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It Takes Heart to be a Hero



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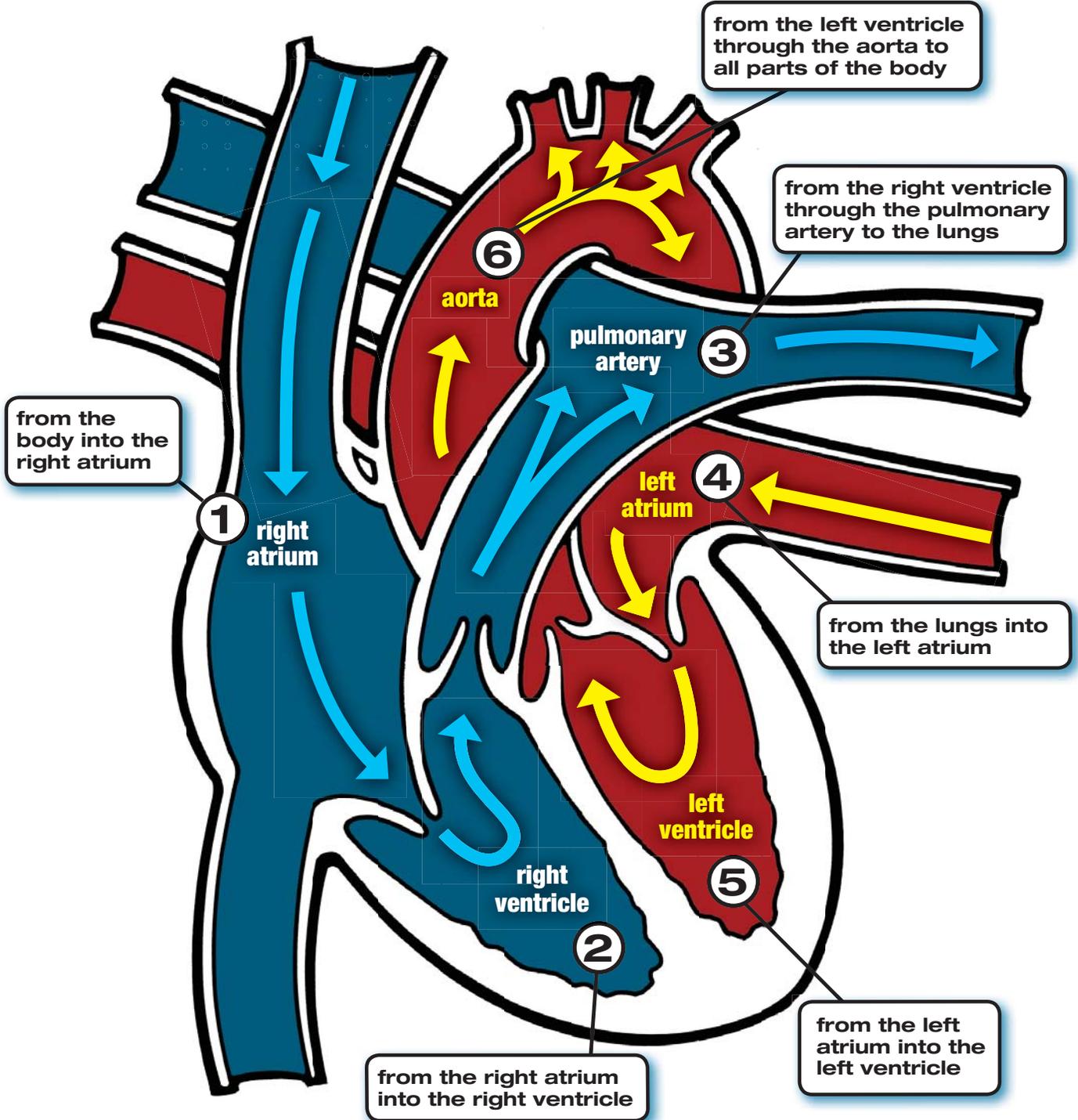
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Elementary School Teacher's Resource Guide

How the Heart Works

Use this information to teach about the heart and how it works. Learning about the importance of the heart to their bodies will motivate students to keep their hearts healthy and strong!



Your Amazing Heart

Your heart is amazing and very important. About the size of your fist, it pumps blood and oxygen through your body — and never stops — and gets rid of waste (what your body doesn't need).

In this guide, you'll learn about your heart and how to take care of it so that it beats strong for a long time.

Your heart is a **cardiac** muscle located in the middle of your chest. Cardiac means about the heart. Your heart is also a special muscle because it's an **involuntary** muscle. That means it works without you thinking about it.

(Use the diagram on the facing page to identify the parts of the heart described below.)

The heart has four separate areas, like four little rooms. They're called **chambers**. The right and left side of the heart are divided by a wall called the **septum**. The two chambers on the right side receive blood from your body and send the blood to your lungs. In the lungs, the blood releases waste from the organs and cells in your body and picks up oxygen. Then the blood leaves the lungs and goes back into the heart through the left side.

The heart's top two chambers are called the **atria** (or **atrium**, if you're just talking about one chamber). The right atrium receives blood from the body that does not have oxygen; the left atrium gets blood from the lungs that has oxygen in it.

The heart's bottom chambers are called the **ventricles**. They push the blood out of the heart. As the ventricles push the blood out, the atria are refilling. This repeats over and over.

All the heart's chambers have special one-way doors called **valves**. The valves only let the blood travel forward.

Your heart is a hard-working organ. It never stops working.

When the Blood Leaves the Heart

The blood moves through your body in a complicated network of tiny connected tubes called **blood vessels**. This is called the **circulatory system**.

One type of blood vessel is an **artery**. Arteries carry blood away from the heart and deliver oxygen and nutrients to the body. Arteries look red because they carry blood that's full of oxygen, and oxygenated blood is bright red.

Another type of blood vessel is a **vein**. Veins carry blood from the body back to the heart. Veins are bluish because the blood in them has carbon dioxide and other wastes rather than oxygen. Arteries connect to veins through tiny vessels called capillaries.

FUN FACT

If all your veins, arteries and capillaries were strung together end to end, they could circle the globe two and half times.

Can You Feel Your Heart Beat?

Note to teachers: Help your students learn how their pulse rates show how being active gets their hearts pumping!

Your Pulse: Checking Out Your Heart

You know your heart is working by feeling your **pulse**. As your heart pumps blood through your body, you can feel it "pulsing" or beating on your wrist, neck and upper arm. These places are **pulse points**.

Your pulse shows you how fast or slow your heart is beating. This is called your **heart rate**. Your heart rate is the number of times your heart beats in a minute. Your heart rate is important because it's one of the ways to tell if your heart is working well.

AMAZING FACT

Your heart beats about 35 million times a year. That means if you live to be 80 years old, your heart will beat 2.8 billion times.



Activities

Grades K–5

Activity: Resting Heart Rate, Active Heart Rate

Materials: A clock or watch with a sweep second hand, paper and pen/pencil for each student

*Note: A resting pulse rate range for 5–11 year-olds is about 55–125 beats per minute.**

Objective: For students to compare their resting heart rate to their active heart rate.

Note to kindergarten, first and second grade teachers: Your students will likely need some help to find their pulses, count the beats and multiply by four. Invite an older class to join your class, and pair up older students with younger students to help the younger students find their pulse, count and multiply the beats.

1. Make sure students have been calm and inactive for at least 10 minutes.
2. Have students find their pulse. The easiest place to check your pulse is on the inside of your wrist. To measure the pulse on your wrist, hold your hand in front of you, with the palm up. Gently place two fingers of your other hand at the top of your wrist, near where your hand starts, on the outside edge of your wrist. Do not use your thumb because it has its own pulse. Move your fingers around until you feel a steady beat.
3. When everyone has found their pulse and has fingers on their pulse, say, “Go” and have students silently count their heart rate for the next 15 seconds as you keep time.
4. Say, “Stop counting,” when the 15 seconds are up.
5. Have students write down the number of times their heart beat in 15 seconds.
6. To find their resting heart rate, have students multiply the number of beats they counted in 15 seconds by four to get their beats per minute (bpm). For example, if you counted 20 beats during the 15 seconds, your pulse would be 80 beats per minute (bpm) because $20 \times 4 = 80$.
7. Have students do two minutes of high-intensity physical activity such as jumping rope, running in place, running around the gym or dancing to fast music. Then, repeat steps 2–6, including multiplying the beats they counted in 15 seconds times four.
8. Have students write down their active heart rates.

Discussion: Ask students what difference they noticed between their resting pulse rate and their active pulse rate. Their active pulse rate should be much higher because their hearts were getting a workout. Remind students that getting their heart beating is how it gets exercise and that it's important to give your heart a workout every day to keep it healthy.

Grades K–2

Activity: Heart Chart

Make a class chart illustrating everyone's resting vs. active heart rates.

Grades 3–5

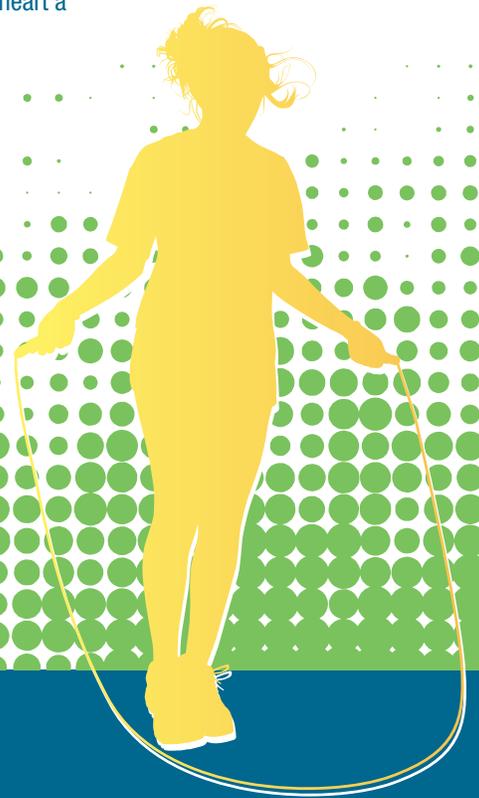
Activity: Heart Math

Use students resting vs. active heart rates for a graphing exercise.

