades in grade 2. Give short, warm, honest feedback on effort, good form, careful records and doing a little better than last time, and keep the journal pages and unit challenges in a folder for the quarter.

- After each unit, write two or three sentences in the folder: what your child did faithfully, one thing that improved, and one thing to keep practicing.
- Fitness feedback rewards effort, faithfulness and improvement against your child's own earlier numbers. It never depends on body size, body measurements or comparison with other children.
- The unit reviews are oral and have no points. Note which ideas your child can tell back easily and which to revisit.
- A child who finds sport hard, or who has a health condition that limits some activities, is praised for faithful effort within what the doctor allows. Every body can grow stronger; the goal is faithfulness, not being the best.

A NOTE TO PARENTS

You do not need to be a coach to teach this course. Read the story aloud, watch the video together, and then be the timer, the counter and the cheerleader. Do the warm-ups and games alongside your child whenever you can. Children copy what they see, and a parent hopping on one foot in the living room teaches more than any speech.

Keep the talk about bodies on what they can do and how to care for them. Praise effort, good form and honest records, not big numbers alone. If a sibling is faster or stronger, steer back to the journal: "Did you beat your own number from last time?" Scripture says plainly that exercise has some value and godliness has more (1 Timothy 4:8). We move, eat, drink and rest to the glory of God.

All the stories in this course are cheerful. The legend of Milo is told as a legend, and the lesson says so; the true idea inside it, getting stronger little by little, is what we keep.

UNIT 1

KEEPING ACTIVE

God made your body to move: to run, jump, climb, throw, catch and play. In this unit you will hear how a young teacher named James Naismith hung two peach baskets in a gym in the winter of 1891 and invented a brand-new game, basketball, so his students could keep moving when it was too cold to play outside. You will play your own peach-basket game at home and count your baskets.

Then you will learn why good athletes warm up before they play and cool down after. You will learn a warm-up by heart, use it before every activity this quarter, and lead your family through it.

PREREQUISITES

- Can count to 100 and tell numbers on a timer
- Can toss and catch a soft ball with a grown-up
- Has a fitness journal (any notebook) and crayons

MASTERY CHECKLIST

- ☐ I can tell how James Naismith invented basketball with two peach baskets.
- ☐ I can say how much active play children need each day: at least 60 minutes.
- ☐ I can lead my warm-up: marching, arm circles, big steps and easy hops.
- ☐ I can tell why we warm up before play and cool down after.
- ☐ I can keep a record of my baskets or my active play in my fitness journal.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Be a Fit Kid” (Nemours KidsHealth):** Free. A short kids’ article on why moving every day is good for your heart, muscles and mood. Read it aloud with Lesson 1.1.
- **A soft foam ball or a small playground ball:** Optional, for the peach-basket game. A rolled pair of socks works just as well.

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

LESSONS IN THIS UNIT

1.1 James Naismith and the Peach Baskets

3 sessions of 20–30 minutes

1.2 Warm Up, Cool Down

3 sessions of 20–30 minutes

UNIT 1 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell the story of James Naismith. Why did he invent a new game, and what did he use for goals?
2. How long should children be active every day? Show me two ways to move that make you breathe hard.
3. Show me your five-part warm-up.
4. Why do we warm up before we play? Why do we cool down after?
5. Show me a gentle stretch. How should a stretch feel?

ANSWER KEY

1. It was a snowy winter in 1891 and his students were bored indoors. His boss asked for a new indoor game. He nailed two peach baskets to the balcony railing, ten feet up, and the students threw a ball into them. That game was basketball.
2. At least 60 minutes every day. Examples: running in place, jumping, tag, hopping, skipping.
3. March, arm circles, big steps, side steps, easy hops (in any order, done gently).
4. Warming up makes our muscles warm and loose and gets our heart ready, so we play better and are less likely to get hurt. Cooling down lets our heart and breathing slow down little by little.
5. Any gentle held stretch with no bouncing. It should feel like a mild pull, never pain.

UNIT CHALLENGE: MY WEEK OF ACTIVE PLAY

For one week, keep a chart of your active play with a parent's help. Each day, color one box for every 10 minutes you ran, jumped, climbed, played a game or helped with active chores. Try to color six boxes (60 minutes) every day. Do your warm-up before you play. At the end of the week, draw your favorite active time and tell your family what you liked best.

LOOK FOR	WHAT IT MEANS
Kept the chart	The chart was filled in each day of the week, with a parent's help.
Moved every day	Your child was active every day and worked toward 60 minutes.
Warmed up	Your child used the five-part warm-up before active play and can lead it by heart.
Told about it	Your child drew a picture and told what he or she enjoyed. Effort and faithfulness count, not how many boxes.

1.1 JAMES NAISMITH AND THE PEACH BASKETS

OBJECTIVES

- Tell how James Naismith invented basketball in the winter of 1891 so his students could keep active indoors.
- Say how much active play children need every day and name ways to move indoors and outdoors.
- Play a peach-basket game at home, count baskets made, and try to make more the second time.

Warm-up. Snowy-day warm-up: march in place for 30 seconds, swinging your arms. Pretend to shovel snow, 5 scoops to each side. Do 10 arm circles forward and 10 backward. Jump softly in place 10 times, like you are trying to stay warm. Think about it: what games can you play when it is too cold or rainy to go outside?

WATCH

The First Basketball Game Ever

YMCA Europe · 2:03

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

WHEN TO WATCH

After “The story.” You will hear James Naismith’s own voice from a radio interview in 1939, with old film of early basketball.

Note: Naismith’s 1939 radio recording over archive film. He says the first players began “tackling” and that there was a free-for-all before he added rules against rough play; it is told lightly. The players in the old film wear ordinary basketball jerseys and shorts.

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>

Another way to hear the same 1939 radio interview, shown over old photographs of Naismith.

KEY TERMS

active

Moving your body: running, jumping, climbing, playing and working.

invent

To make something new that no one has made before.

gymnasium (gym)

A big indoor room for games and exercise.

rules

The ways everyone agrees to play a game so it is fair and safe.

CORE IDEAS

The story. Long ago, in the winter of 1891, a young teacher named James Naismith worked at a school for YMCA leaders in Springfield, Massachusetts. Outside there was deep snow. Inside, his class of young men was bored and grumpy. They were tired of marching and swinging arms in the gym. His boss, Dr. Luther Gulick, gave him about two weeks to invent a new indoor game that would keep them moving and was fair to everyone.

How they figured it out. James Naismith thought hard. Football was too rough for a gym floor. He decided that players would throw a ball into a goal up high, so they had to aim gently instead of throwing hard. He asked the building manager for two boxes. The manager had only two old peach baskets! Naismith nailed them to the railing of the balcony, ten feet above the floor. He wrote thirteen rules, such as no running with the ball and no shoving. In December 1891 his eighteen students played the first game, nine on each team. Only one basket was made, and someone had to climb up to get the ball out! The students loved it. Soon people all over the world were playing basketball.

How your body works. When you run, jump and throw, your heart beats faster and your lungs breathe harder. Your muscles and bones grow stronger. Your body learns to balance and aim. Moving also helps you sleep well and feel happy. Children your age need to be active for at least 60 minutes every day. Most of that should be play that makes you breathe hard, like running and tag. On at least three days a week, add climbing, jumping and hanging to make your muscles and bones strong. Sitting too long makes your body stiff, so get up and move often.

Think it through. James Naismith had studied to be a minister. He believed games could help young people become strong, fair, kind and brave. The Bible says, “I will

praise thee; for I am fearfully and wonderfully made.” Your body is a gift from God, and moving it well is one way to say thank you.

Try it. This week you will make your own peach-basket game with a laundry basket and a soft ball, play it with your family, and count how many baskets you make.

PICTURE STUDY



The Gymnasium of the School for Christian Workers, Springfield, Unknown photographer, About 1887 · Photograph · Springfield College Archives, Springfield, Massachusetts
Image: [Wikimedia Commons](#), public domain

This old photograph shows the gym at the school in Springfield, Massachusetts, where James Naismith taught. It is usually dated to about 1887, a few years before he invented basketball. Students came here to exercise, especially in the long, snowy winters, using bars, mats and ropes.

Look closely

- Find the balcony that runs around the room. Naismith nailed his peach baskets to a railing like this one, ten feet above the floor.
- Find the round metal ring hanging near the balcony. What could it be for? What would happen if you threw a ball through it?
- Find the two young men. What are they leaning on? What exercises could they do on the bars, the mats and the leather horse?
- Look at the floor. How much room is there to run? Imagine eighteen players in here!

Talk about it

1. Why would students in a snowy town need a big indoor room for exercise?
2. If you were James Naismith, where would you hang the baskets? Why up high?

3. Where in your house or yard could you play an active game on a rainy day?

Safety first. A parent should know about and supervise every activity. If you have asthma, a heart condition, diabetes, a recent injury or any health concern, check with your doctor first. Play in a clear space with nothing to trip over and nothing breakable nearby, use a soft ball, and stop and tell an adult if you feel dizzy, have chest pain or trouble breathing.

ACTIVITY

The Peach-Basket Game

James Naismith used two peach baskets. You will use a laundry basket or a bucket. You will practice tossing a soft ball into it, count your baskets, and then play a short game with your family. Next time you will try to make more baskets.

You will need

- A laundry basket, bucket or large box
- A soft ball, a beanbag or a rolled pair of socks
- Tape, chalk or a shoe to mark lines on the floor
- A timer and your fitness journal

Steps

1. **Warm up (3 minutes):** do the snowy-day warm-up from the start of the lesson.
2. **Set up.** Put the basket on the floor (or on a sturdy chair against a wall). Make three tape lines: one big step away, two big steps away and three big steps away.
3. **Aim like Naismith.** Hold the ball with two hands, bend your knees, look at the basket and toss it gently up and in. A soft, high toss works better than a hard throw.
4. **Count your baskets.** From the first line, take 10 tosses. Count how many go in. Then take 10 tosses from the second line and 10 from the third line. Write the three numbers in your journal.
5. **Rest and drink.** Sit down for 1 minute and drink some water.
6. **Family game (5 minutes).** Play with a parent or brother or sister. Use Naismith's rules: no running while holding the ball (pass it or toss it), no pushing or grabbing, and take turns. Each basket is one point. Set the timer for 5 minutes.
7. **Cool down.** Walk slowly around the room for 1 minute and take three big, slow breaths.

8. Session 3: do it again. Warm up, then take 10 tosses from each line again. Did you make more baskets than last time? Circle your best line in your journal.

Tips

- Bend your knees and push up with your legs as you toss. Your legs help your arms.
- Keep your eyes on the front edge of the basket.
- If it is too easy, move back one line. If it is too hard, move closer. Choose a line where some go in and some miss.

Check your work

- ☐ I can tell how James Naismith invented basketball.
- ☐ I counted my baskets from three lines and wrote them down.
- ☐ I played fairly and took turns, and I tried to do better the second time.

FITNESS JOURNAL

1. Draw James Naismith's gym with two peach baskets up on the balcony.
2. Make a chart: Line 1, Line 2, Line 3. Write how many baskets you made out of 10 on each day.
3. Draw yourself playing your favorite active game. Write or tell: How did your body feel after playing?
4. Color a box for each 10 minutes of active play you did today. Can you color six boxes (60 minutes)?

From history. Naismith's thirteen rules were printed in the school newspaper in January 1892. At first the baskets had bottoms, so after every basket someone climbed up to get the ball. Years later the bottoms were cut out. Naismith also lived to see basketball played at the Olympic Games in 1936.

COMMON MISTAKES

- Throwing the ball hard and flat. A soft, high toss goes in more often.
- Running with the ball in the family game. Naismith made a rule against it so the game stays fair and safe.
- Thinking that one game a week is enough. Children need to move every day.

Make it a game • Peach Basket Shoot. Put a laundry basket across the room as your peach basket. Toss a soft ball or sock ball from behind a line. Each toss that lands in counts one point. When it goes in, say one way you can stay active indoors. Count your total after ten tosses, then try to beat it.

Scripture. “I will praise thee; for I am fearfully and wonderfully made: marvellous are thy works” (Psalm 139:14, KJV)

God made your body with muscles, bones, a heart and lungs that work together so you can run and play. Moving it well is a way to praise Him.

1.2 WARM UP, COOL DOWN

OBJECTIVES

- Tell why we warm up before play and cool down after.
- Learn and lead a five-part warm-up: marching, arm circles, big steps, side steps and easy hops.
- Learn a gentle cool-down with walking and easy stretches.
- Use the warm-up before every activity this quarter and lead the family through it.

Warm-up. Feel the difference: before you warm up, touch your toes gently and notice how far you reach. Then march in place for 1 minute, swinging your arms, and do 10 arm circles each way. Now gently reach for your toes again. Does your body feel looser? Think about it: why do runners jog a little before a race?

WATCH

The Daily Warmup Video for Virtual PE Class

The PE Specialist • 11:49

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

WHEN TO WATCH

In Session 2. Follow along: the teacher leads moving warm-up exercises first, then easy stretches on the floor.

Note: A follow-along warm-up from a physical education teacher, with a timer on screen. Stop when the exercises end; the description links to his teaching resources.

BACKUP VIDEO

5 Minute P.E. Warm Up #1 - Elementary Physical Education Dynamic Movement Exercise Workout

PE Learn & Play • 5:19

<https://www.youtube.com/watch?v=CqJ7ILRktnk>

A shorter follow-along warm-up for Session 3.

KEY TERMS

warm-up

Easy, gentle movement before play or exercise that gets your body ready.

cool-down

Slow walking and easy stretching after play that helps your body slow down.

stretch

Gently reaching a part of your body to help it move freely. A stretch should never hurt.

muscle

A part of your body that pulls on your bones to make you move.