Use students resting vs. active heart rates to practice percentages.

Use students resting and active heart rates to figure out the class average for both.

*Source: Natl Health Statistics No. 41 August 24, 2011 Resting Pulse Rate Reference Data for Children, Adolescents and Adults; US 1999–2008



Get Physical: Good for Your Heart, Your Body, Your Mind

Encouraging some children to be physically active can be a challenge, especially if they don't enjoy being active or don't consider themselves to be "good" at athletics. It's important to be sensitive helping all students find an activity they enjoy. Students should not think of exercise as a punishment or something that's not for them because they don't do it well. Use the information below to:

- Teach students about the benefits of physical activity.
- Teach students about the broad range of activities that can be considered active.
- Motivate every student to find activities that are a good fit for them so they'll be more active.

Physical Activity Gives Your Heart the Workout It Needs: Do you remember that your heart is made up of cardiac muscle? Just like other muscles, your heart needs exercise to stay "in shape" — to stay healthy. Low energy activities (like sleeping or reading or watching TV) don't give your heart as good a workout as active activities (like running, swimming or playing basketball).

How do you know if you're giving your heart a good workout? You're getting an active workout if you're breathing hard and starting to sweat.

Physical Activity Gives Your Body the Workout It Needs: Being physically active every day builds and maintains your muscles and bones, which is especially important for kids since they're still growing. Physical activity builds strength and endurance so you can play and work as hard and as long as you like.

Physical Activity Keeps You Healthy: People who are physically active every day tend to get sick less often than people who are not. They are less likely to become overweight or obese. Being physically active also helps lower the risk of some diseases, such as diabetes, heart disease and some types of cancers.

Physical Activity Helps Your Mind and Brain: Participating in physical activities can make you feel less stressed, happier, more confident and generally better about yourself. Being physically active can help you improve your school work. It also leads to a better night's sleep.

Get Physical, 60 Minutes a Day, Every Day

It's recommended that people 6–17 years old participate in an active activity 60 minutes per day. You can break those 60 minutes up into smaller spurts of physical activity. In fact, just changing some of your daily habits can add up to many minutes of physical activity a day. Here are some examples:

- Instead of riding to and from school in a car or taking the bus, walk or ride your bike, scooter or skateboard (be sure to do this with a sibling or friend and take other safety precautions).
- When running errands or shopping with a parent, ask them to park farther away from shops and stores and walk the extra distance.
- Instead of taking the elevator, take the stairs.
- Many household chores provide opportunities for activity. Help your parents with housecleaning, washing the car, yard work and carrying and putting away groceries. You'll be helping your family along with your heart, body and mind.
- Instead of just hanging out on the swings during recess, play basketball, tag or jump rope.

Beware of the Activity Busters

Watching television, playing video games, playing and socializing on the computer and talking or texting on cell phones are all activity busters. Yet, kids spend hours each day involved in these activities. Worse yet, while involved in an activity buster, kids often snack, not thinking about what they're eating, how much they're eating or whether it's good for them.

SERIOUS FACT

The risk of heart disease doubles in inactive people compared to people who get regular exercise.

STARTLING FACTS

About 23 percent of children — one of every four — do not participate in any free-time physical activity. Only 33 percent of children participate in daily physical education class in schools.

Activities

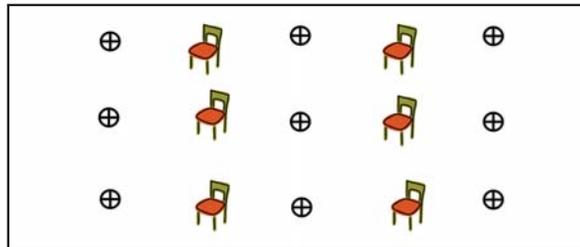
Grades K-5

In Classroom Physical Activity: Wacky Relays

Materials: Classroom with desks pushed to the sides of the room

Objective: To get 15–20 minutes of physical activity into the school day; to illustrate that physical activity can be done anywhere, by anybody, and be fun.

1. Mark five spots along the length of the room for each team with chairs and masking tape as shown below:



2. Split the class into two or three teams (depending on space) and line each team up at one end of the classroom.
3. Explain that they're going to have a wacky relay race and ask for a volunteer to demonstrate:
 - At the first marked spot, team members will do 10 jumping jacks.
 - Then, they will move to the first chair and hop on one foot around it.
 - Then, they will go to the second marked spot and do 10 sit-ups.
 - Then, they will go to the second chair and do the crab walk around it.
 - Then, they will go to the third mark to jump as high as they can five times while shouting out one "good-for-you" food with each jump.
 - Then, they will run back to their team and get back in line.
4. Explain that as soon as the first team member has finished with their jumping jacks and moved to the first chair, the next team member should step out to the first spot and do their jumping jacks and so on, so that eventually five team members from each team will be on the course at once.

Note: The relay course and challenges can be modified to suit your classroom size.

FUN FACT

You only burn about one calorie per minute while watching TV. That's about the same amount of calories you burn when you're sleeping!



Grades K–2

In Classroom Physical Activity: Freeze Dance

Materials: CDs or MP3 player with fast dance music, CD player, speakers

Objective: To get 15–20 minutes of physical activity into the school day; to illustrate to students that physical activity can be done anywhere, by anybody, and be fun.

1. Have students stand by their desks and space themselves so that each student has room.
2. Tell students that when the music plays they should dance. But when the music stops, they must freeze in place.
3. Play the music for several minutes. Stop the music suddenly and check to make sure that students have “frozen.”
Do not eliminate the last student to freeze or students who aren’t perfectly still.
4. *Extension Activity:* For additional activity after students have “frozen,” shout out a physical challenge (examples: jumping jacks, sit-ups, hopping on one foot, jogging in place, etc.) for them while the music is off.
5. Continue for 15–20 minutes.

Grades 3–5

In-School or At-Home Activity: Walkers/Runners Club

Materials: Indoor and/or outdoor place to walk/run, laps counting chart large enough to list all students in class

Objective: To encourage regular physical activity through peer relationships, encouragement and competition.

1. Announce that you will be starting a Walkers/Runners Club and that everyone is welcome to join.
2. Post the lap counting chart and let students know that they can sign up for the club by adding their name to the chart.
3. Identify an area where students can walk/run and assign a distance to signify a lap.
4. Encourage students to run with friends before and/or after school.
5. Have students fill in the lap counting chart whenever they complete 10 laps.
6. Recognize students as they reach lap milestones 50, 100, 150 and so on.

Example of Lap Counting Chart

Name/Laps	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
Danny L.															
McKenna															
Connor															
Jacob P.															
Harper															
Sophia K.															
Marcus															

Discussion: A week after Walkers/Runners Club has begun, ask the students what motivates them to participate in the club? What makes them walk or run on a given day and keeps them from running on other days? Ask the students who haven’t signed up what obstacles are preventing them from signing up for walker/runner club?

Eating Right: Energy In, Energy Out

We get energy from the foods we eat and we use it to power our bodily functions, everyday activities, like brushing our teeth and walking to school, and physical activity. It's important to understand that if we take too much energy in (eat too much) without using it up, our body stores it as fat and we gain weight. If we use up more energy than we take in, we lose weight. So it's important to keep an energy balance.

What Is a Calorie?

You might have heard people talking about calories, counting calories, or how many calories are in this or that food. This might have even made you think that calories are bad for you, but they're not.

A calorie is a unit of energy measurement. The number of calories in a food or beverage is the amount of energy we get when we eat or drink.

Our bodies constantly need and use energy. You know we need energy to ride bikes, play sports and run a race, but our bodies also need energy to do our homework, take a test and even watch TV. In fact, our bodies use energy to do things we aren't even aware of, like digesting food, growing, pumping the heart and breathing. So yes, we even need energy when we sleep.

Different Foods Have Different Amounts of Calories

Most foods and drinks contain calories. Some foods, like celery and lettuce, have very few calories (1 8-inch celery stalk has 11 calories. 1 cup of shredded lettuce has 8 calories). Some foods have a lot of calories (1 cup of shredded cheddar cheese has 455 calories). And some foods, like oatmeal, have a moderate amount of calories (1 cup of oatmeal is 110 calories). For packaged foods, you can learn how many calories are in a food by looking at the nutrition label.

How Many Calories Do Kids Need?

All kids don't need the same amount of calories. That's because all kids differ in age, activity level, gender and size. Each person burns calories (energy) at different rates. Depending on how active you are on different days, you won't need to take in the same amount of calories every day.

The estimated range of calories that a 5 to 11 year-old kid with a moderate activity level should eat/drink is between 1,400–2,000 per day.

Most kids don't have to worry about getting enough calories because being hungry tells them to eat more when they need more energy. Some kids who are overweight might want to watch how many calories they're taking in.

Energy In = Energy Out

If you take in about the same amount of calories through eating and drinking that you use through your body functions, daily activities and being active, then you are in **energy balance**.

But if you take in more calories than your body needs or uses as energy, then your body will take the unused calories and store them as fat and you will gain weight.

If you take in fewer calories than your body needs for energy, then your body will burn the stored fat for energy and you will lose weight. When you're truly hungry (not just snacking because you're bored or stressed), that's the signal your body uses to tell you it needs more energy.

You don't need to worry about staying in energy balance every day. But it is important that you stay in balance over time.

Physical activity is important to maintaining energy balance because it burns calories and strengthens and builds more muscles. Muscles use more energy than fat, which means they burn even more calories. Balancing the food you eat with at least 60 minutes of physical activity every day will help keep your body at a healthy weight and keep your energy in balance.

INTERESTING FACT

Boys 5–19 years-old take in an average 2,252 calories per day.
Girls 5–19 take in an average 1,812 calories a day.

FUN FACT

Olympic Gold Medal swimmer, Michael Phelps eats 12,000 calories a day when he's in training. He trains (exercises) so long and so hard that he burns off all those calories. Definitely, do not try this at home.

Activities

Grades K–2

Activity: Energy Guessing Game

Materials: 10–15 different foods representing a wide range of calories/serving sizes; knowledge of the calories per serving for each food; a measuring cup

Objective: To encourage students to think about the foods they eat as fuel and as “energy in,” and how active they would need to be to maintain their energy balance.

1. Choose three food items.
2. Demonstrate what a recommended serving of each food would be.
3. Ask students to discuss and agree on which of the three foods has the highest amount of calories per serving and which has the lowest.
4. Disclose the calorie amounts per serving of each food. (Some foods with calories are listed below. Go to <http://ndb.nal.usda.gov/ndb/foods/list> to find calorie counts of all foods.)
5. Ask students what activities and for how long they would need to do each to balance out each of the three foods. (Some activities with calories burned are listed on the next page. Go to <http://www.csgnetwork.com/caloriesactburned.html> for more examples.)
6. Repeat with different mix of food items.

Discussion: Discuss with students if the recommended servings were less than what they would normally eat and why.

Would knowing calories per serving of foods change what they ate? Why and how?

List of Foods with Calorie Counts

Food	Calories	Food	Calories
Medium apple	95	1 cup Cheerios	110
Medium banana	105	1 cup oatmeal (made with water)	166
1 cup grapes	104	Potato chips (28 g.)	150
Medium orange	60	Brownie (2" sq.)	243
1 cup broccoli	27	16 oz. chocolate milk shake	720
1 cup cucumber	8	Spaghetti w/Meat Sauce (restaurant lunch serving)	500
1 medium potato	161	1 cup low-fat milk	102
Hamburger (single patty, bun and condiments from fast food restaurant)	273	1 cup skim milk	86
4 oz. chicken breast with skin (2.3 ounces)	231	4 chicken nuggets	190
PBJ sandwich (2 tbsp. PB, 1.5 tbsp. jelly, 2 slices of bread)	343	Pancakes w/butter, syrup (3 pancakes, 2 tsp. butter, 3 tbsp. syrup)	520

List of Activities with Calories Burned

Calories burned listed are for a 62-pound person (average weight of a 9-year-old). If you weigh more, you'll burn more calories. If you weigh less, you'll burn fewer calories. All activities are for 30 minutes.

Activity	Calories Burned	Activity	Calories Burned
Jogging	66	Trampoline	52
Jumping rope	148	Doing homework	22
Bike riding	148	Doing pushups	89
Watching TV	2	Skateboarding	74
Walking	59	Doing sit-ups	89
Playing basketball	118	Playing touch football	113
Climbing stairs	85	Gymnastics	169
Swimming laps	141	Housecleaning	45
Walking the dog	49	Martial arts	141
Bowling	44	Raking lawn	58

Grades 3–5

Activity: Food Lineup

Materials: 15–20 different foods representing a wide range of calories/serving; knowledge of the calories per serving for each food; measuring cup; table

Objective: To encourage students to think about the foods they eat as fuel and “energy in,” and how active they would need to be to maintain their energy balance.

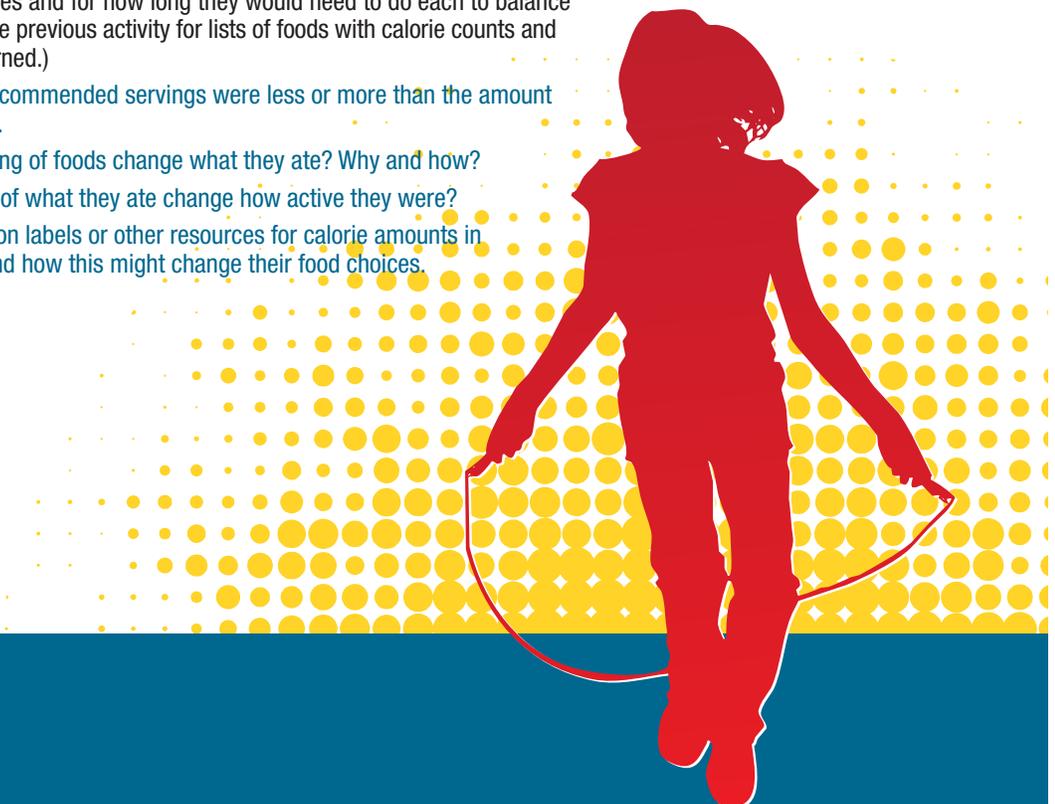
1. Put the food items out on the table.
2. Ask the students to work together to discuss and arrange the food items in the order from highest to lowest calories per serving.
3. Once students agree on the correct order, share the calorie counts per serving of each food.
4. Discuss with students any errors they made in judging relative amounts and what misconceptions they might have had about those foods.
5. Ask students what activities and for how long they would need to do each to balance out each of the foods. (See previous activity for lists of foods with calorie counts and activities with calories burned.)

Discussion: Ask students if the recommended servings were less or more than the amount they would normally eat and why.

Would knowing calories per serving of foods change what they ate? Why and how?

Would knowing the calorie count of what they ate change how active they were?

Ask students if they check nutrition labels or other resources for calorie amounts in foods. If any do, ask them why and how this might change their food choices.



Grades K–5**Activity: Staying in Balance**

Materials: White/Black board or easel sheet for writing down responses

Objective: To make students aware of their reasons for not keeping their energy balance, e.g., not eating right, not being physically active, and help them get beyond the excuses

Grades K–2

1. Tell students that some people might have problems keeping their energy balance; reasons for not being physically active or for eating too much or too little of foods that aren't as healthy.
2. Offer some examples of these and put them on the board or easel sheet:
 - *I'm not very good at sports or gym class, so I don't like to play.*
 - *There's nothing to do after school except watch TV.*
 - *I'm starving after school, so I eat a lot of chips and cookies.*
3. Ask the students to share some of their problems and add those to the easel sheet.
4. Have the students vote on the problem that is most true for them.
5. Brainstorm solutions to that problem with the class.
6. When you feel you have enough "solutions" to that problem, have the students vote again on the remaining problems and repeat the brainstorming of solutions.
7. Continue until all the problems have been "solved."

Discussion: Are there any unsolvable problems to keeping an energy balance?

Next time you have a problem with keeping your energy balance, not being active, eating foods that aren't as healthy and/or eating too much, what will you do?

Grades 3–5

Follow steps 1–3 above.

4. Have students pair up.
5. Identify one student in each pair to express the problem and the other student to be the problem solver.
6. Have student pairs choose one of the problems you've listed or have them come up with their own problem.
7. Have student pairs work independently to role play overcoming their problem with a workable solution.
8. Have students present their role play.

Discussion: Are there any unsolvable problems to keeping an energy balance?

What was hardest for the students to let go of? Why?

What was hardest for the students to accept? Why?



FUN FACT
During exercise, it takes 10 seconds for blood to travel from your heart to your big toe, and back again.

Eating Right: The Balanced Plate

We talked about the balance between energy in/energy out. It's also important to have a balanced plate, e.g., a balanced and healthy diet. Kids need to be aware of what types of food they should be eating most and what types of food to eat less often to build a healthy body and heart. They also need to understand the benefits of eating certain foods and what to watch out for in foods they should eat in moderation.

What's On Your Plate?

Remember your plate from dinner last night. What was on it? Was it mostly meat and potatoes? Did it have any vegetables on it? What about fruits? What was in the glass or cup by your plate? Was it soda, water, juice or milk?

Was your dinner plate last night balanced?

As we learned earlier, balance is important to our health. While it's important to balance energy in or calories in with energy out or calories out, it's also important that the foods you eat create a varied, balanced and healthy diet. The balanced plate easily shows you what combination of foods make up a balanced diet.

What Goes On the Balanced Plate

Picture a plate. To make it a balanced plate, it would have all the food groups on it: vegetables, fruits, grains, protein and dairy.

Half of that plate needs to hold fruits and vegetables, with a bigger part of that being vegetables.

Fiber-rich whole grains and protein are on the other half of the plate, with grains making up a bigger part of that half. Grains are things we get from foods like cereal, bread and rolls. Meats, eggs, unsalted nuts and beans are examples of protein.

Dairy sits in a glass or cup by the plate. Fat-free, 1percent fat and low-fat milk, yogurt and cheese (low/reduced sodium options) are examples of dairy.

When you eat these foods every day, you give your body, brain and heart what they need to keep working at their best for you.

Where are the Cookies?

You might have noticed that there's no room on the balanced plate for things like sweets, chips and candy. That doesn't mean you can't ever have them. These types of foods are OK to eat in **moderation** (means having in limited amounts), but not all the time.