CORE IDEAS

The story. Have you ever seen baseball players toss the ball back and forth before a game, or soccer players jog around the field? They are warming up. In the year 2008, some doctors in Norway wanted to know if a good warm-up really helps. They worked with almost 1,900 girls who played soccer on many teams.

How they figured it out. The doctors taught some of the teams a special warm-up of easy running, balance moves, and strong, careful jumps and landings. These teams did the warm-up before every practice and game. The other teams warmed up the way they always had. At the end of the season the doctors counted the injuries. The teams that did the special warm-up had fewer injuries, and far fewer bad ones. A good warm-up helped keep the players safe.

How your body works. When you are sitting still, your muscles are cool and a little stiff, like cold modeling clay. Easy moving makes your heart beat a little faster and sends more warm blood to your muscles. Warm muscles stretch and bend more easily, like warm clay. Your joints move more smoothly, and your brain wakes up to help you balance. After hard play, your heart is beating fast. A cool-down of slow walking and gentle stretches lets your heart and breathing slow down little by little.

Good form. Start slow and get a little faster. Stretch gently, only until you feel a mild pull, and never bounce. A stretch should never hurt. Breathe slowly while you stretch.

Try it. This week you will learn a five-part warm-up and a cool-down. You will practice until you can do them by heart, then lead your family through them. You will use this warm-up before every activity in this course.

PICTURE STUDY



School Children Exercising on the Lawn, Washington, D.C., Frances Benjamin Johnston, 1899 ·

Photograph · Library of Congress, Washington, D.C.

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

Frances Benjamin Johnston was one of the first American women to work as a professional photographer. In 1899 she photographed the public schools of Washington, D.C. Here a class has gone outside to exercise together on the grass, every child stretching the arms at the same moment.

Look closely

- Look at the children's arms. What move are they doing? Try it yourself.
- Are the children standing close together or spread apart? Why do they need space to swing their arms?
- Look at their clothes and shoes. Would these clothes be easy or hard to move in?
- Find the trees and the grass. Why might the teacher take the class outside to exercise?

Talk about it

1. Is this move a warm-up move or a hard, tiring move? How can you tell?
2. Why is it good to stop sitting at your desk and move for a few minutes?

3. Which part of your five-part warm-up looks most like what these children are doing?

Safety first. Warm up in a clear space on a flat, non-slip floor, wearing good shoes. Move slowly at first, stretch gently without bouncing, and stop if anything hurts; a stretch should feel like a mild pull, never pain. Stop and tell an adult if you feel dizzy, have chest pain or trouble breathing.

ACTIVITY

My Five-Part Warm-up and Cool-down

You will learn a warm-up with five parts, one for each finger on your hand, and a cool-down. Then you will teach it to your family. A good leader knows the moves by heart, counts out loud and keeps everyone safe.

You will need

- A clear space and good shoes
- A timer
- A towel or mat for the cool-down stretches
- Your fitness journal and crayons

Steps

1. **Finger 1, march (1 minute):** march in place, knees up, arms swinging. Start slow and get a little faster.
2. **Finger 2, arm circles (30 seconds):** arms out to the sides like an airplane. Make 10 small circles forward, then 10 big circles forward. Do the same backward.
3. **Finger 3, big steps (30 seconds):** take 10 giant, slow steps across the room, lifting each knee high. Walk back the same way.
4. **Finger 4, side steps (30 seconds):** step sideways across the room and back, like a crab on its feet, staying low with knees bent.
5. **Finger 5, easy hops (30 seconds):** do 10 soft hops on both feet, landing quietly on your toes with bent knees. Then 5 hops on your right foot and 5 on your left.
6. **Play time.** Now your body is ready. Play an active game for 10 minutes: tag, the peach-basket game, or follow-the-leader.
7. **Cool-down (3 minutes):** walk slowly for 1 minute. Then hold each stretch for a slow count of 10, with no bouncing: reach for the sky; hold a chair and pull one heel toward your seat (front of the leg), then the other; sit and gently reach toward your toes (back of the legs); hug your knees.

8. Session 3: lead your family. Teach the whole warm-up to your family without looking at the book. Count out loud for each part. Afterward, write how many parts you remembered.

Tips

- Use your hand to remember: march, arms, big steps, side steps, hops.
- Warm-up moves should make you feel warm, not tired. Save your energy for the game.
- A good leader faces the group, shows each move, and counts in a big, clear voice.

Check your work

- ☐ I can tell why we warm up before play and cool down after.
- ☐ I can do all five parts of my warm-up by heart.
- ☐ I led my family through the warm-up and cool-down.

FITNESS JOURNAL

1. Trace your hand. In each finger, draw or write one part of your warm-up.
2. Before and after warming up, reach gently toward your toes. Draw where your fingers reached each time.
3. Write or tell: How did your body feel before the warm-up? After? After the cool-down?
4. Make a check-off chart for the rest of the week: did you warm up before you played?

From history. Long ago many American schools had a few minutes of exercise every day, often led by the teacher right beside the desks or in the schoolyard. Children marched, swung their arms, bent and reached, much like the warm-up you are learning.

COMMON MISTAKES

- Skipping the warm-up because you want to play right away. Five minutes of warm-up helps you play better and safer.
- Bouncing or pulling hard in a stretch. Stretch gently and hold still.
- Stopping hard play and sitting down right away. Walk slowly first so your heart can slow down.

Make it a game • Five-Part Warm-up Lead. Lead your parent through the five-part warm-up from memory: marching, arm circles, big steps, side steps and easy hops. Do ten counts of each. Your parent may sneak in one wrong move; call it out. Finish with a cool-down stretch and tell her why it matters before and after play.

UNIT 1

KEEPING ACTIVE

God made your body to move: to run, jump, climb, throw, catch and play. In this unit you will hear how a young teacher named James Naismith hung two peach baskets in a gym in the winter of 1891 and invented a brand-new game, basketball, so his students could keep moving when it was too cold to play outside. You will play your own peach-basket game at home and count your baskets.

Then you will learn why good athletes warm up before they play and cool down after. You will learn a warm-up by heart, use it before every activity this quarter, and lead your family through it.

PREREQUISITES

- Can count to 100 and tell numbers on a timer
- Can toss and catch a soft ball with a grown-up
- Has a fitness journal (any notebook) and crayons

MASTERY CHECKLIST

- ☐ I can tell how James Naismith invented basketball with two peach baskets.
- ☐ I can say how much active play children need each day: at least 60 minutes.
- ☐ I can lead my warm-up: marching, arm circles, big steps and easy hops.
- ☐ I can tell why we warm up before play and cool down after.
- ☐ I can keep a record of my baskets or my active play in my fitness journal.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Be a Fit Kid” (Nemours KidsHealth):** Free. A short kids’ article on why moving every day is good for your heart, muscles and mood. Read it aloud with Lesson 1.1.
- **A soft foam ball or a small playground ball:** Optional, for the peach-basket game. A rolled pair of socks works just as well.

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

LESSONS IN THIS UNIT

1.1 James Naismith and the Peach Baskets

3 sessions of 20–30 minutes

1.2 Warm Up, Cool Down

3 sessions of 20–30 minutes

UNIT 1 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell the story of James Naismith. Why did he invent a new game, and what did he use for goals?
2. How long should children be active every day? Show me two ways to move that make you breathe hard.
3. Show me your five-part warm-up.
4. Why do we warm up before we play? Why do we cool down after?
5. Show me a gentle stretch. How should a stretch feel?

ANSWER KEY

1. It was a snowy winter in 1891 and his students were bored indoors. His boss asked for a new indoor game. He nailed two peach baskets to the balcony railing, ten feet up, and the students threw a ball into them. That game was basketball.
2. At least 60 minutes every day. Examples: running in place, jumping, tag, hopping, skipping.
3. March, arm circles, big steps, side steps, easy hops (in any order, done gently).
4. Warming up makes our muscles warm and loose and gets our heart ready, so we play better and are less likely to get hurt. Cooling down lets our heart and breathing slow down little by little.
5. Any gentle held stretch with no bouncing. It should feel like a mild pull, never pain.

UNIT CHALLENGE: MY WEEK OF ACTIVE PLAY

For one week, keep a chart of your active play with a parent's help. Each day, color one box for every 10 minutes you ran, jumped, climbed, played a game or helped with active chores. Try to color six boxes (60 minutes) every day. Do your warm-up before you play. At the end of the week, draw your favorite active time and tell your family what you liked best.

LOOK FOR	WHAT IT MEANS
Kept the chart	The chart was filled in each day of the week, with a parent's help.
Moved every day	Your child was active every day and worked toward 60 minutes.
Warmed up	Your child used the five-part warm-up before active play and can lead it by heart.
Told about it	Your child drew a picture and told what he or she enjoyed. Effort and faithfulness count, not how many boxes.

UNIT 2

HYDRATION

More than half of your body is water. You lose some every day when you sweat, breathe out and go to the bathroom, so you need to fill up again. In this unit you will hear how a health inspector named Luther Haws saw schoolchildren all drinking from one tin cup in 1906 and built a drinking faucet so every child could have a clean drink. You will learn how much water a child your age needs and keep a water log of cups for three days.

Then you will become a drink detective. You will read the labels on drinks, measure the sugar in each one with a teaspoon, and see why water and milk are the best everyday drinks and sweet drinks are sometimes drinks.

PREREQUISITES

- Knows the five-part warm-up from Unit 1
- Can count to 50 and color in a chart
- Can scoop with a teaspoon carefully

MASTERY CHECKLIST

- ☐ I can tell the story of Luther Haws and the drinking faucet.
- ☐ I can say about how much water a child my age needs each day: about 5 cups, and more on hot or busy days.
- ☐ I can name three ways my body loses water: sweat, breath and the bathroom.
- ☐ I can tell when to drink: before, during and after play, and when I am thirsty.
- ☐ I can measure the sugar in a drink with teaspoons and tell why water is the best everyday drink.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Why Drinking Water Is the Way to Go” (Nemours KidsHealth):** Free. A short kids’ article on what water does in the body and when to drink. Read it aloud with Lesson 2.1.
- **A reusable water bottle with ounce or cup marks:** Optional. Makes the water log easier. Any cup and a measuring cup work just as well.

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

LESSONS IN THIS UNIT

2.1 How Much Water?

3 sessions of 20–30 minutes

2.2 Water or Sugary Drink?

3 sessions of 20–30 minutes

UNIT 2 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing. There are no points; note what your child knows well and what to review.

1. Tell the story of Luther Haws. What did he see at the school, and what did he build?
2. How many cups of water does a child your age need each day? When should you drink more?
3. Show me or tell me three ways water leaves your body.
4. How can you tell if you need to drink more water?
5. Point to the everyday drinks and the sometimes drinks in your sugar display. Why is water the best everyday drink?

ANSWER KEY

1. In 1906 he saw schoolchildren all drinking from one tin cup, which can spread germs. He built a drinking faucet that sent up a stream of clean water so each child could drink without a shared cup.
2. About 5 cups a day, and more on hot days or when playing hard and sweating.
3. Sweat (point to skin), breathing out (blow on a hand), and going to the bathroom (pee).
4. Feeling thirsty, dark yellow pee, a dry mouth, a headache or feeling very tired. Pale yellow pee means you are drinking enough.
5. Everyday: water and plain milk. Sometimes: soda, fruit punch, sweet tea, sports drinks. Water has no sugar, fills you with what your body needs and does not hurt your teeth.

UNIT CHALLENGE: MY WATER WEEK CHART

For one week, keep a chart of every cup of water you drink, with a parent's help. Draw your five water times each day and color a cup for each one. Mark the days you played hard and drank before, during and after. At the end of the week, count your cups for each day and make a simple bar graph by coloring a tower of squares for each day. Show your family your graph and your sugar display, and tell them why water is the best everyday drink.

LOOK FOR	WHAT IT MEANS
Kept the chart	Cups were colored each day of the week, with honest numbers.
Drank through the day	Your child used water times and drank before, during and after play.
Bar graph	A tower of colored squares for each day, neatly made with a parent's help.
Told about it	Your child explained the graph and the sugar display to the family. Effort and faithfulness count, not the biggest number.

2.1 HOW MUCH WATER?

OBJECTIVES

- Tell how Luther Haws invented a drinking faucet so schoolchildren would not share one cup.
- Explain simply what water does in the body and three ways the body loses water.
- Say how much water a child needs each day and keep a three-day water log in cups.

Warm-up. Do your five-part warm-up (march, arm circles, big steps, side steps, easy hops). Then do 20 jumping jacks and sit down. Do you feel warmer? Is your mouth a little dry? Think about it: where does the water in your body go when you play hard?

WATCH

How the Urinary System Works

Nemours KidsHealth • 5:14

https://www.youtube.com/watch?v=2_7Q1xQ-NWU

WHEN TO WATCH

After “How your body works.” Watch how your kidneys clean your blood and make pee, and why drinking water helps.

Note: A cartoon from a children’s hospital. It talks plainly about pee and the bathroom, in a friendly way for young children.

KEY TERMS

hydrated

Having enough water in your body.

thirsty

The feeling that tells you your body needs water.

sweat

Water that comes out of your skin to cool you down.

kidneys

Two bean-shaped parts in your back that clean your blood and make pee.

CORE IDEAS

The story. About a hundred years ago, many schools had one bucket of water and one tin cup. Every child drank from the same cup! In 1906 a man named Luther

Haws was a health inspector in Berkeley, California. His job was to help keep the town clean and healthy. One day he visited a school and saw the children all drinking from that one cup. He knew that germs can pass from one mouth to another on a shared cup.

How they figured it out. Luther Haws was also a plumber, so he knew how water pipes work. He took some spare parts and built a faucet that sent a little stream of clean water up into the air. A child could lean over and drink without touching any cup at all. The school leaders in Berkeley liked it so much that they put his faucets in their schools. Soon drinking fountains were in schools and parks all over the country, so every child could have a clean drink of water whenever he was thirsty.