That's because the kind of calories in those foods are what we call "empty calories." We call them empty calories because those foods don't give you vitamins, nutrients or other benefits that the five food groups give you.



INTERESTING FACT
An average size brownie has 243 calories and 10 grams of fat. An average size apple has 95 calories and 0.3 grams of fat.

Activities

Grades K–2

Activity: Balanced Plate Collage

Materials: Lots of magazines with pictures of different foods, scissors, glue stick, a large piece of paper to represent a placemat with a plate and small circle representing dairy glass already drawn on it (note for kindergarten teachers: you might want to pre-mark the “plates” to represent the proportions), a large drawing of the completed balanced plate for students to refer to.

Objective: To reinforce what types of foods belong on the balanced plate and in what proportions those food groups are represented on the balanced plate.

1. Review the balanced plate, proportions and food groups with students.
2. Discuss what specific foods fit into each food group.
3. Pass out the paper placemats to students and have them mark the vegetable section with a “V,” the fruit section with an “F,” the grains section with a “G,” the protein section with a “P” and the dairy circle with a “D.”
4. Pass out magazines and scissors to students and have them cut out pictures of foods that they can find.
5. Once they have finished cutting out the food pictures, pass out the glue sticks. Have students glue the pictures into the appropriate sections of their “plates” to create a balanced plate.

Discussion: When you look at the pictures you cut out, do you see any foods you’ve never tried before? What has stopped you from trying those foods? Would you be interested in trying those foods? Why or why not? Does the plate you made look like your plate at meals? In what ways does it look like your meals? In what ways doesn’t it?

Grades 3–5

Activity: “What’s That Food?”

Materials: Either magazines or Internet access with printing capabilities

Objective: To encourage students to look for and try new, healthy foods.

1. Talk to students about their eating habits. What are their favorite foods in each of the groups? What have they tried that they don’t like? What won’t they try or eat?
2. Have students independently search through food magazines and/or online for foods that they have never seen or never tried before. Have them find out what that food is called and what food group it belongs in. Encourage students to find at least three unknown/untried foods.
3. Have students try to stump their classmates with their food finds.
4. Have students try to guess what food group the unknown food belongs in and share what makes them think that.
5. Keep track on the board or in a list of foods that stumped students and foods that didn’t.
6. Have students discuss which of the foods they would try and which they wouldn’t and why.
7. *Extension Activity:* Bring unusual foods to see if any of the students recognize them. Encourage students to try the new foods (check with students for possible food allergies or other dietary restrictions).
 - Food suggestions: kumquat, tomatillo, star fruit, ugli fruit, spaghetti squash, edamame, mustard greens, lychees, dragon fruit, quinoa, spelt, buckwheat, wild rice, Greek yogurt, buffalo, Cornish hen, garbanzo beans.

Discussion: Why are some kids reluctant to try foods, especially vegetables? What could happen if they tried something new? Do you ever get bored with the food you eat? What foods have you been bored with? What can you do about that?



Eating Right: The Food Groups

To have a healthy diet, kids (and everyone) need to eat from all five of the food groups: vegetables, fruits, grains, protein and dairy. Each food group gives your body different health benefits and nutrients.

FUN FACT Tomatoes are eaten more than any other single fruit or vegetable in the United States.

Vegetables: The “Protectables”

Health and Nutrition Benefits

Vegetables have very few things your body shouldn't have too much of, like bad fat (saturated and trans fat), salt (sodium), added sugars or cholesterol.

- Making vegetables a part of your healthy diet can reduce the risk for heart disease and heart attack.
- Making certain vegetables a part of your healthy diet can protect against some kinds of cancer.
- Vegetables that have a lot of potassium can help lower blood pressure.
- Vegetables contain a lot of fiber (which helps your digestion and can lower your chance of heart disease and type 2 diabetes).
- If you're trying to lose weight by lowering the amount of calories you take in, then vegetables are good because they are low in calories. Also, the fiber in vegetables makes you feel full and that helps you eat less.
- Vegetables are high in Vitamin A, which is needed to keep eyes and skin healthy, and Vitamin C, which helps you absorb iron.

Eat a Rainbow of Vegetables: Different Color Vegetables for Different Benefits

Vegetables come in a rainbow of colors, and different color vegetables give you different health and nutrition benefits:

Dark Green Vegetables include dark green leafy vegetables like romaine lettuce, spinach, broccoli, mustard greens and kale. Dark green vegetables contain a lot of fiber and nutrients that might help protect against certain cancers.

Red Vegetables include tomatoes, red potatoes, radishes, beets and red cabbage. Red vegetables can help protect cells and the heart.

Orange and Yellow Vegetables include pumpkin, sweet potatoes, carrots, rutabagas and acorn squash. Orange and yellow vegetables have a lot of fiber and potassium. Orange vegetables have Vitamin A which is good for your eyesight and may help fight off illnesses.

Green Vegetables include spinach, lettuce, cucumbers, brussel sprouts and artichokes. They may help protect your eyes and can help protect against certain forms of cancer.

Blue and Purple Vegetables like eggplant, purple asparagus and purple cabbage can help protect the cells in your body and may reduce the chance of heart disease.

White Vegetables including lima beans, potatoes, onions, jicama and parsnips may help lower cholesterol, blood pressure and the chance of heart disease.

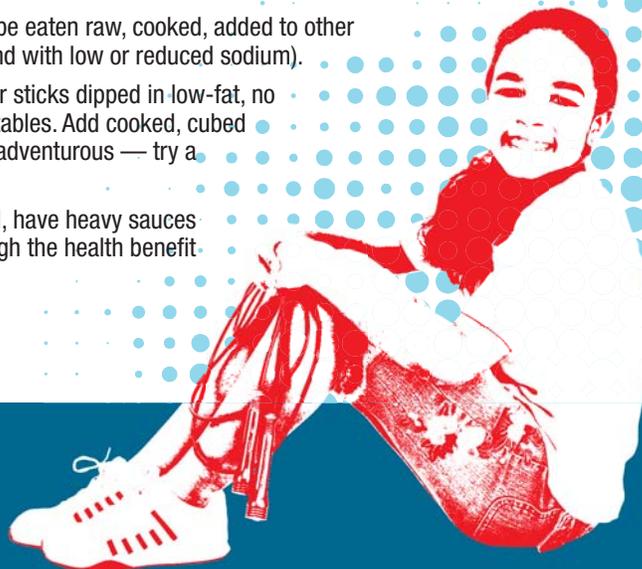
Your Mom Is Right ... Eat Your Vegetables Every Day

Depending on your calorie needs you should eat 2½–3½ cups of vegetables a day total, spread out over your meals and snacks. Over the course of a week you should include vegetables from the full variety of colors to get all the health and nutrition benefits of vegetables.

Think of different ways to include vegetables in your diet. They can be eaten raw, cooked, added to other dishes and even as a drink with 100 percent vegetable juice (the kind with low or reduced sodium).

Try sliced-up fresh raw vegetables like carrots, celery and cucumber sticks dipped in low-fat, no added sugar yogurt. Make a pizza covered in different colored vegetables. Add cooked, cubed vegetables like zucchini and eggplant to spaghetti. Be creative and adventurous — try a new vegetable every week.

Be careful of how vegetables are prepared. Vegetables that are fried, have heavy sauces or are cooked in butter or oil have a lot of added fat that can outweigh the health benefit (yes, that includes french fries)!



Fruit: A Sweet and Healthy Treat

Health and Nutrition Benefits

Most fruits can satisfy a sweet tooth, and, unlike cookies and candy, fruit is a healthy treat.

- Fruit has no cholesterol. Most fruits are low in fat, sodium and calories.
- Fruit can protect against many of the diseases that vegetables protect against, like some cancers, diabetes and heart disease. Fruit contains many of the same nutrients as vegetables.
- Many fruits are good sources of potassium, which helps protect against high blood pressure.
- Almost all fruits (but not fruit juices) have fiber, which can help lower the risk of heart disease. Fiber helps your digestion and makes you feel full and less hungry without adding a lot of calories.
- Some fruits have a lot of Vitamin C, which helps keep your gums and teeth healthy and helps you heal when you have a cut or wound.

An Apple a Day and Then Some

Depending on your calorie needs, you should have 1½–2 cups of fruit a day, spread out over your meals and snacks. In general, 1 cup of fresh fruit or 100 percent fruit juice or ½ cup of dried fruit would count as 1 serving. But you don't always cut up fruit, so here are some other 1 cup equivalents:

- Apple: ½ of a large apple, a whole small apple
- Banana: 1 large
- Grapes: 32 seedless grapes
- Orange: 1 large
- Pear: 1 medium
- Plum: 3 medium or 2 large

There's a Whole Orchard of Fruit to Try

I'm sure you've had apples and oranges and bananas. But have you tried papaya or mangoes or cantaloupe or honeydew melons?

Fruit can be eaten raw, whole, cut up, cooked, dried or baked. You can add fruit to salads and meat dishes. Mix your favorite fruits up in a blender with ice and low-fat vanilla yogurt (no added sugar) for a delicious smoothie or have a glass of 100 percent fruit juice. Top off your cereal with some cut-up fruit and even try some different fruits in sandwiches. Watch out for canned fruit and canned fruit cocktail because some contain sugary syrup.

FASCINATING AND USEFUL FACT

You can use fruit juice or applesauce in your cake or cookie recipes in place of some of the fat. That will make homemade treats healthier but will taste just as good.

Go, Go Grains!

Health and Nutrition Benefits

Grains are foods that are made from wheat, rice, oats, barley or any other cereal. Grains include breads, cereals, pasta, crackers and rice. Fiber-rich whole grains are loaded with fiber as well as B vitamins and minerals called magnesium and selenium:

- Eating fiber-rich whole grains may help with weight management because the fiber makes you feel full; so you eat less.
- The fiber in grains may help lower cholesterol levels and may lower the risk of heart disease, obesity and type 2 diabetes.
- Whole grains have magnesium and selenium. Magnesium helps build bones and releases energy from muscles and selenium helps your body form antioxidants to help protect your cells from damage.