How your body works. More than half of your body is water! Water is in your blood, which carries food and air to every part of you. Water cushions your joints and helps your food move through your tummy. When you play, you sweat, and the sweat cools you down. You also lose water when you breathe out and when you go to the bathroom. Your two kidneys clean your blood and send extra water and waste out as pee. So you need to refill every day. A child your age needs about 5 cups of water a day, and more on hot days or busy, sweaty days. Some water also comes from foods like watermelon, oranges, soup and milk.

Think it through. Your body sends you signals. Feeling thirsty means “drink now!” Pee that is pale yellow, like lemonade, means you are drinking enough. Dark yellow pee, a dry mouth, a headache or feeling very tired can mean you need more water. In the wilderness God gave His thirsty people water from a rock. Clean water is a gift, and we can thank Him for it.

Try it. This week you will keep a water log. For three days you will color in a cup on your chart every time you drink one cup of water, and see if you can reach about 5 cups, sipping a little at a time all through the day.

PICTURE STUDY



The Copper Drinking Fountain, Jean-Baptiste-Siméon Chardin, About 1734 · Oil on wood · Musée du Louvre, Paris

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

Jean-Baptiste-Siméon Chardin was a French painter who loved to paint simple things from the kitchen. About three hundred years ago, before houses had water pipes, families kept clean drinking water in a big copper tank like this one. They filled it with water carried from a well or fountain and poured a drink from the little tap.

Look closely

- Find the tap on the copper tank. What would happen if you turned it?
- Find the pail, the jug and the ladle. What could each one be used for?
- Look at the shiny copper. Where does the light hit it? How did Chardin make it look like metal?
- Look at the floor and the wall. Is this a fancy room or a plain kitchen corner?

Talk about it

1. Who had to carry the water to fill this tank? How heavy do you think a full pail of water would be?
2. How do you get a drink of clean water at your house? How is it easier than long ago?

3. Why is it good to have water close by all day long?

Safety first. Drink water through the day, a few sips at a time; there is no need to gulp huge amounts at once. Drink before, during and after active play, and more on hot days. Tell an adult if you feel dizzy, have a headache or feel very tired when you are playing in the heat.

ACTIVITY

My Three-Day Water Log

Water you drink goes in, and water you sweat, breathe and pee goes out. You will keep track of how many cups of water you drink for three days and see if you can reach about 5 cups a day. On the third day you will try a plan to do even better.

You will need

- Your own cup or water bottle
- A measuring cup (1 cup = 8 ounces)
- A water-log chart in your fitness journal: draw 8 empty cups for each of three days
- Crayons

Steps

1. **Measure your cup.** With a parent, pour one measuring cup of water into your own cup or bottle. Mark that line with tape or a marker, or remember how full it looks. That is one cup.
2. **Day 1: just notice.** Drink the way you usually do. Each time you finish one cup of water, color one cup on your chart. Count milk too, but color it a different color.
3. **Check your signals.** Twice during the day, notice: Am I thirsty? Is my pee pale yellow like lemonade or dark yellow? Draw a happy face or a thirsty face on your chart.
4. **Count at bedtime.** How many cups of water did you color? Write the number.
5. **Day 2: make a plan.** Plan five water times: breakfast, mid-morning, lunch, after play, and supper. Draw a little picture of each time on your chart. Drink one cup at each time and color it in.
6. **Move and refill.** On Day 2, play actively for 20 minutes (tag, the peach-basket game or running in the yard) after your warm-up. Drink half a cup before you play, sip during your rest, and drink half a cup after.

7. **Day 3: do it again.** Follow your plan again. Did you reach about 5 cups? Did your signals show happy faces?

8. **Compare.** Look at your three days. Which day had the most cups? Circle it.

Tips

- Keep your water bottle where you can see it. You will remember to drink more often.
- Cold water from the tap with a slice of orange or a few berries tastes fresh and has no added sugar.
- Sip a little at a time through the day. Your body uses water best that way.

Check your work

- ☐ I can tell how Luther Haws made drinking water clean and easy for schoolchildren.
- ☐ I kept my water log for three days and counted my cups.
- ☐ I made a water plan and tried to reach about 5 cups a day.

FITNESS JOURNAL

1. Color your three-day water log. Write the number of cups for each day.
2. Draw yourself, and draw arrows showing three ways water leaves your body: sweat, breath and the bathroom.
3. Draw the copper water tank from the picture, and next to it draw where you get water at home.
4. Write or tell: When did you feel thirsty this week? What did you do?

From history. In 1909 Luther Haws started a company in Berkeley to make his drinking faucets, and the company still makes drinking fountains today. Drinking fountains in schools are lower and higher so children and grown-ups can both reach.

COMMON MISTAKES

- Waiting until you are very thirsty to drink. Drink a little all day, and before, during and after play.
- Gulping a whole bottle at once. Sipping through the day is better.
- Thinking only plain water counts. Milk, soup and juicy fruits give water too, but water is the best everyday drink.

Make it a game • Faucet Inventor Quiz. Be Luther Haws explaining your new drinking faucet. Tell your parent why children should not share one cup. Then act out three ways the body loses water: sweat after ten jumping jacks, breathing out and going to the bathroom. She counts how many you remember in thirty seconds. Beat your count.

Scripture. “thou shalt smite the rock, and there shall come water out of it, that the people may drink” (Exodus 17:6, KJV)

When the people of Israel were thirsty in the desert, God gave them water from a rock. Clean water is His gift to us every day.

2.2 WATER OR SUGARY DRINK?

OBJECTIVES

- Tell how a dentist named Willoughby Miller discovered how sugar helps germs make holes in teeth.
- Measure the sugar in several drinks with teaspoons, using the grams on the label.
- Name everyday drinks (water and milk) and sometimes drinks (soda, sweet tea, fruit drinks, sports drinks).

Warm-up. Do your five-part warm-up. Then play “Water or Soda?”: a parent calls out a drink. If it is an everyday drink (water, milk), jump high and touch the sky. If it is a sometimes drink (soda, fruit punch, sweet tea), crouch down low like a little ball. Think about it: why do you think water and milk get the big jump?

WATCH

How Much Sugar is in Soda? (Signing Savvy) S1 E18

WonderGrove Kids · 1:45

https://www.youtube.com/watch?v=lbb1Se_ttvc

WHEN TO WATCH

Before the activity. Watch a boy count teaspoons of sugar into a cup for a bottle of soda, then try it yourself.

Note: A short children’s health cartoon with a real boy measuring sugar. A sign-language interpreter appears in a small box in the corner.

KEY TERMS

sugar

A sweet food. A little gives quick energy, but too much is not good for your teeth or your body.

label

The words and numbers on a package that tell what is inside.

gram

A very small amount of weight. One teaspoon of sugar is about 4 grams.

cavity

A hole in a tooth made by germs that feed on sugar.

CORE IDEAS

The story. Long ago, sugar was rare and costly. In Bible times, honey was a special treat. Today sugar is cheap and easy to find, and lots of drinks have sugar added to them. More than a hundred years ago, an American dentist named Willoughby Miller wondered why so many people got holes in their teeth.

How they figured it out. Dr. Miller worked in a laboratory in Germany. He looked at the tiny germs from people's mouths under a microscope. He put pieces of teeth with germs and different foods and watched what happened. He found that when the germs ate sugar, they made an acid, a sour juice that slowly ate away at the hard outside of the tooth and made a hole, called a cavity. In 1890 he wrote a book about what he found. Dentists still teach his idea today: the more often sugar sits on your teeth, the more the germs can make holes.

How your body works. Your body runs best on water. Water has no sugar at all. Milk has calcium for strong bones and teeth. Soda, fruit punch, lemonade, sweet tea and sports drinks have a lot of added sugar. One can of soda can have about 10 teaspoons of sugar! Children should have less than 6 teaspoons of added sugar in a whole day, from all their food and drinks together. Too many sweet drinks can fill you up so you do not want your growing foods, and the sugar can hurt your teeth. Sweet drinks are sometimes drinks: fine for a party or a special day. Water and milk are everyday drinks.

Think it through. The Bible says, "Hast thou found honey? eat so much as is sufficient for thee." That means honey is good, but enough is enough. Treats are good gifts from God in their place, and self-control helps us enjoy them well.

Try it. This week you will be a drink detective. You will find the sugar number on drink labels, change grams into teaspoons with a parent's help, and spoon real sugar into cups so you can see how much each drink has.

PICTURE STUDY



Boy and Girl at a Well, Winslow Homer, About 1879 · Watercolor and pencil on paper · Private collection

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

Winslow Homer was an American painter who liked to paint children on farms. Long ago there was no tap in the kitchen. Children often helped bring fresh water up from the well in a bucket, and on a hot day a cool drink from the well was the best thing in the world.

Look closely

- Find the bucket. Is it going up or coming down?
- Find the long pole. How does the girl use it to pull the water up?
- Look at the boy. What is he doing while he waits?
- Look at the hills and trees. Does it look like a hot summer day?

Talk about it

1. Is cool well water an everyday drink or a sometimes drink? Why?
2. These children had no soda or juice boxes. What did they drink when they were thirsty?
3. Where does the water in your house come from? How could you keep a cup of water ready when you play?

Safety first. A parent helps with the sugar display and checks for food allergies before any tasting. Do not eat spoonfuls of sugar; it is for looking at. Wipe up spills right away so no one slips.

ACTIVITY

Drink Detective: The Sugar Display

Labels tell how much sugar is in a drink, but grams are hard to picture. You will turn grams into teaspoons and spoon real sugar into clear cups so you can see it with your own eyes. Then you will plan a week of drinks and try a water challenge.

You will need

- Labels from 3 to 5 drinks (soda, juice drink, sports drink, chocolate milk, plain milk) or pictures of the labels
- A bottle or glass of plain water
- Sugar, a teaspoon and small clear cups or zip bags
- Sticky notes or paper for name tags
- Your fitness journal

Steps

1. **Warm up (3 minutes):** do the “Water or Soda?” game from the start of the lesson.
2. **Find the sugar line.** With a parent, find the words “Total Sugars” and “Added Sugars” on each label and the number of grams (g). Also find how many servings are in the bottle.
3. **Turn grams into teaspoons.** A parent helps you divide: every 4 grams of sugar is about 1 teaspoon. (40 grams is about 10 teaspoons.) Write the number for each drink.
4. **Make the display.** Put one clear cup or bag next to each drink. Spoon in the right number of level teaspoons of sugar, counting out loud. Put a name tag on each cup.
5. **Water’s turn.** Put an empty cup next to the water. Water has zero teaspoons!
6. **Line them up.** Put the cups in order from the least sugar to the most. Which drink has the most? Which has none?
7. **Plan your week.** Draw a chart with 7 days. Plan water or milk for every day, and pick one day for a small sometimes drink if your parents say yes.

8. Session 3: the water challenge. Play actively for 15 minutes after your warm-up, then drink water. Keep your drink chart for the rest of the week and color each day that you chose water or milk.

Tips

- Use level teaspoons: scrape the extra off with the back of a butter knife.
- Plain milk has some natural sugar from the milk itself. Look at the “Added Sugars” line to find the sugar people put in.
- Save the sugar afterward for baking, so nothing is wasted.

Check your work

- ☐ I can tell how Dr. Miller found out that sugar helps germs make holes in teeth.
- ☐ I measured the sugar in drinks with teaspoons and lined them up from least to most.
- ☐ I can name everyday drinks and sometimes drinks.

FITNESS JOURNAL

1. Draw your sugar display: each drink with its cup of sugar, and write the number of teaspoons under each one.
2. Draw a tooth. Show tiny germs eating sugar and making a hole, and a toothbrush coming to help.
3. Color your 7-day drink chart: blue for water, white for milk.
4. Write or tell: Which drink surprised you the most? Why?

From history. For hundreds of years, many people believed holes in teeth were made by tiny worms! Dr. Miller’s careful work under the microscope helped show that the real cause was germs feeding on sugar. That is why we brush our teeth twice a day and drink water after sweet foods.

COMMON MISTAKES

- Thinking a drink is healthy because it has fruit on the label. Fruit drinks and punch often have lots of added sugar.
- Thinking sports drinks are needed after play. For children’s everyday play, water is best.
- Thinking treats are bad. A sometimes drink at a birthday party is fine; water and milk are for every day.

Make it a game • Spoon Sugar Guess. Line up three drinks or empty labels from the kitchen. Guess how many teaspoons of sugar each has before you read the grams. Divide the grams by four for the real answer, then spoon that much sugar onto a plate to see it. Closest guesses win. Say which drink helps teeth most.

Scripture. “Hast thou found honey? eat so much as is sufficient for thee” (Proverbs 25:16, KJV)

Sweet things are good gifts, and the Bible teaches us to enjoy them with self-control: enough is enough.

UNIT 2

HYDRATION

More than half of your body is water. You lose some every day when you sweat, breathe out and go to the bathroom, so you need to fill up again. In this unit you will hear how a health inspector named Luther Haws saw schoolchildren all drinking from one tin cup in 1906 and built a drinking faucet so every child could have a clean drink. You will learn how much water a child your age needs and keep a water log of cups for three days.

Then you will become a drink detective. You will read the labels on drinks, measure the sugar in each one with a teaspoon, and see why water and milk are the best everyday drinks and sweet drinks are sometimes drinks.

PREREQUISITES

- Knows the five-part warm-up from Unit 1
- Can count to 50 and color in a chart
- Can scoop with a teaspoon carefully

MASTERY CHECKLIST

- ☐ I can tell the story of Luther Haws and the drinking faucet.
- ☐ I can say about how much water a child my age needs each day: about 5 cups, and more on hot or busy days.
- ☐ I can name three ways my body loses water: sweat, breath and the bathroom.
- ☐ I can tell when to drink: before, during and after play, and when I am thirsty.
- ☐ I can measure the sugar in a drink with teaspoons and tell why water is the best everyday drink.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Why Drinking Water Is the Way to Go” (Nemours KidsHealth):** Free. A short kids’ article on what water does in the body and when to drink. Read it aloud with Lesson 2.1.
- **A reusable water bottle with ounce or cup marks:** Optional. Makes the water log easier. Any cup and a measuring cup work just as well.

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

LESSONS IN THIS UNIT

2.1 How Much Water?

3 sessions of 20–30 minutes

2.2 Water or Sugary Drink?

3 sessions of 20–30 minutes

UNIT 2 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing. There are no points; note what your child knows well and what to review.

1. Tell the story of Luther Haws. What did he see at the school, and what did he build?
2. How many cups of water does a child your age need each day? When should you drink more?
3. Show me or tell me three ways water leaves your body.
4. How can you tell if you need to drink more water?
5. Point to the everyday drinks and the sometimes drinks in your sugar display. Why is water the best everyday drink?

ANSWER KEY

1. In 1906 he saw schoolchildren all drinking from one tin cup, which can spread germs. He built a drinking faucet that sent up a stream of clean water so each child could drink without a shared cup.
2. About 5 cups a day, and more on hot days or when playing hard and sweating.
3. Sweat (point to skin), breathing out (blow on a hand), and going to the bathroom (pee).
4. Feeling thirsty, dark yellow pee, a dry mouth, a headache or feeling very tired. Pale yellow pee means you are drinking enough.
5. Everyday: water and plain milk. Sometimes: soda, fruit punch, sweet tea, sports drinks. Water has no sugar, fills you with what your body needs and does not hurt your teeth.

UNIT CHALLENGE: MY WATER WEEK CHART

For one week, keep a chart of every cup of water you drink, with a parent's help. Draw your five water times each day and color a cup for each one. Mark the days you played hard and drank before, during and after. At the end of the week, count your cups for each day and make a simple bar graph by coloring a tower of squares for each day. Show your family your graph and your sugar display, and tell them why water is the best everyday drink.

LOOK FOR	WHAT IT MEANS
Kept the chart	Cups were colored each day of the week, with honest numbers.
Drank through the day	Your child used water times and drank before, during and after play.
Bar graph	A tower of colored squares for each day, neatly made with a parent's help.
Told about it	Your child explained the graph and the sugar display to the family. Effort and faithfulness count, not the biggest number.

UNIT 3

NUTRITION

Food is a gift from God and the fuel your body runs on. In this unit you will hear how the astronaut John Glenn ate applesauce from a tube while flying around the earth in 1962, when no one was sure a person could even swallow in space. You will learn about “go” foods that give energy, “grow” foods that build your body, and “glow” foods that protect it, and you will sort foods and help make a fuel snack plate.

Then you will hear the true story of Daniel in Babylon, who asked for vegetables and water instead of the king’s rich food and was healthier after ten days. You will take your own ten-day colorful-plate challenge and try a new vegetable.

PREREQUISITES

- Knows that water is the best everyday drink (Unit 2)
- Can wash hands well before handling food
- Can name a few fruits and vegetables

MASTERY CHECKLIST

- ☐ I can tell how John Glenn tested eating in space.
- ☐ I can sort foods into go foods (energy), grow foods (building) and glow foods (protecting).
- ☐ I can name the five food groups: fruits, vegetables, grains, protein and dairy.
- ☐ I can tell the story of Daniel and the king’s food.
- ☐ I can help make a snack or plate with foods of many colors, and I tried a new vegetable.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“How to Make Healthy Food Choices” (Nemours KidsHealth):** Free. A kids’ article on the five food groups and the MyPlate picture. Read it aloud with Lesson 3.1.

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

LESSONS IN THIS UNIT

3.1 Food Is Fuel

3 sessions of 20–30 minutes

UNIT 3 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing. There are no points; note what your child knows well and what to review.

1. What did John Glenn eat in space, and what did his test show?
2. Point to a go food, a grow food and a glow food in the kitchen. What does each kind do for your body?
3. Name the five food groups.
4. Tell the story of Daniel's ten-day test.
5. Show me your colorful-plate chart. Why is it good to eat many colors?

ANSWER KEY

1. He ate applesauce from a tube (and little sugar tablets). It showed that people can swallow and eat while floating in space.
2. Go foods (bread, rice, oatmeal, potatoes, fruit) give energy. Grow foods (eggs, meat, fish, beans, milk, cheese, nuts) build muscles and bones. Glow foods (fruits and vegetables) have vitamins that keep you healthy.
3. Fruits, vegetables, grains, protein and dairy.
4. Daniel did not want to eat the king's food. He asked for ten days of vegetables (pulse) and water. After ten days he and his friends looked healthier and stronger than the others, and God gave them wisdom.
5. Different colored fruits and vegetables have different vitamins and minerals that help us grow, heal and stay well.

UNIT CHALLENGE: A SNACK I MADE FOR MY FAMILY

With a parent, plan and make a healthy snack for your family. It must have a go food, a grow food and at least two colors of glow foods. Draw your plan first, wash your hands, help prepare it (a parent does any cutting or cooking), and serve it with water. Ask your family to say what they liked. Put your drawing, a photo or picture of the snack, and your ten-day colorful-plate chart in your folder.

LOOK FOR	WHAT IT MEANS
Planned it	Your child drew a plan with a go, a grow and two glow foods.
Helped make it safely	Your child washed hands, helped prepare the food and let a grown-up handle knives and heat.
Served it kindly	Your child served the family, offered water and said thank you to God.
Ten-day chart	The colorful-plate chart was kept honestly for ten days. Faithful effort counts, not perfect days.

3.1 FOOD IS FUEL

OBJECTIVES

- Tell how John Glenn tested eating in space in 1962.
- Explain simply that some foods give energy (go), some build the body (grow), and some protect it (glow).
- Sort real foods into groups and help make a fuel snack plate with a go, a grow and a glow food.

Warm-up. Rocket warm-up: do your five-part warm-up. Then crouch down low and count backward from 10 to 1, and blast off with a big jump, arms high. Do it 5 times. Float back down slowly like an astronaut. Think about it: a rocket needs fuel to fly. What does your body use for fuel?

WATCH

The 5 Fabulous Food Groups

SciShow Kids · 4:31

<https://www.youtube.com/watch?v=L9ymkJK2QCU>

WHEN TO WATCH

After “How your body works.” Learn the five food groups and play the quiz at the end.

BACKUP VIDEO

What Do Astronauts Eat in Space?

NASA Johnson · 1:33

<https://www.youtube.com/watch?v=0nOlFG6XEpo>

After “The story.” See what astronauts eat on the International Space Station today.

KEY TERMS

fuel

Something that gives energy to make a thing go, like gas for a car or food for your body.

go foods

Foods that give quick energy, like bread, rice, pasta, oatmeal, potatoes and fruit. They have carbohydrates.

grow foods

Foods that help build muscles and bones, like eggs, meat, fish, beans, nuts, milk and cheese. They have protein.

glow foods

Fruits and vegetables full of vitamins that help keep you healthy and strong.

CORE IDEAS

The story. On February 20, 1962, an American astronaut named John Glenn climbed into a tiny spacecraft called *Friendship 7*. A huge rocket carried him up into space, and he flew around the whole earth three times in about five hours. He had a special job to do. No American had ever eaten in space. Some doctors worried that without gravity, food might not go down to your stomach. Could a person even swallow up there?

How they figured it out. John Glenn tested it. He squeezed applesauce out of a tube, like toothpaste, into his mouth and swallowed. It went down just fine! He also ate little sugar tablets. His test showed that your body can swallow and eat even while floating in space. Since then, astronauts have eaten all kinds of food in space: tortillas, fruit, eggs, nuts and even vegetables they grow on the space station.

How your body works. Food is fuel. Your body uses it to run, think, grow and stay well. **Go foods** like bread, rice, oatmeal, potatoes and fruit give you energy to play. Their energy comes from carbohydrates. **Grow foods** like eggs, chicken, fish, beans, nuts, milk and cheese have protein, which builds your muscles and helps you grow. **Glow foods** are fruits and vegetables, full of vitamins that help you see, heal and fight germs. A little fat, from foods like nuts, milk and olive oil, gives lasting energy too. The five food groups are fruits, vegetables, grains, protein and dairy. Eating from all of them gives your body what it needs.

Think it through. The Bible says, “Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God.” Every meal is a gift. We thank God for it, and we eat a variety of good foods so our bodies are ready to work and play.

Try it. This week you will play a food-sorting game, then help make a fuel snack plate with a go food, a grow food and a glow food.

PICTURE STUDY



Owen Garriott Prepares a Meal on Skylab, NASA, 1973 · Photograph · NASA (Skylab space station)

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

Eleven years after John Glenn ate his applesauce, three astronauts lived on a space station called Skylab for almost two months. This photograph shows the astronaut Owen Garriott getting a meal ready at the station's table. The food came in cans and packets kept in the lockers behind him.

Look closely

- Find the food packet in his hands. What do you think is inside?
- Look at the little trays on the table. How many can you count? Why do you think the food is in small trays with lids?
- Look at the lockers behind him. What might be stored in them?
- Look at his face. Does he look happy to eat?

Talk about it

1. If food floated away in space, how would you keep it on your plate?
2. Astronauts work hard in space. What go, grow and glow foods would you pack for them?
3. What is your favorite meal? Which food groups are in it?

Safety first. Wash your hands with soap before you touch food. A parent handles knives, the stove and anything hot, and checks for food allergies before you taste anything. Keep the sorting game safe: walk or jog, and clear the floor of things you could trip on.

ACTIVITY

Go, Grow, Glow Sorting Race and Fuel Snack Plate

First you will play an active sorting game with real foods from your kitchen. Then you will help make a fuel snack plate with one go food, one grow food and one glow food, the way astronauts plan meals to keep them strong.

You will need

- 10 to 15 foods or food packages from the kitchen (bread, rice, oatmeal, a potato, an apple, a banana, carrots, an egg carton, a can of beans, peanut butter, cheese, milk)
- Three baskets, boxes or towels labeled GO, GROW and GLOW
- A timer
- Snack foods for the plate, a plate and a butter knife
- Your fitness journal

Steps

1. **Warm up (3 minutes):** do the rocket warm-up.
2. **Set up the race.** Put the foods in a pile at one end of the room and the three labeled baskets at the other end, about 10 big steps away.
3. **Sorting race.** Start the timer. Pick up one food, jog to the baskets, put it in the right one (GO for energy, GROW for building, GLOW for fruits and vegetables), and jog back. Keep going until the pile is gone. Write your time.
4. **Check together.** With a parent, check each basket. Move any food that is in the wrong place. (Some foods fit two groups: milk is a grow food, and it has go energy too.)
5. **Race again.** Mix up the pile and race again. Can you sort them all correctly and beat your first time?
6. **Wash your hands.** Now get ready to make a snack.
7. **Make a fuel snack plate.** With a parent, choose one go food (whole-grain crackers, a slice of bread, a few whole-grain pretzels), one grow food (cheese, a boiled egg, peanut butter, yogurt) and one glow food (apple slices, baby

carrots, berries, cucumber). Arrange them on your plate and say thank you to God before you eat.

8. Session 3: plan a day. Draw a plate for breakfast, lunch and supper. Color a go, grow and glow food on each one. Help make one of those meals.

Tips

- Brown bread, brown rice and oatmeal are whole grains. They give longer-lasting energy than white bread.
- Try to make your glow foods two different colors.
- Snacks are fuel for play, not a prize for good behavior.

Check your work

- ☐ I can tell how John Glenn tested eating in space.
- ☐ I sorted foods into go, grow and glow and beat my first time.
- ☐ I helped make a snack plate with a go, a grow and a glow food.

FITNESS JOURNAL

1. Draw your fuel snack plate. Label the go, grow and glow foods.
2. Write your two sorting-race times. Circle the faster one.
3. Draw John Glenn in his space capsule eating applesauce from a tube.
4. Draw a plate for one meal this week and color the five food groups you ate.

From history. John Glenn named his spacecraft *Friendship 7* and asked his children to help choose the name. Today astronauts on the International Space Station grow lettuce and other vegetables in a small garden in space and eat them fresh.

COMMON MISTAKES

- Eating only go foods (like crackers and bread) and forgetting grow and glow foods.
- Thinking a snack must come from a package. Fruit, vegetables, cheese and nuts are great snacks.
- Skipping breakfast. Your body needs fuel in the morning to learn and play.

Make it a game • Go Grow Glow Sort. Make three circles: go, grow and glow. Your parent holds up a food and you sprint to place it in the correct circle. Race the timer for ten foods. Then build a snack plate with one from each circle and explain why. Try to beat your sorting time the next round.

3.2 DANIEL AND THE KING’S FOOD

OBJECTIVES

- Tell the true story of Daniel and his friends and their ten-day test in Babylon (Daniel 1).
- Explain why vegetables and fruits of many colors help the body grow strong and well.
- Keep a ten-day colorful-plate chart and try at least one new vegetable.

Warm-up. Rainbow warm-up: do your five-part warm-up. Then a parent calls out a color. For red, do 5 hops like a jumping tomato. For orange, 5 big carrot reaches to the sky. For yellow, 5 banana side bends. For green, 5 tall broccoli tree stands on one foot. For purple, 5 grape squats. Think about it: why do you think God made fruits and vegetables in so many colors?

WATCH

Daniel & the King's Food (stick puppet bible storytelling)

Wright Ideas with Susan · 4:07

https://www.youtube.com/watch?v=RL5CL_NjASs

WHEN TO WATCH

After you read “The story.” Watch the story told with simple paper puppets, then try telling it with your own puppets.

Note: A small children’s ministry channel. The teller retells Daniel 1 faithfully with paper stick puppets; it is a gentle model for your child’s own puppet retelling.