Two Groups of Grains

Grains are divided into two groups: fiber-rich **whole grains** and **refined grains**. Fiber-rich whole grains are made with all the pieces of the grain. Refined grains have been put through a process called "milling." Milling removes parts of the grain and also removes a lot of the health benefits of fiber. Because of that, refined grain isn't as healthy for you as whole grain. So you should make at least half the grains you eat fiber-rich whole grains.

Examples of fiber-rich whole grains include brown rice, oatmeal and anything made with whole meal flour. Check food packaging on items like bread, cereal and pasta. It will tell you whether the item has been made with whole grains. Examples of refined grains include white rice, white flour and white bread.

AMAZING FACT

On average, each American eats 53 pounds of bread every year.

Get Your Grains

Depending on your calorie needs, you should eat 5–6 ounces of grains a day, spread out over your meals and snacks. In general, 1 slice of bread, 1 cup of ready-to-eat cereal, or ½ cup of cooked rice, cooked pasta, or cooked cereal would equal 1 ounce from either the refined or fiber-rich whole grain group. Here are the 1 ounce equivalents or typical serving equivalents for some other popular grain items:

- 1 full size bagel = 4 ounces
- 5 whole wheat crackers = 1 ounce
- ½ English muffin = 1 ounce
- 1 4½" diameter pancake = 1 ounce
- 3 cups popped popcorn = 1 ounce
- 1 small (6" diameter) corn or flour tortilla = 1 ounce
- ½ cup brown rice = 1 ounce

Whole Grain Is The Way To Go!

For snacks, eat air-popped popcorn or whole grain crackers. Instead of white rice, eat brown rice. Instead of plain pasta, eat whole grain pasta. For breakfast, have a bowl of oatmeal instead of cereal made with refined grains, or look for cereal boxes that say “made with whole grain.”

Protein: Meat, Poultry, Fish, Eggs, Nuts and Seeds (and Sometimes Beans and Peas)**Health and Nutrition Benefits**

Protein is essential to our health because it provides your body with what it needs to build bones, cartilage, skin and blood.

- Proteins have B Vitamins. B Vitamins build tissue and are important for the formation of red blood cells.
- The iron in proteins helps carry the oxygen in our blood.
- Eating seafood can help prevent heart disease.
- Peanuts and certain other nuts also may reduce the risk of heart disease. But nuts are also high in calories, so be careful about how much you eat.
- Some meats are high in bad fat (saturated and trans fat), cholesterol and calories and should be eaten only occasionally. Lean meats, chicken (without the skin) and fish (especially oily fish, like salmon and herring) are good choices to be eaten more often.

How Many Eggs = How Many Nuts: Figuring Out How Much Protein to Eat

Depending on calorie needs, kids in elementary school should eat 4–5½ ounces of protein a day. One ounce of meat, fish or poultry, ½ ounce of nuts or seeds, ¼ cup of cooked beans, 1 egg or 1 tablespoon of peanut butter all equal an ounce of protein. Check the list below for typical size servings:

- 1 small hamburger = 2–3 ounces
- 1 small chicken breast half = 2–3 ounces
- 1 can of tuna (oil drained) = 3–4 ounces
- 12 unsalted almonds = ½ ounce = 1 ounce serving (plus 1 teaspoon oil)

Beans and Peas (also called legumes) can fit in both the vegetable group and the protein group. People who don't eat meat are called vegetarians or vegans, and beans and peas allow them to get protein. Beans and peas include black beans, kidney beans, soybeans and some you might not have heard of, like garbanzo beans and lentils. Legumes are high in potassium and magnesium. Our bodies need magnesium for almost every function, including keeping your heartbeat regular and your bones strong.

Go Lean with Protein

There are many not-as-good-for-you choices in the protein group, so it's important to make good choices.

- Lean meat, chicken with no skin and fish should be cooked with little or no added butter and oil or heavy sauces.
- Unsalted nuts and peanut butter should be eaten in small quantities because they're high in calories.
- Try going meatless one or two days a week. On meatless days, get your protein from nuts, seeds, beans and soy.

FUN FACT

The Hamburger Hall of Fame is in Seymour, Wisconsin, where the world's biggest hamburger (8,266 pounds) was made.

Dairy: Building and Maintaining Strong Bones

Health and Nutrition Benefits

Dairy products (anything made from milk) are a great source of calcium, Vitamin D, potassium and protein. They help build and maintain strong bones and teeth:

- Because your bones are still growing, dairy and its nutrients are especially important for kids.
- Vitamin D helps your body maintain proper levels of calcium and phosphorous which helps build and maintain strong bones.
- Dairy products contain fat, so choose fat-free, low-fat or 1 percent fat instead of regular and 2 percent dairy products.

Dairy Roundup

The dairy group includes anything made from milk, along with the many types of milk:

- Milk: fat-free/skim, 1 percent fat, low-fat, chocolate and other flavored milks and soy milk
- Cheeses: fat-free or low-fat, reduced or low sodium
- Yogurt: fat-free or low-fat, no added sugars

For Healthy Bones

Drink 2½–3 cups of milk a day, depending on your size, or you can substitute those cups with one of the dairy group equivalents: 1 cup of fat-free or low-fat milk = 1 cup of fat-free or low-fat yogurt with no added sugars, 1½ ounces of fat-free or low-fat natural cheese, or ½ ounce of processed cheese (like American cheese).

Choose Wisely

Pick low-fat or skim milk instead of whole milk. For snacks, choose fat-free or low-fat or nonfat yogurt with no added sugars. Whether your choice is milk, yogurt or cheese, be sure to look for the words nonfat, fat-free, low-fat, skim or 1 percent on the milk label and nonfat, fat-free or low-fat on yogurt and cheese labels (choose lower sodium options). Choose ice cream only occasionally because it usually has sugar and fat.

FUN FACT

An average U.S. cow gives 6½ gallons of milk a day. That's more than 100 glasses of milk a day!



Activities

Grades K–2

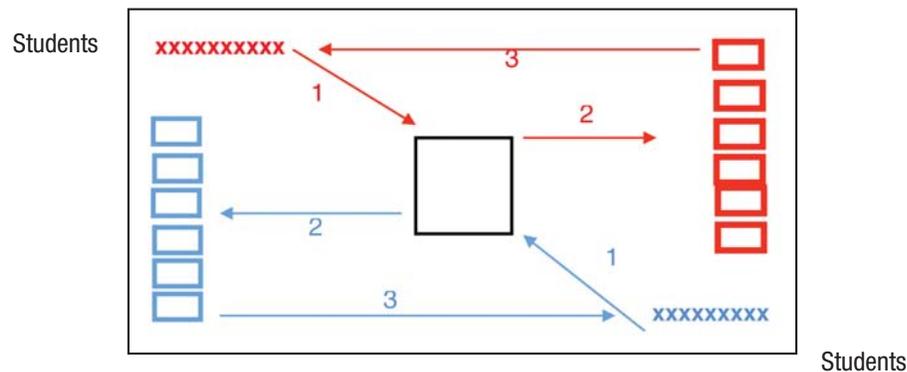
Activity: Food Shuffle Relay Race

Materials: Pictures and packaging of many different types of food, two sets of six containers, with five representing one of the food groups and the sixth labeled to represent foods that should be eaten in moderation like sweets and chips; one large container to initially hold all the pictures/packageing.

Objective: To help teach and reinforce which foods belong in each food group, which foods are healthy and which ones should be eaten in moderation.

1. Move the desks to the sides of the classroom.
2. Place the large container filled with the food images and packaging in the middle of the classroom.
3. Place each set of smaller containers at opposite ends of the room in a row.
4. Split your class into two teams and have each team line up at opposite ends of the room.
5. The first person in each team will run to the large container in the middle of the room, randomly pull out a food picture or package, run to the containers opposite their teams and quickly decide which of the six smaller containers their food belongs in. Then, they will deposit it in that container. They then run back to their team to tag the next person to go.
6. This will continue until all the food images/packages have been sorted into the smaller containers.
7. The teacher can either independently tally up how many food images/packages were placed correctly or lead the class in the tally, to further reinforce food groups and benefits of each food group.
8. The winning team is the one that placed the most food images/packages correctly.

Discussion: Which foods were hardest to decide on where to place? Why?



Grades 3–5:

Activity: What's My Food? Game Show

Materials: List of combination of foods (e.g.: peanut butter and banana sandwich, macaroni and cheese, beef taco, grilled tofu sandwich, smoothie, spaghetti with meatballs, hamburger sandwich); two sets of food group cards, with a different color for each food group; a bell to ring when a team gives the right answer.

Objective: To raise awareness of what ingredients go into common foods to help students make healthier choices.

1. Split the class into two teams and group each team around a table or desk.
2. You (the "game show host") will announce a food from your list.
3. Each team will decide together what food groups are represented by the ingredients in that item.
4. When they come to an agreement, they will hold up the cards representing those food groups and explain which ingredients are from the food groups.
5. The first team to get the right answers gets a point.
6. Go to the next food item and continue.

Discussion: How has playing this game changed how you might think about the foods you eat?

Eating Right: Know Your Portion Size

Remember Goldilocks of “Goldilocks and the Three Bears”? She was all about finding what was just right for her. She didn’t want things too hot or too cold, too hard or too soft or too big or too small. That’s how you want to think about your food portions. Even with the healthiest foods, too little or too much aren’t good. You want to eat the portion that is “just right.”

A serving size is the amount of food listed on a nutrition label. A portion size is the amount of food that you actually eat. If you eat more than the serving size, then you are eating more calories and nutrients than what is listed on the nutrition label.

Eating too much from the protein, grain and dairy food groups or eating foods that are not healthy means you’re taking in too many calories and possibly too much bad fat (saturated and trans fat), sodium (salt), added sugars and cholesterol. It can be bad for your heart. If you don’t eat enough of these foods, then you’re not getting enough nutrients and vitamins you need, including calcium, protein, magnesium and Vitamins A, C and D.