KEY TERMS

Babylon

A great city long ago, ruled by King Nebuchadnezzar, where Daniel was taken as a young man.

pulse

In the King James Bible, food grown from seeds, such as vegetables and beans.

test

A careful try to find out what is true.

vitamins

Tiny helpers in food that keep your body healthy. Fruits and vegetables are full of them.

CORE IDEAS

The story. Long ago, King Nebuchadnezzar of Babylon brought some young men from Israel to his palace to train them to serve him. One of them was Daniel. His friends were Hananiah, Mishael and Azariah. The king ordered that they eat rich food and drink from his own table. But Daniel decided in his heart not to eat the king's food. He wanted to obey God.

How they figured it out. The man in charge was afraid. "If you look weaker than the other young men, the king will be angry with me!" So Daniel asked for a test. "Give us pulse to eat and water to drink for ten days," he said. Pulse means vegetables and food from seeds, like beans. "Then look at us, and look at the young men who eat the king's food, and decide." The man agreed. After ten days, Daniel and his friends looked healthier and stronger than all the young men who ate the king's food! So they kept eating vegetables and drinking water, and God gave them wisdom and learning.

How your body works. Vegetables and fruits are full of vitamins and minerals, the tiny helpers your body needs to grow, heal cuts and fight germs. Different colors have different helpers: orange carrots help your eyes, green leaves help your blood, red tomatoes and purple berries help keep you well. Beans give protein to build muscles. That is why it is good to eat a rainbow of colors every day. Try to fill half your plate with fruits and vegetables.

Think it through. Daniel's test was brave and wise. He trusted God, and he also asked for a fair test and let people see the results. Daniel was faithful in small things, like what he ate, and God blessed him. We can be faithful too, by thanking God for good food and choosing it gladly.

Try it. This week you will begin a ten-day colorful-plate challenge, just as long as Daniel's test. Each day you will color in every color of fruit and vegetable you ate, and you will try at least one new vegetable.

PICTURE STUDY



Still Life with Cucumbers and Tomatoes, Luis Egidio Meléndez, 1774 · Oil on canvas · Museo del Prado, Madrid

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

Luis Meléndez was a Spanish painter who painted simple foods so carefully that they look real enough to pick up. A painting of things on a table, with no people, is called a still life. Here he painted fresh cucumbers and tomatoes from a Spanish garden, with dishes and jugs ready for a meal.

Look closely

- Count the cucumbers. Count the tomatoes. Which are there more of?
- Look at the bumps on the cucumbers and the folds on the tomatoes. How did he make them look so real?
- Find the jugs and the pitcher. What might be inside them: water, oil, vinegar?
- What colors do you see? Which colors from your rainbow chart are here?

Talk about it

1. What could you make with these cucumbers and tomatoes?
2. Daniel ate “pulse”: vegetables and food from seeds. Which foods in this painting grew from seeds in a garden?
3. What vegetable would you like to try this week?

Safety first. Wash your hands and the vegetables before you eat. A parent does all the cutting with a sharp knife and checks for food allergies before you taste anything new. Sit down to eat, and take small bites.

ACTIVITY

The Ten-Day Colorful-Plate Challenge

Daniel's test lasted ten days. Yours will too! Each day you will color in a box for every color of fruit and vegetable you ate. You will also have a tasting party to try new vegetables, and you will make a "Daniel snack."

You will need

- A ten-day chart in your fitness journal: 10 rows (days) and 5 columns (red, orange and yellow, green, blue and purple, white and tan)
- Crayons
- Three or four vegetables to taste (for example: snap peas, red pepper, cucumber, jicama, cherry tomatoes)
- For the Daniel snack: hummus or bean dip, or beans, with vegetable sticks
- Small plates and a cup of water

Steps

1. **Warm up (3 minutes):** do the rainbow warm-up.
2. **Make your chart.** Draw 10 rows for 10 days and 5 color columns. Write today's date on Day 1.
3. **Tasting party.** Wash hands. A parent cuts three or four vegetables into small pieces. Taste one bite of each. For each one, draw a face on your chart: smile, okay or not yet. "Not yet" is fine; it can take many tries to like a new food.
4. **Make a Daniel snack.** Dip vegetable sticks in hummus or bean dip (beans are "pulse"!) and drink a cup of water. Thank God for the food.
5. **Color each day.** Every evening for ten days, color one box for each color of fruit or vegetable you ate that day. Try to color at least three colors every day.
6. **Keep moving.** Each day of the challenge, also play actively and drink water, the way Daniel and his friends kept training for the king.
7. **Session 3: taste again.** Taste the "not yet" vegetable again, prepared a new way (raw, cooked or with dip). Did your face change?

8. **Day 10: compare.** Count how many boxes you colored on Day 1 and on Day 10. Which colors did you eat most? Which do you want more of?

Tips

- Help choose and wash vegetables at the store or garden. Children like food they helped pick.
- One small bite is a brave start.
- Frozen and canned vegetables count too.

Check your work

- ☐ I can tell the story of Daniel's ten-day test.
- ☐ I kept my colorful-plate chart and tried at least one new vegetable.
- ☐ I can explain why we eat fruits and vegetables of many colors.

FITNESS JOURNAL

1. Keep your ten-day colorful-plate chart. Color every box honestly.
2. Draw Daniel and his three friends with a plate of vegetables and a cup of water.
3. Draw the tasting-party faces for each vegetable you tried.
4. Write or tell: Which new vegetable did you like? How would you like to eat it next time?

From history. The book of Daniel tells that Daniel served in Babylon for many years, under several kings, all the way to the reign of King Cyrus of Persia. The four friends are better known by their Babylonian names: Daniel was Belteshazzar, and his friends were Shadrach, Meshach and Abednego.

COMMON MISTAKES

- Giving up after one taste. It can take ten or more tries to like a new food.
- Eating only one color, like only green beans. Try many colors.
- Thinking Daniel's story means all other food is bad. Daniel obeyed God's law; the lesson for us is faithfulness and good food gladly eaten.

Make it a game • Daniel's Ten Days. Be Daniel in Babylon. Stand tall and tell your parent why you want vegetables and water instead of the king's rich food. Then she plays the guard and asks, Why colors? Answer by naming three colorful foods and what they do for your body. Swap roles and see who is better at saying the story.

Scripture. “Prove thy servants, I beseech thee, ten days; and let them give us pulse to eat, and water to drink.” (Daniel 1:12, KJV)

“Prove” means test, and “pulse” means vegetables and food from seeds. Daniel trusted God and asked for a fair test, and God blessed him.

UNIT 3

NUTRITION

Food is a gift from God and the fuel your body runs on. In this unit you will hear how the astronaut John Glenn ate applesauce from a tube while flying around the earth in 1962, when no one was sure a person could even swallow in space. You will learn about “go” foods that give energy, “grow” foods that build your body, and “glow” foods that protect it, and you will sort foods and help make a fuel snack plate.

Then you will hear the true story of Daniel in Babylon, who asked for vegetables and water instead of the king’s rich food and was healthier after ten days. You will take your own ten-day colorful-plate challenge and try a new vegetable.

PREREQUISITES

- Knows that water is the best everyday drink (Unit 2)
- Can wash hands well before handling food
- Can name a few fruits and vegetables

MASTERY CHECKLIST

- ☐ I can tell how John Glenn tested eating in space.
- ☐ I can sort foods into go foods (energy), grow foods (building) and glow foods (protecting).
- ☐ I can name the five food groups: fruits, vegetables, grains, protein and dairy.
- ☐ I can tell the story of Daniel and the king’s food.
- ☐ I can help make a snack or plate with foods of many colors, and I tried a new vegetable.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“How to Make Healthy Food Choices” (Nemours KidsHealth):** Free. A kids’ article on the five food groups and the MyPlate picture. Read it aloud with Lesson 3.1.

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

LESSONS IN THIS UNIT

3.1 Food Is Fuel

3 sessions of 20–30 minutes

UNIT 3 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing. There are no points; note what your child knows well and what to review.

1. What did John Glenn eat in space, and what did his test show?
2. Point to a go food, a grow food and a glow food in the kitchen. What does each kind do for your body?
3. Name the five food groups.
4. Tell the story of Daniel's ten-day test.
5. Show me your colorful-plate chart. Why is it good to eat many colors?

ANSWER KEY

1. He ate applesauce from a tube (and little sugar tablets). It showed that people can swallow and eat while floating in space.
2. Go foods (bread, rice, oatmeal, potatoes, fruit) give energy. Grow foods (eggs, meat, fish, beans, milk, cheese, nuts) build muscles and bones. Glow foods (fruits and vegetables) have vitamins that keep you healthy.
3. Fruits, vegetables, grains, protein and dairy.
4. Daniel did not want to eat the king's food. He asked for ten days of vegetables (pulse) and water. After ten days he and his friends looked healthier and stronger than the others, and God gave them wisdom.
5. Different colored fruits and vegetables have different vitamins and minerals that help us grow, heal and stay well.

UNIT CHALLENGE: A SNACK I MADE FOR MY FAMILY

With a parent, plan and make a healthy snack for your family. It must have a go food, a grow food and at least two colors of glow foods. Draw your plan first, wash your hands, help prepare it (a parent does any cutting or cooking), and serve it with water. Ask your family to say what they liked. Put your drawing, a photo or picture of the snack, and your ten-day colorful-plate chart in your folder.

LOOK FOR	WHAT IT MEANS
Planned it	Your child drew a plan with a go, a grow and two glow foods.
Helped make it safely	Your child washed hands, helped prepare the food and let a grown-up handle knives and heat.
Served it kindly	Your child served the family, offered water and said thank you to God.
Ten-day chart	The colorful-plate chart was kept honestly for ten days. Faithful effort counts, not perfect days.

STRENGTH

Strength is the power to push, pull, lift, carry and hold your body steady. You use it to climb, carry groceries, help in the garden and sit up tall. In this unit you will hear the very old legend of Milo and the calf, and learn the true idea inside it: your muscles grow stronger little by little when you give them a bit more work, then rest, good food and sleep. You will start a “Milo ladder” and add one more each time.

Then you will meet a Scottish minister skating on a frozen loch more than two hundred years ago, balanced on one foot with his arms folded. You will learn about your core, the strong muscles around your middle that help you balance, and practice planks, side planks and the stork stand, timing your holds and trying to beat them.

PREREQUISITES

- Knows the five-part warm-up and cool-down (Unit 1)
- Knows that grow foods with protein help build muscles (Unit 3)
- Can count seconds on a timer

MASTERY CHECKLIST

- ☐ I can tell the legend of Milo and the calf and the true idea in it: get stronger little by little.
- ☐ I can name what muscles need to grow stronger: work, rest, food and sleep.
- ☐ I can do wall push-ups, chair squats and bear crawls with good form.
- ☐ I can hold a plank, a side plank and a stork stand, and time my holds.
- ☐ I can tell how to train safely: warm up, use good form, rest, and stop if something hurts.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Your Muscles” (Nemours KidsHealth):** Free. A kids’ article on how your muscles work. Read it aloud with Lesson 4.1.
- **“Your Bones” (Nemours KidsHealth):** Free. A kids’ article on bones and joints and how to keep them strong.

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

LESSONS IN THIS UNIT

4.1 Milo and the Calf

3 sessions of 20–30 minutes

4.2 Core and Balance

3 sessions of 20–30 minutes

UNIT 4 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell the legend of Milo and the calf. Is it a true story or a legend? What true idea is inside it?
2. What four things do your muscles need to grow stronger?
3. Show me a wall push-up and a chair squat with good form.
4. Point to your core. How does it help you?
5. Show me a plank and a stork stand. How did the Skating Minister keep his balance?

ANSWER KEY

1. Milo carried a calf every day as it grew, until he could carry a big cow. It is a legend; no one could carry a full-grown cow. The true idea is that muscles grow stronger when you add a little more work each time.
2. Work (exercise and play), rest, food (especially protein) and sleep.
3. Wall push-up: body straight, hands at shoulder height, bend elbows and push back. Chair squat: sit back slowly until the seat touches the chair, stand up tall without using hands.
4. The muscles around the middle: tummy, sides and back. The core holds the body steady, helps balance, sitting up tall, carrying and throwing.
5. Plank: straight like a board on hands or elbows and toes or knees. Stork stand: on one foot, other foot against the standing leg, hands on hips, eyes on a spot. The minister kept steady with his core, legs and feet, and lots of practice.

UNIT CHALLENGE: TWO WEEKS OF STRENGTH AND BALANCE

For two weeks, do Milo's ladder every other day and the balance and core challenge on the days in between (with one full rest day each week). Keep your ladder chart and your balance chart. At the end of the two weeks, test again in exactly the same way as the first time and write your "before" and "after" numbers side by side. Color a short tower for each "before" number and a taller tower for each "after" number, and show your family what got stronger.

LOOK FOR	WHAT IT MEANS
Faithful practice	Your child practiced on most days of the two weeks, with rest days, and the charts were filled in.
Good form	A parent watched and saw a straight body in push-ups and planks and slow, careful squats.
Fair before-and-after test	The same moves were tested the same way both times, with honest numbers.
Told about it	Your child showed the towers and told what got stronger. Effort and improvement count, not the size of the numbers.

4.1 MILO AND THE CALF

OBJECTIVES

- Tell the legend of Milo and the calf, and say plainly that it is a legend with a true idea inside it.
- Explain simply how muscles and bones work together and how muscles grow stronger with work, rest, food and sleep.
- Count starting numbers for wall push-ups, chair squats and bear crawls, and add one each workout on a “Milo ladder.”

Warm-up. Farm animal warm-up: do your five-part warm-up. Then walk like a calf on wobbly legs (hands and feet, slowly) for 20 seconds, gallop like a pony across the room and back, and stand tall and stretch like a giraffe reaching for leaves, 5 times. Think about it: which animal move made your arms work? Which made your legs work?

WATCH

How Do Our Bodies Move?

SciShow Kids · 3:35

<https://www.youtube.com/watch?v=j918PoWWaB0>

WHEN TO WATCH

After “How your body works.” Watch how your muscles pull on your bones to make you move.

BACKUP VIDEO

Learning About Muscles | Sid the Science Kid | Jim Henson Company

The Jim Henson Company · 3:14

<https://www.youtube.com/watch?v=v83BwNRj1DQ>

A gentle cartoon for Session 3 about the muscles that move our bodies.

KEY TERMS

legend

A very old story that people have told for a long time. Parts may not have really happened.

muscle

A part of your body that pulls on your bones to make you move. Your heart is a muscle too.

bone

A hard part inside your body that holds you up and protects you. You have more than 200 bones.

rep

One time doing an exercise, like one squat. (Short for “repetition.”)

CORE IDEAS

The story. Long, long ago, about 2,500 years ago, there lived a famous strong man named Milo. He lived in a Greek city called Croton, in the south of Italy, and he won at the ancient Olympic Games six times. People told many stories about him. The most famous one is a legend. It says that when Milo was young, he picked up a newborn calf and carried it on his shoulders. He carried it every day. Every day the calf grew a little bigger and a little heavier, and every day Milo grew a little stronger, until one day he could carry a big, grown-up cow!

How they figured it out. Could anyone really carry a full-grown cow? No, that is too heavy for any person! That part is a legend. But people kept telling the story for thousands of years because it has a true idea inside it: if you do a little more work each time, your muscles slowly get stronger. Coaches and doctors today use the same idea. They add a little at a time, like one more push-up, and they watch the person grow stronger week by week.

How your body works. You have more than 600 muscles. Muscles are joined to your bones by strong cords, and they pull on your bones to move them, like strings on a puppet. When you make your muscles work hard, like climbing or carrying, they get a little tired. Then, while you rest, eat and sleep, your body fixes them and makes them a little stronger. So muscles need four things: **work**, **rest**, **food** (especially grow foods with protein, like eggs, milk, beans and chicken) and **sleep** (children your age need 9 to 12 hours each night). Running, jumping and climbing make your bones stronger too.

Good form. At your age, you grow strong using your own body: climbing, crawling, pushing, jumping and carrying light things to help. Move slowly and carefully. Breathe out as you push. Tired muscles are fine, but if something hurts in a sharp way, stop and tell a grown-up.

Try it. This week you will count how many wall push-ups, chair squats and bear-crawl steps you can do with good form. Then you will climb your “Milo ladder,” adding one more each workout, just like Milo’s calf grew a little each day.

PICTURE STUDY



Peasants Bringing Home a Calf Born in the Fields, Jean-François Millet, 1864 · Oil on canvas · The Art Institute of Chicago

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

Jean-François Millet was a French painter who grew up on a farm and loved to paint farm families at work. Here a calf has just been born out in the field. Two farmers carry it home on a stretcher of poles and straw while its mother follows close behind.

Look closely

- Find the calf. How are the two men carrying it? Why do they need two people?
- Look at the men's arms and backs. Which muscles are they using to carry?
- Find the mother cow. Where is she looking?
- Find the children by the house. What do you think they are saying?

Talk about it

1. In the legend, Milo carried a calf every day. How heavy do you think this newborn calf is?
2. Farm families grew strong by doing real work every day. What jobs at your house use pushing, pulling, lifting or carrying?
3. Why is it easier and safer to carry something heavy with a helper?

Safety first. Use only your own body weight. Warm up first, move slowly with good form, and breathe out as you push; do not hold your breath. If you use a chair, push it against a wall so it cannot slide. Rest a day between ladder workouts, and stop and tell an adult if anything hurts in a sharp way or in a joint.

ACTIVITY

Milo's Ladder

Milo's calf grew a little every day. You will add a little every workout. First you will count your starting number for three exercises. Then, every other day for two weeks, you will add one more rep, and watch your ladder climb.

You will need

- A wall, a sturdy chair pushed against the wall, and clear floor space
- A towel or mat
- A helper to count and watch your form
- Your fitness journal with a ladder chart: date, wall push-ups, chair squats, bear-crawl steps

Steps

1. **Warm up (3 minutes):** do the farm animal warm-up.
2. **Learn the three moves.** *Wall push-up:* stand an arm's length from a wall, hands flat on the wall at shoulder height. Keep your body straight like a board, bend your elbows to bring your nose close to the wall, then push back. *Chair squat:* stand in front of the chair, feet apart. Sit back slowly until your seat just touches the chair, then stand up tall without using your hands. *Bear crawl:* hands and feet on the floor, knees just off the ground, and crawl forward. Each hand step is one step.
3. **Find your starting numbers.** Do as many good-form reps as you can of each move, resting 1 minute between moves. Stop when your form gets wobbly. Count bear-crawl steps until you need to stop. Write all three numbers.
4. **Set your ladder.** Your ladder starts at your number minus 2. (If you did 12 wall push-ups, start at 10.) Write the starting rung for each move.
5. **Workout 1 (Session 2):** do 2 rounds. In each round, do your ladder number of wall push-ups, chair squats and bear-crawl steps. Rest 1 minute and drink water between rounds.
6. **Rest day.** The next day, do not do the ladder. Play, walk and help at home. Eat good food and get a good night's sleep. Your muscles are getting stronger

while you rest.

7. **Workout 2 (Session 3):** warm up, then add 1 to each number. If you cannot finish with good form, stay at the same number next time. That is fine!
8. **Keep climbing.** Do the ladder every other day for two weeks. Cool down each time with a slow walk and gentle stretches. Color one rung on your ladder chart each time you climb.

Tips

- Good form first, numbers second. One slow, careful rep is better than three wobbly ones.
- Count out loud on the way up. It helps you breathe out as you push.
- If wall push-ups get easy, step your feet a little farther from the wall.

Check your work

- ☐ I can tell the legend of Milo and the true idea inside it.
- ☐ I found my starting numbers and wrote them on my ladder chart.
- ☐ I can name four things muscles need to grow stronger: work, rest, food and sleep.

FITNESS JOURNAL

1. Draw a ladder with 7 rungs. Color one rung each time you do a Milo's ladder workout, and write your numbers beside it.
2. Draw Milo carrying the little calf, and then Milo carrying the big cow. Write: "A little more each day."
3. Draw yourself doing a wall push-up, a chair squat and a bear crawl.
4. Write or tell: Which move was hardest? What will you try next time?

From history. Old writers told other legends about Milo too. One says he could hold a pomegranate so that no one could pull it out of his hand, yet the fruit was not even squashed. That shows strength and gentleness together.

COMMON MISTAKES

- Trying to add too much at once. Milo's calf grew a little at a time; one more rep is plenty.
- Doing the ladder every day with no rest. Muscles grow stronger while you rest.

- Letting your body sag on wall push-ups or plopping down on chair squats. Keep straight and move slowly.

Make it a game · Milo Calf Carry. Milo lifted a calf every day. Pick up a light pillow as your calf and carry it across the room. Each day add a little more: one extra pillow or a longer walk. Count how many days it takes to carry four pillows. Say it is a legend with a true idea about getting stronger slowly.

Scripture. “But they that wait upon the LORD shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk, and not faint.” (Isaiah 40:31, KJV)

Our muscles grow stronger with practice, but real, lasting strength comes from trusting God.

4.2 CORE AND BALANCE

OBJECTIVES

- Tell about the Reverend Robert Walker, the Skating Minister, and how he balanced on the ice.
- Explain what the core muscles are and how they help you balance and stand tall.
- Hold a plank, a side plank and a stork stand with good form, time each hold, and try to beat the time.

Warm-up. Balance warm-up: do your five-part warm-up. Then walk heel-to-toe along a straight line on the floor (a tape line or the edge of a rug) for 10 steps, then walk back. Stand on one foot and count to 5; switch feet. Think about it: what do your arms do when you start to wobble?

WATCH

PE Skills for balance (elementary grades)

Prime Coaching Sport · 3:35

<https://www.youtube.com/watch?v=HPhw88o84MQ>

WHEN TO WATCH

Before the activity. Watch a PE coach show balance skills: standing on one leg, stepping over cones, balancing a beanbag on your head. Try a few!

Note: A PE coach's channel. It uses beanbags, cones and pool noodles; socks, cups and a rolled towel work just as well. The end shows his teaching cards for sale.

KEY TERMS

core

The strong muscles all around your middle: your tummy, sides and back.

plank

Holding your body straight like a board, resting on your hands or elbows and toes (or knees).

balance

Keeping your body steady without falling over.

stork stand

Standing on one foot with the other foot resting on the side of your standing leg.

CORE IDEAS

The story. More than two hundred years ago, in Edinburgh, Scotland, there lived a minister named Robert Walker. On Sundays he preached at the Canongate Kirk. But on cold winter days, when the lochs (the Scottish word for lakes) froze hard, he went skating! When he was a boy, his family lived in Holland, where people skated on the frozen canals, and that is where he learned. He belonged to the Edinburgh Skating Club, one of the very first skating clubs in the world.

How they figured it out. About the year 1795, the painter Henry Raeburn, Walker's friend, painted him gliding across Duddingston Loch. Look at him: he glides on one foot, his other leg stretched behind, with his arms folded across his chest! Skaters call this the travelling position. It is hard to do. With his arms folded, he cannot wave them to catch his balance. He has to keep steady using the strong muscles of his middle, his legs and his feet. Skating like that takes lots of practice.

How your body works. Your **core** is the ring of muscles around your middle: your tummy muscles in front, the muscles on your sides and the muscles along your back. Your core holds your body steady, like the trunk of a tree. It helps you balance on one foot, sit up straight at the table, carry things and throw a ball. Your ears and your eyes help too: tiny parts inside your ears tell your brain if you are tipping, and your brain tells your muscles to fix it. Balance gets better with practice.

Good form. Plank: hands under your shoulders (or elbows under shoulders), body straight like a board from head to heels, or from head to knees for an easier plank. Squeeze your tummy, keep your eyes on the floor and breathe. **Side plank:** lie on your side, prop yourself up on your elbow under your shoulder, and lift your hips so your body is straight. Bend your knees for an easier side plank. **Stork stand:** stand tall on one foot, rest the other foot against the side of your standing ankle or knee, hands on your hips, and look at one spot on the wall.

Try it. This week you will hold each of the three moves while a helper times you, rest, and try again. Next time you will try to hold each one a few seconds longer.

PICTURE STUDY



The Skating Minister (The Reverend Robert Walker Skating on Duddingston Loch), Attributed to Henry Raeburn, About 1795 · Oil on canvas · Scottish National Gallery, Edinburgh

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

This painting shows the Reverend Robert Walker, a minister in Edinburgh, skating on Duddingston Loch, a lake near the city. It is usually said to be by his friend Henry Raeburn. It hung in Walker's family's homes for more than a hundred years, and now it is one of the best-loved paintings in Scotland.

Look closely

- Find the skate that is touching the ice. How many feet is he gliding on?
- Look at his arms. Why is it hard to balance with your arms folded?
- Look at his body. Is he leaning forward, backward or standing tall? Which muscles keep him steady?
- Find the curvy lines on the ice. What made them?

Talk about it

1. Try standing on one foot with your arms folded, like the minister. Is it easier or harder than with your arms out?
2. Robert Walker practiced skating from the time he was a boy. Why does practice make balance better?
3. What do you do that needs good balance?

Safety first. Practice on a towel or mat on a flat, non-slip floor, with space around you and nothing hard nearby to fall against. Breathe while you hold; never hold your breath. Use the easier knee plank if your back sags, and stop if you feel pain in your back or a joint.

ACTIVITY

The Balance and Core Challenge

You will become as steady as the Skating Minister. You will hold a plank, a side plank on each side and a stork stand on each foot while a helper times you. You will rest, try again, and write your best times. Next session you will try to beat them.

You will need

- A towel or mat on a flat floor
- A timer and a helper
- A tape line on the floor (or the edge of a rug)
- Your fitness journal with a chart: plank, side plank (right), side plank (left), stork (right foot), stork (left foot)

Steps

1. **Warm up (3 minutes):** do the balance warm-up.
2. **Practice each move.** Read the good-form cues aloud and try each move for 5 seconds while your helper checks: Is your body straight like a board? Are you breathing?
3. **Plank test.** Get into your plank (knees or toes). Your helper starts the timer. Hold with good form until your hips sag or rise, then stop. Write the seconds.
4. **Rest 1 minute** and drink some water.
5. **Side plank test.** Hold a side plank on your right side, then rest 30 seconds and hold on your left side. Write both times.
6. **Stork stand test.** Stand on your right foot in the stork stand, hands on hips, eyes on one spot. Your helper times until your foot touches down or your hands come off your hips. Then try your left foot. Write both times.
7. **Balance walk.** Walk heel-to-toe along the tape line and back, then try it with your arms folded like the Skating Minister.
8. **Session 3: beat your times.** Warm up, then do all the tests again the same way. Did you hold longer? Circle each time you beat.

Tips

- Pick one spot on the wall and stare at it. It helps you balance.
- In the plank, squeeze your tummy like you are getting ready for a tickle.
- A wobble is your muscles learning. Keep practicing!

Check your work

- ☐ I can tell about the Skating Minister and how he balanced.
- ☐ I can point to my core muscles and tell how they help me.
- ☐ I timed my plank, side planks and stork stands and tried to beat my times.

FITNESS JOURNAL

1. Copy your balance chart with all five times from Session 2 and Session 3. Circle the times you beat.
2. Draw the Skating Minister gliding on one foot with his arms folded.
3. Draw a stick figure doing a plank. Draw a straight line along its back to show “straight like a board.”
4. Write or tell: Which balance move was hardest? Which foot balances better?

From history. The Edinburgh Skating Club met on Duddingston Loch and on another loch nearby whenever the ice was thick enough. Members had to pass a skating test before they could join, including skating a full circle on each foot.