It’s important to eat deeply colored vegetables and fruits, such as spinach, carrots, peaches and berries. They tend to be higher in vitamins and minerals than the others, such as potatoes and corn. Eat whole vegetables and fruits instead of drinking juices. When fresh foods are not available, choose frozen and canned vegetables and fruits packaged in water without added sugar, saturated and trans fat or salt.

No Two Slices of Bread Are Alike

We learned that a slice of bread equals an ounce and that we need 5 ounces of grains a day. But not all slices of bread are the same size, just like not every apple or banana is the same size. And what does 1½ ounces of cheese look like? It can be confusing.

An easy way to understand portions is to compare the recommended portion size to everyday items. That way, you’ll know if you’re eating the right portion. The following chart will help you estimate the right portion size:

<p>Food Serving</p> <ul style="list-style-type: none"> 1 cup of vegetables 1 cup of mashed potatoes 1 medium apple 1 cup strawberries 1 cup cooked pasta 	<p>Size of a Baseball</p> 	<p>Food Serving</p> <ul style="list-style-type: none"> 1 ounce dried fruit ¼ cup almonds or walnuts 	<p>Size of a Golf Ball</p> 
<p>Food Serving</p> <ul style="list-style-type: none"> 1 small baked potato 	<p>Size of a Computer Mouse</p> 	<p>Food Serving</p> <ul style="list-style-type: none"> 1 piece of bread 	<p>Size of a Smartphone</p> 
<p>Food Serving</p> <ul style="list-style-type: none"> ½ cup blueberries or grapes ½ cup cooked rice ½ cup cooked beans ½ cup frozen yogurt or ice cream 	<p>Size of Half a Baseball</p> 	<p>Food Serving</p> <ul style="list-style-type: none"> 1 waffle 1 piece of lunch meat 	<p>Size of a DVD</p> 
<p>Food Serving</p> <ul style="list-style-type: none"> 1 bagel 	<p>Size of a 6 oz. Tuna Can</p> 	<p>Food Serving</p> <ul style="list-style-type: none"> 3 ounces of cooked chicken or lean beef 	<p>Size of a Deck of Cards</p> 
<p>Food Serving</p> <ul style="list-style-type: none"> 1½ ounces of hard cheese ¼ cup almonds or walnuts 	<p>Size of 3 Dice</p> 	<p>Food Serving</p> <ul style="list-style-type: none"> 3 ounces of cooked fish 	<p>Size of a Checkbook</p> 

Activities

Grades K–5

Activity: Past and Future Portions Game

Materials: Large box of cereal, bag of potato chips, cereal bowls, two large bowls, measuring cup

Objective: For students to rethink the size of an appropriate portion.

1. Choose two students to pour their usual portion of cereal into a bowl.
2. Have the students show the other students their portion size.
3. Ask students to raise their hands:
 - If that's about the portion size they would have
 - If that's less than the portion size they would have
 - If that's more than the portion size they would have
4. Choose another student and have them find the actual serving size on the cereal box nutrition label and announce it to the class.
5. Choose two other students to use the measuring cup to determine and show how much cereal the two volunteers choose as their portion vs. the serving size, according to the box.
6. Choose two students to demonstrate the portion of chips they usually eat by putting that amount into the two larger bowls. Ask them if they usually put chips in a bowl when they eat them or if they eat them out of the bag
7. Repeat step 3 with chip portions.
8. Have another student find the actual serving size for the chips on the bag.
9. *Grade 3–5 Extension Activity:* Have students calculate how many additional or fewer calories the cereal and chip volunteers ate than the amount of calories shown by serving size on the nutrition labels.

FOOD FOR THOUGHT

Food portions have gotten larger and larger over the past 20 years. A typical bagel was 3-inches wide and 140 calories 20 years ago. Today, a typical bagel is double that size and 350 calories!

Discussion: Were you surprised by the serving/portion size listed on the packaging?

Have you ever checked to see what the serving was on packaging? Why? For what types of foods?

Does this exercise make you think differently about portion sizes? How so?

Will this exercise make you act differently when it comes to portion size? How so?

Grades K–5

Activity: Food Portions Match Game

Materials: Two or three sets of Comparison Items Cards made from the Portion Size Comparison Items Sheet; a list of common food items

Objective: To teach and reinforce portion sizes for foods.

1. Divide the class into two or three teams.
2. Give each team a set of household comparison item cards created from the worksheets.
3. Have each team stand or sit together in front of a desk or table.
4. Choose a food item from your list and announce it to the class.
5. Each team will quickly decide which household item best represents the appropriate portion size for that food. When they decide, they'll hold up that card.
6. If necessary, teams can try three times to choose the correct card. If after three attempts neither team has chosen correctly, make a note of that item so it can be discussed later.
7. Award points when teams choose the correct card.

Discussion: Which food items were difficult to match? Why were those difficult?

Did students expect the portions to be bigger or smaller? Why?

Download *Portion Size Comparison Items Sheet* at heart.org/educator (For the Classroom).

Eating Right: Sugar, Not So Sweet

Sugar might taste sweet, but too much of it is not so sweet for your health. Products high in sugar, like sodas, juice drinks, candy and cookies, can lead to health problems like obesity, diabetes, high blood pressure, heart disease and cavities.

SHOCKING FACT
The average American consumes more than 150 pounds of sugar a year.

How Much Sugar Are You Consuming?

Americans consume an average of 22 teaspoons of sugar a day, according to a recent study. How much are you consuming? Here's how much sugar is in some favorite items:



Energy Burst ... Then Sugar Bust

Some people think that sugar gives you energy, but it only gives you a quick burst of energy followed by a drop in energy (also called a crash), which leaves you feeling tired and grouchy.

Beware of Sneaky Sugar

You probably know that soda, cookies, candy, doughnuts and cake have a lot of sugar in them. That's one of the reasons you should be careful about eating too much of these foods. Did you know that lots of foods are loaded with hidden sugar — sugar you can't really taste or that you wouldn't expect to find in foods because they're supposed to be good for you?

Here are some foods that sugar is hiding in:

- Ketchup can be 20 percent sugar.
- Granola bars often have high sugar ingredients like chocolate and marshmallows baked into them.
- Protein bars are often made with added sugars to improve their taste.
- Sports drinks can be loaded with sugar to improve their taste.
- Canned and jarred tomato and spaghetti sauces often have added sugars to cut the acidic taste of the tomatoes.
- Oatmeal is naturally low in sugar, but watch out for the packets of flavored oatmeal. Many of them are loaded with sugar.
- Some yogurts have added sugars.



Be a Sugar Sleuth

To make sure you're not eating all that unwanted sugar, you can be a sugar detective. You and your parents can know exactly how much sugar is in packaged food by checking out the nutrition label and the ingredients list.

The amount of sugar can be found on nutrition labels under Total Carbohydrates. The amount of sugar shown here includes natural sugars in foods and sugars that are added during food processing.

The amount of sugar is measured in grams. To convert the grams into teaspoons, divide the number of grams by 4.2. So for the label shown, the number of teaspoons of sugar in one serving size would be $12 \div 4.2 = 2.85$ teaspoons of sugar.

Sugar detectives should read the ingredient list as well as the nutrition label. This is where some super sleuthing comes in, because sugar isn't always called "sugar." Check the list below for other names for sugar. When you see any of these in an ingredient list, you'll know that added sugars are lurking in that product.

Other Names for Added Sugars:

- Sucrose
- Fructose
- Glucose
- Dextrose
- Galactose
- Lactose
- Maltose
- Corn Syrup
- High-Fructose Corn Syrup
- Honey
- Maple Syrup
- Molasses
- Evaporated Cane Juice
- Concentrated Fruit Juice

Nutrition Facts	
Serving Size 1 bar (37.0g)	
Amount Per Serving	
Calories 130	Calories from Fat 27
% Daily Value*	
Total Fat 3g	5%
Saturated Fat 0.5g	2%
Sodium 105mg	4%
Total Carbohydrate 23.0g	8%
Dietary Fiber 2.0g	8%
Sugar 12.0g	8%
Protein 2.0g	
Vitamin A 15%	Vitamin C 0%
Calcium 20%	Iron 10%
*Based on a 2000 calorie diet	

Activities

Grades 3–5

At Home Activity: Be a Sugar Sleuth

Materials: None

Objective: To help make students aware of some of the foods that contain “hidden” sugar and to familiarize them with looking at nutrition labels for hidden sugar.

1. Review how to find sugar content on nutrition labels and how to identify sugar on the ingredients list.
2. Ask students to look through the packaged foods in their home in which they wouldn't expect to find sugar.
3. Ask them to read the nutrition labels and ingredient list of those foods and identify two or three items that have hidden sugar in them.
4. Have them bring those items to school or bring a list of foods they found with hidden sugar.
5. Count up how many different items students identified that have hidden sugar.
6. *Extension activity:* Have students calculate the number of teaspoons of sugar in the items they brought.
7. *Extension activity:* Keep a list of the items students brought and the number of teaspoons of sugar in each item.

Discussion: Which items were the most surprising when it came to having sugar in them? Why those items?

Now that you know about hidden sugar, does it change the way you think about food? How so?

Does it change the way you will eat or decide what you will eat? How so?

Grades K–5**At Home Activity: Sugar Investigation**

Materials: Grades K–2 Sugar Worksheet, Grades 3–5 Sugar Worksheet

Objective: To make students aware of the amount of sugar they consume. To help them realize that they can investigate how much sugar is in the foods they eat, and learn other important nutritional information.