COMMON MISTAKES

- Letting your hips sag or stick up in the plank. Keep a straight line from head to heels (or knees).
- Holding your breath. Count out loud to keep breathing.
- Looking around during the stork stand. Look at one spot to stay steady.

Make it a game • Stork and Plank Duel. Stand like a stork on one foot and see who holds longest while your parent counts. Then hold a plank together and watch the clock. Say which muscles are the core and how they help you balance. Then glide your arms and lean like the Skating Minister, balanced on one foot. Beat your own time.

UNIT 4

STRENGTH

Strength is the power to push, pull, lift, carry and hold your body steady. You use it to climb, carry groceries, help in the garden and sit up tall. In this unit you will hear the very old legend of Milo and the calf, and learn the true idea inside it: your muscles grow stronger little by little when you give them a bit more work, then rest, good food and sleep. You will start a “Milo ladder” and add one more each time.

Then you will meet a Scottish minister skating on a frozen loch more than two hundred years ago, balanced on one foot with his arms folded. You will learn about your core, the strong muscles around your middle that help you balance, and practice planks, side planks and the stork stand, timing your holds and trying to beat them.

PREREQUISITES

- Knows the five-part warm-up and cool-down (Unit 1)
- Knows that grow foods with protein help build muscles (Unit 3)
- Can count seconds on a timer

MASTERY CHECKLIST

- ☐ I can tell the legend of Milo and the calf and the true idea in it: get stronger little by little.
- ☐ I can name what muscles need to grow stronger: work, rest, food and sleep.
- ☐ I can do wall push-ups, chair squats and bear crawls with good form.
- ☐ I can hold a plank, a side plank and a stork stand, and time my holds.
- ☐ I can tell how to train safely: warm up, use good form, rest, and stop if something hurts.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Your Muscles” (Nemours KidsHealth):** Free. A kids’ article on how your muscles work. Read it aloud with Lesson 4.1.
- **“Your Bones” (Nemours KidsHealth):** Free. A kids’ article on bones and joints and how to keep them strong.

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

LESSONS IN THIS UNIT

4.1 Milo and the Calf

3 sessions of 20–30 minutes

4.2 Core and Balance

3 sessions of 20–30 minutes

UNIT 4 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell the legend of Milo and the calf. Is it a true story or a legend? What true idea is inside it?
2. What four things do your muscles need to grow stronger?
3. Show me a wall push-up and a chair squat with good form.
4. Point to your core. How does it help you?
5. Show me a plank and a stork stand. How did the Skating Minister keep his balance?

ANSWER KEY

1. Milo carried a calf every day as it grew, until he could carry a big cow. It is a legend; no one could carry a full-grown cow. The true idea is that muscles grow stronger when you add a little more work each time.
2. Work (exercise and play), rest, food (especially protein) and sleep.
3. Wall push-up: body straight, hands at shoulder height, bend elbows and push back. Chair squat: sit back slowly until the seat touches the chair, stand up tall without using hands.
4. The muscles around the middle: tummy, sides and back. The core holds the body steady, helps balance, sitting up tall, carrying and throwing.
5. Plank: straight like a board on hands or elbows and toes or knees. Stork stand: on one foot, other foot against the standing leg, hands on hips, eyes on a spot. The minister kept steady with his core, legs and feet, and lots of practice.

UNIT CHALLENGE: TWO WEEKS OF STRENGTH AND BALANCE

For two weeks, do Milo's ladder every other day and the balance and core challenge on the days in between (with one full rest day each week). Keep your ladder chart and your balance chart. At the end of the two weeks, test again in exactly the same way as the first time and write your "before" and "after" numbers side by side. Color a short tower for each "before" number and a taller tower for each "after" number, and show your family what got stronger.

LOOK FOR	WHAT IT MEANS
Faithful practice	Your child practiced on most days of the two weeks, with rest days, and the charts were filled in.
Good form	A parent watched and saw a straight body in push-ups and planks and slow, careful squats.
Fair before-and-after test	The same moves were tested the same way both times, with honest numbers.
Told about it	Your child showed the towers and told what got stronger. Effort and improvement count, not the size of the numbers.

UNIT 5

AEROBIC TRAINING

Your heart is a strong muscle about the size of your fist. It pumps blood all through your body, all day and all night. In this unit you will hear how a French doctor named René Laennec rolled up a sheet of paper in 1816 to listen to a heartbeat, and invented the stethoscope. You will make a paper tube, listen to a heart, find your pulse at your wrist and neck, and see how your heart speeds up when you play and slows down when you rest.

Then you will learn to jump rope, one of the oldest games there is and a wonderful way to make your heart and lungs strong. You will count your jumps in a row and try to beat your number. The quarter ends with a family fitness day that you help plan and lead.

PREREQUISITES

- Knows the five-part warm-up and cool-down (Unit 1)
- Can count to 100
- Has done the balance challenge (Unit 4)

MASTERY CHECKLIST

- ☐ I can tell how René Laennec invented the stethoscope with a rolled-up paper.
- ☐ I can find my pulse at my wrist and my neck and count the beats.
- ☐ I can tell why my heart beats faster when I play and slows down when I rest.
- ☐ I can jump rope, count my jumps in a row and try to beat my number.
- ☐ I helped plan and lead a family fitness day.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Your Heart & Circulatory System” (Nemours KidsHealth):** Free. A kids’ article on how the heart pumps blood. Read it aloud with Lesson 5.1.
- **A jump rope:** Optional. Any simple rope works; when you stand on its middle, the handles should reach about to your armpits. A length of clothesline works too.
- **A stopwatch or kitchen timer:** Optional. A phone timer works just as well for pulse counts and jump-rope rounds.

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

LESSONS IN THIS UNIT

5.1 Count Your Heartbeat

3 sessions of 20–30 minutes

5.2 Jump Rope

3 sessions of 20–30 minutes

UNIT 5 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell how Dr. Laennec invented the stethoscope.
2. Show me where you can find your pulse.
3. What happens to your heartbeat when you jump hard, and when you rest? Why?
4. Show me good jump-rope form.
5. What do we know for sure about Double Dutch, and what is just a story people tell?

ANSWER KEY

1. In 1816 in Paris, he did not want to press his ear against a patient's chest, so he rolled paper into a tube, put one end on her chest and listened at the other. He heard the heartbeat clearly. Later he made a wooden tube and called it a stethoscope.
2. On the inside of the wrist below the thumb, and on the side of the neck (gently, one side). Use two fingers, not the thumb.
3. It gets faster when you jump, because your muscles need more oxygen, so the heart pumps more blood. When you rest, it slows down again.
4. Stand tall, elbows close, turn the rope with the wrists, small jumps, land softly on the balls of the feet.
5. People say Dutch settlers brought it to New Amsterdam, but no one has proven it. We know that in 1973 two New York police officers made it a team sport, and the first tournament was in 1974.

UNIT CHALLENGE: FAMILY FITNESS DAY

Plan, lead and record a family fitness day. Draw a plan with your five-part warm-up, a station from each unit (the peach-basket game, a water table, Milo's ladder moves, the balance challenge and jump rope), a colorful snack you help make, and a cool-down. On the day, lead your family, cheer for everyone, and count your own jumps in a row one more time. Afterward, draw a picture of the day, write or tell what everyone liked best, and put it in your folder with your heartbeat table and jump chart.

LOOK FOR	WHAT IT MEANS
Planned it	Your child drew a plan with a warm-up, stations from the units, a snack, water and a cool-down.
Led it kindly	Your child led the warm-up and cool-down, explained the stations and encouraged everyone at his or her own pace.
Records	The heartbeat table and jump chart were kept honestly, with a try to improve.
Told about it	Your child drew and told about the day. Joy, effort and faithfulness count, not the biggest numbers.

5.1 COUNT YOUR HEARTBEAT

OBJECTIVES

- Tell how René Laennec invented the stethoscope in 1816.
- Find your pulse at your wrist and neck and count beats for 15 seconds.
- Compare your heartbeat at rest, right after hard play and after a short rest, and record it in a table.

Warm-up. Heartbeat warm-up: sit still and put your hand flat on the left side of your chest. Can you feel anything? Now do your five-part warm-up, then 20 jumping jacks. Put your hand back on your chest. What changed? Think about it: why does your heart beat harder when you move?

WATCH

How to Feel Your Heart Beat

SciShow Kids · 3:35

<https://www.youtube.com/watch?v=tF9-jLZNM10>

WHEN TO WATCH

After “How your body works.” Watch how your heart pumps blood and learn how to find your pulse at your wrist and neck.

BACKUP VIDEO

PE Chef: PULSE (How to measure your heart rate).

Just Adapt It. · 3:18

<https://www.youtube.com/watch?v=d7DnSIPlcJI>

For Session 2 or 3. A PE teacher in a chef’s hat finds his pulse at the wrist and neck, counts it, exercises, and counts again.

KEY TERMS

heart

A strong muscle in your chest that pumps blood all through your body.

heartbeat

One squeeze of your heart. It makes a “lub-dub” sound.

pulse

The little push you feel in your wrist or neck each time your heart beats.

stethoscope

A tool doctors use to listen to your heart and lungs.

CORE IDEAS

The story. In the year 1816, in a hospital in Paris, France, there worked a kind young doctor named René Laennec. Doctors back then listened to a patient’s heart by putting an ear right against the patient’s chest. One day a young woman came to him with a sick heart. Dr. Laennec did not think it was polite to press his ear against her chest. What could he do?

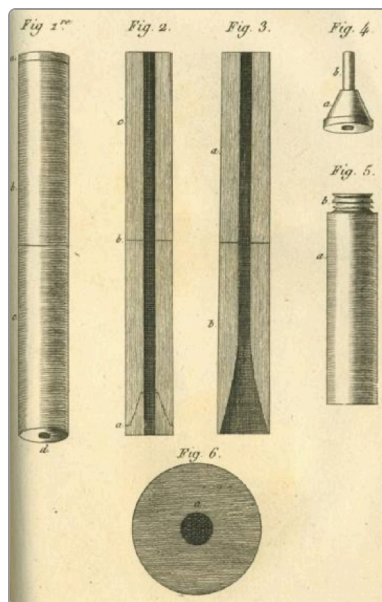
How they figured it out. Dr. Laennec remembered that sound travels well through solid things. He rolled a few sheets of paper into a tight tube. He put one end on the patient’s chest and the other end to his ear. He was amazed! He could hear her heartbeat more clearly than ever before. Later he made a hollow wooden tube that worked even better and named it the stethoscope, which means “chest viewer.” He listened to the hearts and lungs of many patients and wrote down what healthy and sick ones sounded like. Doctors all over the world still use stethoscopes today.

How your body works. Your heart is a muscle about the size of your fist. With every beat it squeezes and pushes blood through tubes all over your body. The blood carries air (oxygen) from your lungs and food energy to all your muscles. Each beat makes a little push in the tubes near your skin. That push is your **pulse**. You can feel it on the inside of your wrist below your thumb, or on the side of your neck. When you sit still, a child’s heart beats about 70 to 110 times a minute. When you run and jump, your muscles need more oxygen, so your heart beats faster and you breathe harder. When you rest, it slows down again. Playing hard often makes your heart stronger, just like your other muscles.

Think it through. In the Bible, the word “pulse” in Daniel’s story means vegetables! In this lesson, pulse means the beat of your heart. It is the same word with two meanings. Your heart has been beating since before you were born, and God keeps it beating while you sleep.

Try it. This week you will make a paper tube like Dr. Laennec’s and listen to a heartbeat. Then you will count your pulse when you are still, right after jumping, and after a rest, and see how your heart changes.

PICTURE STUDY



Drawings of the Stethoscope, from On Mediate Auscultation, René Laennec, 1819 · Engraving in a printed book · Published in Paris; copies in many medical libraries

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

Three years after he rolled up his paper tube, Dr. Laennec wrote a big book about listening to the heart and lungs. In it he printed these careful drawings of his wooden stethoscope so other doctors could make their own. It came apart in pieces so it could be carried in a pocket.

Look closely

- Find the long tube (Figure 1). What is it made of? How long do you think it is?
- Look at Figures 2 and 3. They show the tube cut in half. What is inside?
- Find the little funnel piece. Where might it fit?
- Find the round drawing at the bottom. What is the dark circle in the middle?

Talk about it

1. How is Dr. Laennec's tube like your paper tube? How is it different?
2. Why did he draw the stethoscope so carefully and put it in a book?
3. Why do you think the tube is hollow?

Safety first. Press gently when you feel for your pulse, and on the neck use only one side at a time. Jump on a flat, non-slip floor in good shoes. If you feel dizzy, have chest pain or trouble breathing, stop and tell an adult right away.

ACTIVITY

Laennec's Tube and My Heartbeat Table

You will make a paper tube like Dr. Laennec's and listen to a family member's heart. Then you will be a heart scientist: you will count your pulse at rest, right after hard play and after a rest, and write your numbers in a table. In Session 3 you will do it again and see if your heart slows down faster after you rest.

You will need

- A sheet of stiff paper or a few sheets of plain paper, and tape
- A timer that shows seconds
- A helper (a parent to count with you and do the multiplying)
- Your fitness journal with a heartbeat table: At rest, Right after jumping, After 2 minutes of rest

Steps

1. **Make Laennec's tube.** Roll the paper into a tight tube about as wide as a quarter coin, and tape it so it does not unroll.
2. **Listen.** In a quiet room, gently put one end of the tube on the left side of a parent's chest and put your ear on the other end. Listen for the "lub-dub." Then let the parent listen to your heart.
3. **Find your pulse.** Put two fingers (not your thumb) on the inside of your wrist, just below your thumb. Press gently and wait until you feel the little push. Then try the side of your neck, beside your windpipe.
4. **Count at rest.** Sit still for 2 minutes. Then, while your helper watches the timer, count your pulse beats for 15 seconds. Write the number. A parent multiplies it by 4 to get your beats in one minute.
5. **Jump!** Do your warm-up, then do jumping jacks or hop in place for 1 minute, as fast as you safely can.
6. **Count right away.** Find your pulse quickly and count for 15 seconds. Write the number. Is it bigger?
7. **Rest and count again.** Sit and breathe slowly for 2 minutes. Count for 15 seconds again and write it down. Cool down with a slow walk.