1. Have students discuss their favorite sweet foods and beverages.
2. Have them write down five of their favorites on the worksheet (*Note: Grades K–2 can do this part with their parents if necessary.*)
3. Explain to students that many companies list the nutrition information and ingredients of all of their products online.
4. Ask students to find the amount of sugar in each of their favorite foods/beverages as an at-home activity and fill in the worksheet with the amounts. (*Note: Grades K–2 can do this exercise with parents.*)
5. Have students bring their completed worksheets to share with the class.
6. Grades K–5: Have students discuss how often they eat/drink those items. Have them calculate how much sugar they're consuming from those items per week.
7. Ask students to come up with better-for-you sweet alternatives.
8. Have students use the Internet (either at home or at school) to find out how many grams of sugar are in their sweet alternatives. Then, calculate how much sugar they would be consuming each week if they replaced their favorites with the alternatives. Then, calculate the difference.

Discussion: Were you surprised by how much sugar was in your favorite items? How much sugar would you have guessed would be in those items?

Download *Grades K-2 Sugar Worksheet*, *Grades 3-5 Sugar Worksheet* at heart.org/educator (For the Classroom).



Catching the Right Amount of Zzzzzz's

Sleep is very important and often overlooked when thinking about staying healthy and fit. With everything that kids have to do and all the distractions in their lives, many don't get enough sleep. Help your students understand why getting enough sleep is important.

Bedtime — is there a more dreaded word? Most kids hate going to bed, which is too bad because many kids don't get enough sleep. That can lead to problems like not doing well in school, not being alert, being cranky and lowered resistance to colds and the flu. Researchers think that not getting enough sleep can even affect kids' growth.

If you're like most kids, you've had a busy day. There's school, activities, playing with friends, homework and household chores. It's no wonder you get tired. You're not alone — everyone and every living thing need sleep. Your body and your brain need rest.

So how much sleep do you need? At least 10 hours per night is what's recommended for kids your age. So stay away from drinks with caffeine, like some sodas, take a nice warm bath, turn off the TV and the computer — and go to bed.

Activities

Grades K–5

Activity: Counting the Hours: Calculating how many hours of sleep you get vs. how many hours you need

Materials: Analog clock, paper and pen

Objective: For students to figure out if they're getting the right amount of sleep, to practice time-telling skills with an analog clock.

1. Ask students how they feel when they don't get enough sleep. Review the reasons why we all need to get plenty of sleep.
2. Have students write down what time they usually go to bed and what time they get up on school days.
3. Have students calculate the number of hours of sleep they get.
4. Now have students calculate the difference between the 10 hours of sleep they're supposed to get and the hours they're actually getting.

Note: Kindergarten and first graders will likely need help with the calculation.

Discussion: Talk to students about what types of things keep them from sleeping and what types of things help them sleep. Have students share ideas for how to get to sleep more easily.

Grades 3–5

Activity: Scheduling Sleep: Create a daily schedule that allows for 10 hours of sleep

Materials: Sleep Diary Worksheet and pencils

Objective: For students to think about priorities that will keep them healthy and create a daily schedule that allows for physical activity and at least 10 hours of sleep.

1. Discuss with your students the importance of living a healthy life. Ask students to suggest the things that they need to include in their lives for it to be healthy. Be sure that 10 hours of sleep and physical activity are included in the discussion.
2. Have students list all the things they do during a normal school day, giving them enough time to recall everything including sleep, school, meals, activities, lessons, play time, computer and TV time, socializing, etc.
3. After students have a complete list, have them create a daily schedule that leaves time for daily physical activity and 10 hours of sleep.

Discussion: Ask your students how difficult it was to find time for the necessary amount of sleep and physical activity.

What did they give up to make sure those things were in their daily schedule?

Ask students how likely they will be to follow the schedule. Follow up with them in a week to find out if they're following the new schedule and if not, why?

Download *Sleep Diary Worksheet* at heart.org/educator (For the Classroom).

INTERESTING FACT

When you sleep, your brain recharges, your cells repair themselves and your body releases important hormones.

Some Kids Have “Special” Hearts: About Congenital Heart Defects

Some kids are born with special hearts; their hearts are not completely healthy. This condition is called **congenital heart disease** or **congenital heart defects**. This happens when the heart or the blood vessels around the heart don't develop correctly before a baby is born.

Many Different Treatments

There are many types of congenital heart defects and a wide range of how serious the heart defects are. So there are many ways to treat congenital heart defects. Some people may only need to go to a special heart doctor called a **cardiologist** regularly, while others may need medications or even surgery.

Learn More, Do More

Because of the research doctors have conducted in the past 10 years, they've learned a lot more about congenital heart defects and how to help kids who have special hearts.

Doing Your Part

The money you raise for the American Heart Association by participating in Jump Rope For Heart helps kids with congenital heart defects. It takes money to do research on medicines and treatments for heart problems, so we know the best way to make sick hearts healthier.

SHOCKING FACT

Every year about 32,000 babies are born with a heart defect in the U.S.

Activities

Grades K–5

Activity: Learn About Some Special Kids With Special Hearts

Materials: Computer with Internet connection, projector, Venn Diagram Worksheet

Objective: To humanize congenital heart disease, to give students a deeper understanding of the impact of the disease on children, and to encourage compassion and understanding for those children.

1. Go to www.heart.org/jump and select Kids We've Helped. Share several of the stories of kids with congenital heart defects with your class.
2. Discuss with your students what they think it would feel like to live with a special heart.
3. Talk to your class about how alike and different they are from kids with congenital heart disease.
4. *Grades 3–5 Extension Activity:* Have students read about more of the children featured in Kids We've Helped.
5. Have them choose a close friend. Using the Venn Diagram Worksheet, create a Venn Diagram that illustrates in what ways they're similar to their friend and in what ways they're different.
6. Have them pick one of the kids they read about on the Jump Rope For Heart website who they think they would be friends with if they met. Using what they learned about this kid from reading the article, create a Venn Diagram illustrating how they're similar and in what ways they're different.

Discussion: In what ways were your two Venn Diagrams similar and in what ways were they different?

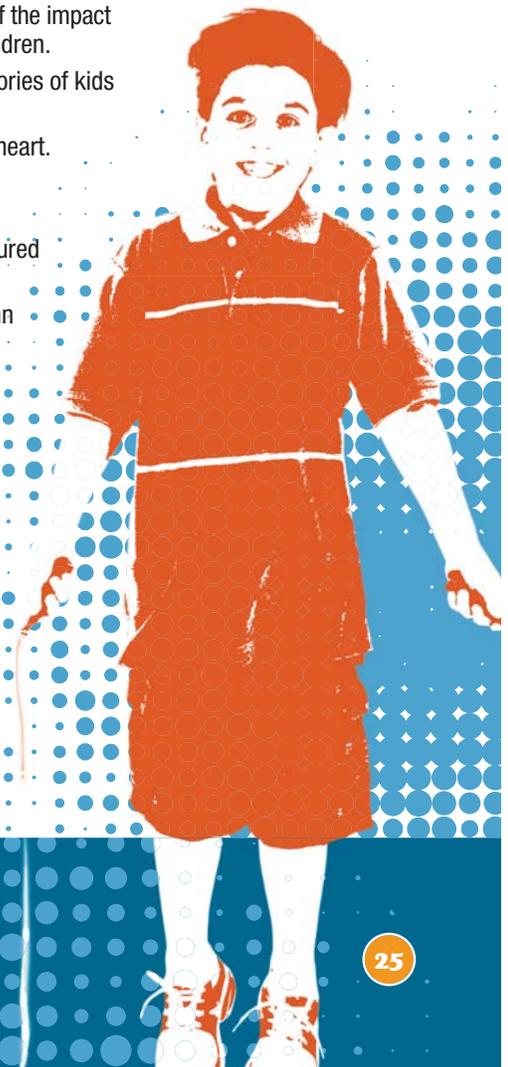
Do you have differences between you and your friend?

Do you have differences between you and the child with a special heart?

Do you share similarities with both?

Do you think you would find more differences or more similarities if you had the chance to get to know the child you chose from the Jump Rope For Heart website?

Download Venn Diagram Worksheet at heart.org/educator (For the Classroom).



Unhealthy Heart Dangers: Heart Attack and Stroke

It's important that kids learn about heart attacks and strokes. If they begin healthy lifestyle habits while they're young, they're more likely to continue those habits for life. These choices can prevent a heart attack or stroke later. It's also important that they understand the warning signs of heart attacks and strokes so they can take the proper action if they're with anyone showing these warning signs.

How Heart Attacks Happen

We learned that the heart pumps blood full of oxygen and other nutrients to all parts of the body. The heart muscle also needs oxygen and nutrients. In a person with a healthy heart, blood flows freely through the blood vessels (arteries and veins). It's like the pipes that bring water to your home — when everything is working as it should, water comes through the pipes into your sinks and bathtubs and gets carried away through the drains. Water shouldn't flow too slowly or back up.

Unhealthy habits, like not getting enough physical activity or eating a lot of unhealthy food — *over time* — can cause a fatty substance, called **plaque**, to build up inside the blood vessels. This can limit the blood flow through the vessels or totally block the blood from going through the blood vessels. If either of these things happen, the heart can't get the oxygen and nutrients it needs and it starts to die. When this happens, it's called a heart attack.

The Warning Signs of a Heart Attack

When we see someone in the movies or on TV having a heart attack, they feel a sudden, sharp pain in their chests and they drop dramatically to the floor. Sometimes that's how a heart attack happens, but most heart attacks come on slowly, with the person feeling uncomfortable or mild pain.

It's important to know the signs of a heart attack because getting medical help quickly can mean the difference between surviving a heart attack or not.

A person having any of these symptoms should talk to their doctor or call 9-1-1:

- Discomfort in their chest that lasts for more than a few minutes or goes away and then comes back
- Discomfort in other areas of the upper body, including pain or discomfort in one or both arms, the back, neck, jaw or stomach
- Having trouble breathing with or without chest discomfort
- Breaking into a cold sweat, having nausea/vomiting or feeling lightheaded

People can survive a heart attack if they receive medical care quickly. If you are with someone who has any of the symptoms of a heart attack, get help immediately by calling 9-1-1.