8. Session 3: do it again. Repeat the whole test the same way. Compare: how far did your heartbeat go up, and how quickly did it come back down?

Tips

- If you cannot find your pulse, move your fingers a tiny bit and press a little softer.
- Your thumb has its own pulse, so use your two middle fingers.
- Every heart is different. Compare your numbers only with your own.

Check your work

- ☐ I can tell how Dr. Laennec invented the stethoscope.
- ☐ I found my pulse at my wrist and neck and counted it.
- ☐ I filled in my heartbeat table and can tell why my heart sped up and slowed down.

FITNESS JOURNAL

1. Copy your heartbeat table from both sessions. Draw a bar for each number to make a bar graph.
2. Draw Dr. Laennec listening with his paper tube.
3. Draw a heart and draw arrows showing blood going out to your arms, legs and head and coming back.
4. Write or tell: How did your chest feel after jumping? How did it feel after resting?

From history. Dr. Laennec was good with his hands: he carved the first wooden stethoscopes himself on a lathe. The two-earpiece stethoscope doctors use today, with rubber tubes, came later, in the 1850s.

COMMON MISTAKES

- Using your thumb to feel your pulse. Your thumb has its own pulse and makes counting confusing.
- Pressing too hard on your neck. Press gently, on one side only.
- Thinking a fast heartbeat after play is bad. It is your heart doing its job, and it slows down when you rest.

Make it a game • Pulse Count Pairs. Find your pulse on your wrist and count beats for fifteen seconds while your parent keeps time. Write it down. Do twenty jumping jacks and count again. Predict first whether it will go up or down, then check. Tell the story of Laennec's paper tube. Compare your numbers.

5.2 JUMP ROPE

OBJECTIVES

- Tell what we know, and what we do not know, about the history of jump rope and Double Dutch.
- Explain how jumping rope makes your heart, lungs, muscles and bones stronger.
- Practice jump-rope steps, count jumps in a row, and try to beat your best number.
- Help plan and lead a family fitness day.

Warm-up. Jumping warm-up: do your five-part warm-up. Then lay your rope straight on the floor and jump over it: 10 bell hops (forward and back), 10 ski hops (side to side) and 5 hops on each foot. Think about it: how does your heart feel after all that jumping?

WATCH

Building Jump Rope Skills for Kindergarten to 2nd Grade

PHABulous Kids · 4:10

<https://www.youtube.com/watch?v=Z75ilY5ez2s>

WHEN TO WATCH

In Session 2. Follow along: a PE teacher shows how long your rope should be, jumps over a rope on the floor, then turns the rope for single jumps.

Note: A PE teacher's channel made for kindergarten to grade 2, with an on-screen timer for each skill.

BACKUP VIDEO

Jump rope for PE

Prime Coaching Sport · 9:38

<https://www.youtube.com/watch?v=ELM0fCv57x8>

In Session 3, for more jump-rope steps to try: the simple bounce, hopping, running steps and the skier.

KEY TERMS

aerobic

Steady exercise that makes your heart and lungs work harder for a while, like running, skipping, swimming or jumping rope.

rhythm

A steady beat, like “jump, jump, jump.”

endurance

Being able to keep going for a long time without stopping.

Double Dutch

A jump-rope game with two long ropes turned in opposite directions while a jumper jumps in the middle.

CORE IDEAS

The story. Children have jumped rope for hundreds of years, in many lands, often singing rhymes to keep the beat. One favorite is Double Dutch, with two long ropes turning at once. People often say that settlers from Holland brought Double Dutch to New Amsterdam, the town that became New York City. It is a nice story, but no one has found old writings to prove it, so we do not know for sure. Here is something we do know: in 1973, two police officers in New York City turned Double Dutch into a team sport with rules and judges, and in 1974 they held the first Double Dutch tournament.

How they figured it out. The two officers wanted to give children in their city a fun, active game to play together. They wrote rules: how teams of jumpers and turners take turns, what tricks count, and how fast the jumpers go. Judges counted jumps and watched for good teamwork. Soon schools and teams all over the country were practicing. They found out what jumpers everywhere know: jumping rope takes practice, rhythm and teamwork, and it makes you strong.

How your body works. Jumping rope is **aerobic** exercise: it keeps your heart and lungs working hard for a while. Your heart beats faster to send oxygen to your leg and arm muscles, and you breathe harder to bring in more air. When you do aerobic play often, your heart gets stronger and pumps more blood with every beat, and you can keep going longer. That is called **endurance**. Jumping also makes your bones stronger, because every little landing tells your bones to grow tough. Your brain learns rhythm and timing, too.

Good form. Stand tall and look straight ahead. Keep your elbows close to your sides and turn the rope with your wrists, making small circles. Jump just high enough to clear the rope, about as high as a pencil is thick, and land softly on the balls of your feet with your knees a little bent.

Try it. This week you will learn to jump rope one step at a time, count your jumps in a row, and try to beat your number. Then you will help plan your family fitness day to finish the quarter.

PICTURE STUDY



Action Shot of a Girl Jumping Rope in a Backyard, Unknown photographer, 1890s · Photograph · State Library of Queensland, Brisbane, Australia

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

About 130 years ago, someone in Australia took this photograph of a girl jumping rope in her backyard. Cameras were slow back then, and it was hard to take a picture of someone moving. The photographer caught her right in the middle of a jump!

Look closely

- Find the rope. Where is it as she jumps over it?
- Look at her knees and feet. How high did she jump? Is that higher than she needs to?
- Look at her dress and her hair. How can you tell she is moving fast?
- Find the fence, the trees and the chimney. What kind of place is she playing in?

Talk about it

1. What clothes are good for jumping rope? Would a long dress be easy or hard?
2. Is she jumping very high or just high enough? Which is better for jumping many times in a row?
3. Where at your house could you jump rope safely?

Safety first. Jump on a flat, non-slip surface such as a driveway, a patio or a hard floor, in good shoes, with space all around and no one standing close to the turning rope. Land softly on the balls of your feet. Rest and drink water between rounds, play outside in shade or a cooler part of the day when it is hot, and stop and tell an adult if you feel dizzy, have chest pain or trouble breathing.

ACTIVITY

Jump-Rope Challenge and Family Fitness Day

You will learn to jump rope in small steps, count how many jumps you can do in a row, and try to beat your number. Then you will put together everything you learned this quarter and lead your family in a fitness day.

You will need

- A jump rope (when you stand on its middle, the handles reach about to your armpits) or a length of clothesline
- A timer
- Your fitness journal with a jump chart: try 1, try 2, try 3, best
- For the fitness day: a basket and soft ball, a water pitcher and cups, a healthy snack, and chalk or tape for stations

Steps

1. **Warm up (3 minutes):** do the jumping warm-up over a rope on the floor.
2. **Step 1, turn and step.** Hold one handle in each hand with the rope behind your heels. Swing it over your head, let it land in front of your toes, and step over it. Do this 10 times.
3. **Step 2, turn and jump.** Swing the rope over, and when it lands in front of your toes, jump over it with both feet. Do this 10 times. Then try to keep the rope turning without stopping: turn, jump, turn, jump.
4. **Count your best.** Do 3 tries. Each time, count how many jumps you can do in a row before you miss. Rest 30 seconds and drink water between tries. Write all three numbers and circle your best.
5. **Heart check.** After your third try, feel your pulse for 15 seconds, like Dr. Laennec's lesson. Is your heart beating fast?
6. **Session 3: beat your best.** Warm up and do 3 more tries. Did you beat your best number from Session 2? Also try 30 seconds of jumping (any steps, start again when you miss) and count your total jumps.
7. **Plan the family fitness day.** With a parent, plan a time and set up stations from every unit: (1) the peach-basket game, (2) a water table, (3) wall push-

ups and chair squats, (4) plank and stork stand, (5) jump rope or hopping, and a colorful snack you help make.

8. Lead the family fitness day. Lead your family through your five-part warm-up. Visit each station for 3 minutes, cheering everyone on and letting each person go at his or her own pace. Drink water, share the snack, thank God together, and finish with your cool-down. Show your family your fitness journal.

Tips

- Small, quiet jumps are better than big, loud ones. You will last longer.
- Turn the rope with your wrists, not your whole arms.
- If the rope is too long or too short, a parent can tie a knot near the handles or give you a different rope.

Check your work

- ☐ I can tell what we know and do not know about the history of Double Dutch.
- ☐ I counted my jumps in a row and tried to beat my best number.
- ☐ I helped plan and lead a family fitness day.

FITNESS JOURNAL

1. Copy your jump chart from both sessions. Draw a tall bar for your best number each day.
2. Draw two people turning two long ropes and a jumper in the middle: Double Dutch!
3. Draw your family fitness day stations and who was at each one.
4. Write or tell: What was your favorite thing in this whole course? What will you keep doing?

From history. Jump-rope rhymes have been passed from child to child on playgrounds for generations, often with counting games that tell how many jumps you made. Today Double Dutch teams compete in the United States and in other countries.

COMMON MISTAKES

- Jumping too high and too hard. Jump just high enough to clear the rope.
- Turning the rope with big, stiff arms. Keep your elbows in and use your wrists.

- Giving up after a miss. Every jumper misses. Start again and count again.

Make it a game · Jump Rope Count Duel. Jump with a rope, or pretend with an imaginary one, and count your jumps in a row. Your parent writes your record. Rest and try to beat it. Say how jumping makes your heart, lungs, muscles and bones stronger. Try a rhythm of two jumps and a clap. The best jumper tells the Double Dutch story.

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

Paul tells us to run our race with all our heart. Whether we jump, run or play, we do our best for God, and we keep going even when it is hard.

UNIT 5

AEROBIC TRAINING

Your heart is a strong muscle about the size of your fist. It pumps blood all through your body, all day and all night. In this unit you will hear how a French doctor named René Laennec rolled up a sheet of paper in 1816 to listen to a heartbeat, and invented the stethoscope. You will make a paper tube, listen to a heart, find your pulse at your wrist and neck, and see how your heart speeds up when you play and slows down when you rest.

Then you will learn to jump rope, one of the oldest games there is and a wonderful way to make your heart and lungs strong. You will count your jumps in a row and try to beat your number. The quarter ends with a family fitness day that you help plan and lead.

PREREQUISITES

- Knows the five-part warm-up and cool-down (Unit 1)
- Can count to 100
- Has done the balance challenge (Unit 4)

MASTERY CHECKLIST

- ☐ I can tell how René Laennec invented the stethoscope with a rolled-up paper.
- ☐ I can find my pulse at my wrist and my neck and count the beats.
- ☐ I can tell why my heart beats faster when I play and slows down when I rest.
- ☐ I can jump rope, count my jumps in a row and try to beat my number.
- ☐ I helped plan and lead a family fitness day.

OPTIONAL BOOKS AND GEAR FOR THIS UNIT

- **“Your Heart & Circulatory System” (Nemours KidsHealth):** Free. A kids’ article on how the heart pumps blood. Read it aloud with Lesson 5.1.
- **A jump rope:** Optional. Any simple rope works; when you stand on its middle, the handles should reach about to your armpits. A length of clothesline works too.
- **A stopwatch or kitchen timer:** Optional. A phone timer works just as well for pulse counts and jump-rope rounds.

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

LESSONS IN THIS UNIT

5.1 Count Your Heartbeat

3 sessions of 20–30 minutes

5.2 Jump Rope

3 sessions of 20–30 minutes

UNIT 5 REVIEW

Ask each question aloud. Your child may answer by telling, pointing, drawing or showing a movement. There are no points; note what your child knows well and what to review.

1. Tell how Dr. Laennec invented the stethoscope.
2. Show me where you can find your pulse.
3. What happens to your heartbeat when you jump hard, and when you rest? Why?
4. Show me good jump-rope form.
5. What do we know for sure about Double Dutch, and what is just a story people tell?

ANSWER KEY

1. In 1816 in Paris, he did not want to press his ear against a patient's chest, so he rolled paper into a tube, put one end on her chest and listened at the other. He heard the heartbeat clearly. Later he made a wooden tube and called it a stethoscope.
2. On the inside of the wrist below the thumb, and on the side of the neck (gently, one side). Use two fingers, not the thumb.
3. It gets faster when you jump, because your muscles need more oxygen, so the heart pumps more blood. When you rest, it slows down again.
4. Stand tall, elbows close, turn the rope with the wrists, small jumps, land softly on the balls of the feet.
5. People say Dutch settlers brought it to New Amsterdam, but no one has proven it. We know that in 1973 two New York police officers made it a team sport, and the first tournament was in 1974.

UNIT CHALLENGE: FAMILY FITNESS DAY

Plan, lead and record a family fitness day. Draw a plan with your five-part warm-up, a station from each unit (the peach-basket game, a water table, Milo's ladder moves, the balance challenge and jump rope), a colorful snack you help make, and a cool-down. On the day, lead your family, cheer for everyone, and count your own jumps in a row one more time. Afterward, draw a picture of the day, write or tell what everyone liked best, and put it in your folder with your heartbeat table and jump chart.

LOOK FOR	WHAT IT MEANS
Planned it	Your child drew a plan with a warm-up, stations from the units, a snack, water and a cool-down.
Led it kindly	Your child led the warm-up and cool-down, explained the stations and encouraged everyone at his or her own pace.
Records	The heartbeat table and jump chart were kept honestly, with a try to improve.
Told about it	Your child drew and told about the day. Joy, effort and faithfulness count, not the biggest numbers.