How Strokes Happen

A stroke can happen when a blood vessel that carries oxygen to the brain gets blocked or bursts. When that happens, part of the brain can't get the oxygen it needs, so it starts to die. Without the help of a doctor or hospital right away, a stroke can cause injury to the brain.

The people who are at the most risk for a stroke are over age 55, don't eat a healthy diet, don't get a lot of physical activity, may be overweight or have certain medical problems.

The Warning Signs of a Stroke

Just like with a heart attack, it's important to get medical help as quickly as possible for people having a stroke. The sooner they get medical help, the better their chances are for making a complete recovery from the stroke.

People who are having a stroke may show the following symptoms:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or difficulty understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or loss of coordination
- Sudden, severe headache with no known cause

As with a heart attack, if you are with someone who has any of the warning signs of a stroke, get help immediately by calling 9-1-1.

SAD FACT

In our country, heart disease kills about one-third more people than all types of cancer combined.

Activities

Grades K–5

Activity: CALL 9-1-1! Teaching How to Call 9-1-1 in an Emergency

Materials: Disconnected land line phone or cell phones

Objective: To teach students how to call 9-1-1 in case of an emergency and make them as familiar and comfortable as possible with the process.

1. Explain what an emergency situation is — a family member or friend is unconscious or seriously hurt, a fire, an intruder in the house — and what is not an emergency situation: a cut, bump or bruise, a stolen item, a lost item or pet.
2. Stress that students should never call 9-1-1 unless it's an emergency, and that it's against the law in some places to use the number if it's not an emergency.
3. Students need to know their address (apartment number as well) and phone number even though most 9-1-1 calls are traced.
4. If possible, students should call 9-1-1 from a land line instead of a cellphone (because a land line is traceable).
5. When they call 9-1-1, they will be asked their name, location, the type of emergency, who needs help and if that person is awake or unconscious.
6. Teach students to stay on the phone with the 9-1-1 operator until help comes and the 9-1-1 operator tells them they can hang up.
7. Have them speak clearly and loudly, even if they are scared. Emphasize it's OK if they don't know all the answers to the operator's questions. Let them know that it's OK to feel scared during an emergency, but that it's important to stay calm to get help as quickly as possible.
8. Have students role play calling 9-1-1 on the phone, with you as the operator.

Discussion: Encourage students to discuss any fears they have about calling 9-1-1 and ask students to offer tips on dealing with those fears.

Grades K–2

Activity: Make a Valentine For Your Heart

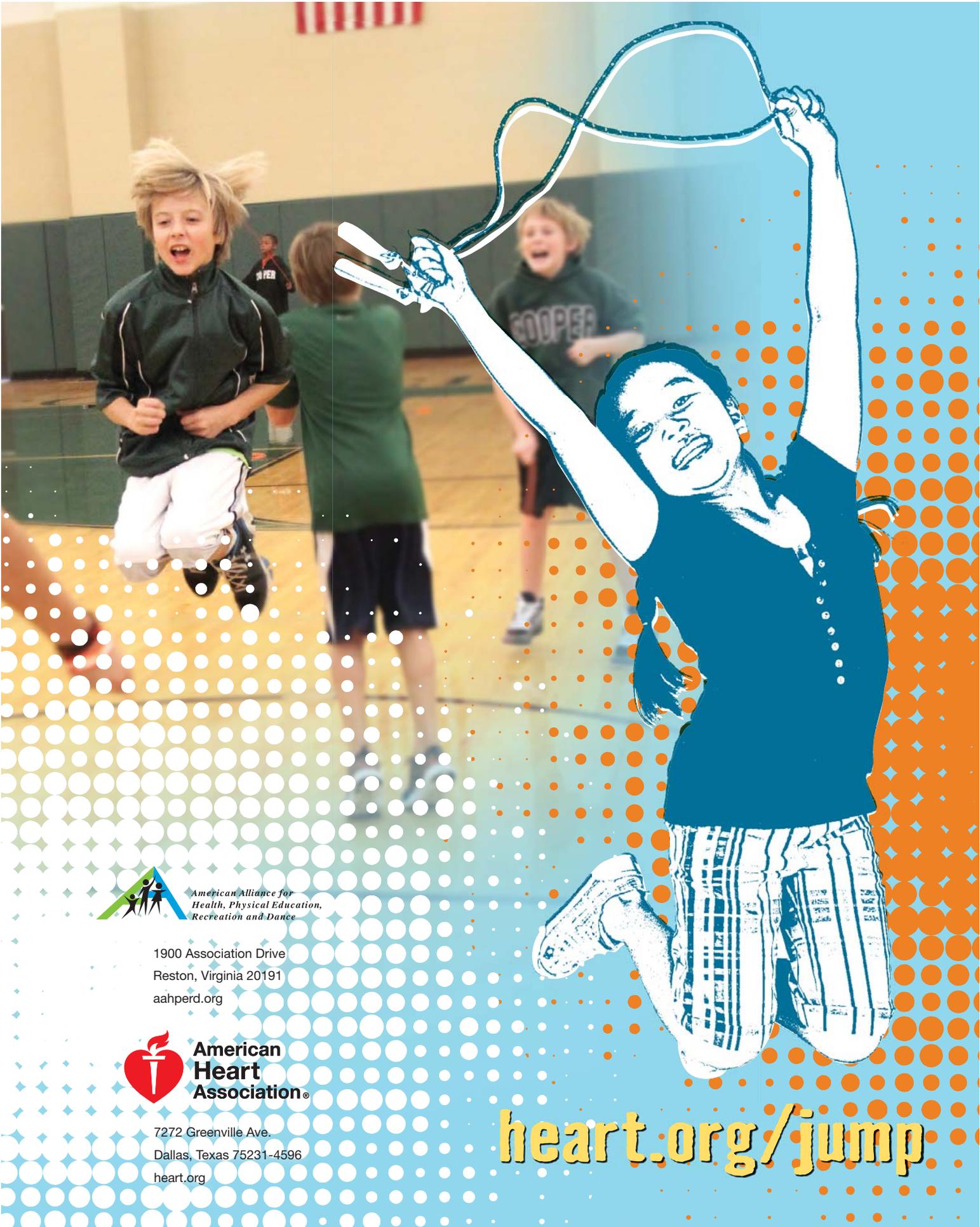
Materials: Construction paper, glue, doilies, scissors for students, additional arts and crafts supplies

Objective: To reinforce what was learned about heart-healthy habits regarding diet and physical activity and further encourage making healthy choices.

1. Have a creative conversation with your class: Ask your students what they would say to their hearts to show they would take good care of it. Encourage them by reviewing what your heart does and what can happen if you don't keep your heart healthy.
2. Tell your students that they're going to make Valentines to show their heart how much they appreciate it for all it does for them and to let it know they will take good care of it.
3. Valentines can be displayed in the classroom.

Discussion: Have students share their Valentines and feelings about their heart with the rest of the class to stimulate further discussion and make students more thoughtful about what they eat and getting physical activity.





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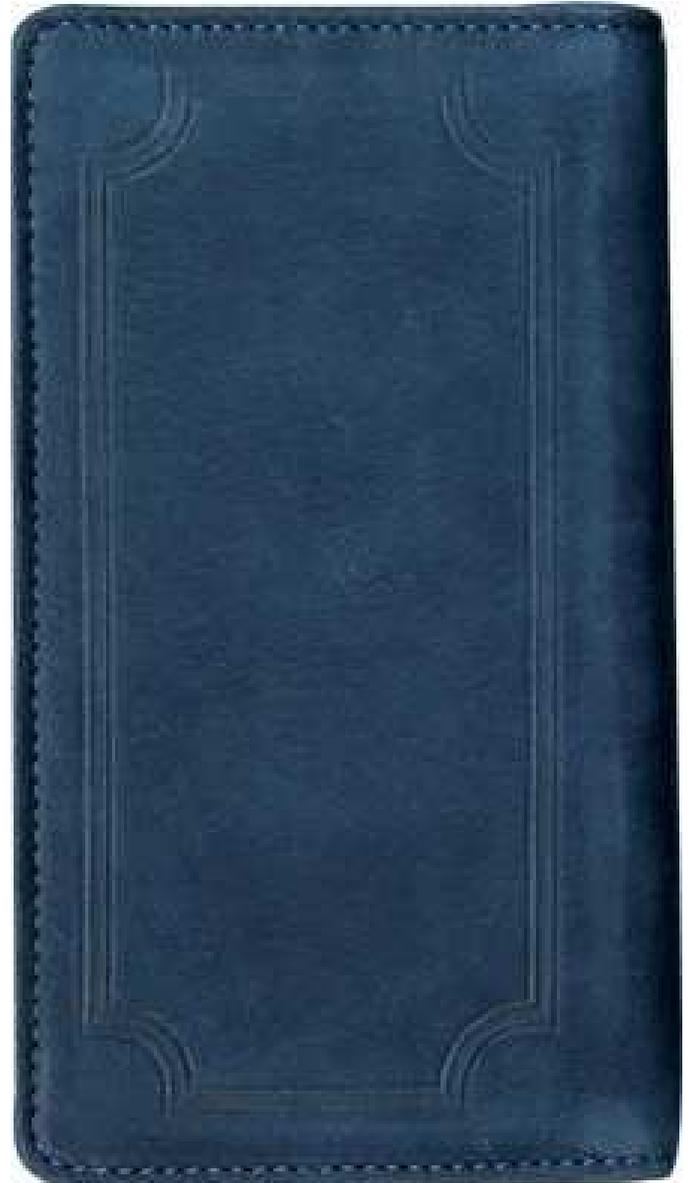
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**American
Heart
Association®**

7272 Greenville Ave.
Dallas, Texas 75231-4596
heart.org

heart.org/jump





Name _____



Sugar Detectives Worksheet

My 5 Favorite Sweet Treats Are	It Contains This Much Sugar	A Good And Healthy Alternative Is	It Contains This Much Sugar	Healthy alternative has X less grams of sugar than sweet treat has
1.		1.		X=
2.		2.		X=
3.		3.		X=
4.		4.		X=
5.		5.		X=