

## **Grade 3: Exercise**

### **Lesson 6: Building Strong and Healthy Bones with Exercise**

#### **Objectives:**

- ✓ Students will identify that exercise, more specifically **weight bearing** exercise, builds bone and supports a strong skeletal system.
- ✓ Students will understand why exercise is important in building strong bones.
- ✓ Students will discover how bone is built by doing an experiment.
- ✓ Students will record the number of exercise activities they do a week and set new goals to include more exercise each day.

#### **Materials:**

- Building bricks or wood blocks (about 50--you may wish to borrow these from a kindergarten teacher)
- Sponges (two)
- Bowl
- Water
- Concentrated Liquid Starch (use a commercial variety such as Linit, Faultless, Niagara or Sta-Flo, which can generally be found in the laundry section of discount stores or supermarkets)
- Exercise/Not Exercise Activity Paper (**See Figure 1**)
- Parent letter/Home activity paper (**See Figure 2**)
- "Consequence Game" Cards (**See Figure 3**)

#### **Activity Summary:**

In this lesson students will explore how and what different kinds of exercise support a strong and healthy Skeletal System.

#### **Background Information for the Teacher:**

Students need to be introduced to the concept of **weight-bearing exercise**. Some students may think this simply means lifting weights, when it actually means **lifting and moving the weight of your body**. We engage in weight-bearing exercise all the time—lifting, pushing, pulling, walking, jumping, and running are all weight-bearing exercises.

Unfortunately, children in our society tend to engage in less weight-bearing exercise than in the past. Our sedentary society, children included, spends far less time in active exercise than in the past. One of the goals of this lesson is to help students become more active every day and more aware of their activity level. Children should have a **minimum of 60 minutes** of physical activity daily. In order to grow and maintain strong and healthy bones, at least half of that should be weight-bearing exercise.

This activity level can occur during play, household chores, sports, and routine daily activities. Helping students become aware of the benefits of using and moving their bodies can encourage them to become active, healthy adults. You may wish to explore information on physical fitness offered by the Centers for Disease Control, [www.cdc.gov](http://www.cdc.gov), and the President's Challenge, [www.fitness.gov](http://www.fitness.gov).

**Vocabulary:**

Skeletal System

bones

joints

exercise

weight-bearing

osteoblast

osteoclast

**Engage (5-10 minutes):**

1. Borrow cardboard building bricks or wood blocks from a kindergarten class or bring in your own. Stack bricks ten across and about five high. (Adjust according to the size of the blocks you are using and the number of blocks you have available.)
2. Have 10-20 extra blocks in a cardboard box.
3. Ask for two volunteers: a DESTROYER and a BUILDER. Tell the “destroyer” volunteer that he/she will **take apart** the stack of blocks as fast as he/she can, while only removing ONE block at a time. (Dismantled blocks must be placed in the box before the next block can be removed.)
4. Tell the “builder” volunteer that he/she will **build up** the stack as fast as they can. But again, they can only use ONE block at a time.
5. Before the volunteers begin, count the number of extra blocks in the box and write that number on the board.
6. Tell the students the goal is to see how many blocks are in the box at the end. If there are MORE blocks in the box than you started with, then the “destroyer volunteer” was faster. If there are LESS blocks in the box than you started with the “builder volunteer” was faster.
7. Set a certain amount of time (60 seconds) and say, “**GO.**”
8. At the end of the time, stop the volunteers and count the blocks. Write the new number on the board. Have students discuss the outcome, then repeat (if time allows.)

9. Ask: ***“What happened?”*** Then explain: ***“This is how BONE works. Our bones are constantly changing and growing. We have bone BUILDERS in our body and bone RESORBERS. Bone builders are called OSTEOLASTS.”*** (Explain that “osteo” means “bone” and “lasts” means “build”.) ***“Bone destroyers are called OSTEOLASTS.”*** (“Osteo” means “bone” and “lasts” means “restorers.”) ***“Osteoblasts and osteoclasts work at about the same pace.”***

**Explore: (10-15 minutes)**

1. Ask: ***“From our previous lesson, what was the name of the MINERAL we need to build strong bones?”*** (*Calcium.*) Ask: ***“What are some foods that give us calcium?”*** (Review.)

Ask: ***“What do you need to do IN ADDITION to getting plenty of calcium in order to build really STRONG BONES?”*** (Let students guess.) ***“There are TWO KEY PARTS to building strong bones: number one is to get plenty of calcium from the foods we eat and number two is to engage in WEIGHT-BEARING EXERCISES.”***

**Explain:**

1. The body is always doing bone remodeling. This process is going on at all times in your body. Bone-resorbers take away bone and bone-builders build new bone. When we exercise we cause stress on our bones. This stress activates the osteoblasts and makes them work harder to make bone thicker. Exercise also causes your body to release a special hormone, calcitonin, which stops osteoclasts. In other words, **exercise makes your osteoblasts work harder and slows down your osteoclasts**. However, when we do NOT exercise osteoclasts (bone-destroyers) tear bone down because it is not being used. To have strong bones we need to exercise in addition to eating healthy foods, especially foods high in **calcium**.
2. You can illustrate the calcification process by taking a new cellulose sponge and passing it around to the students so they can see how soft and pliable it is. Next, dip the same sponge into a bowl of **concentrated liquid starch**, squeezing until the sponge becomes saturated with the starch. Finally, after squeezing out any excess starch, allow the sponge to air dry (or use a hairdryer to speed up the process.) Explain that the sponge represents the bone, which is porous, and the addition of starch illustrates what happens when we consume plenty of calcium. When the sponge is completely dry, pass it around the classroom again so students can see that the sponge is now much less pliable. Let students compare the sponge with the starch added to it to a new sponge.

3. Conversely, you can demonstrate what happens to bone when calcium is leached out of bone tissue by rinsing out the sponge that has been dipped into the liquid starch. As the starch content diminishes, the sponge becomes much less rigid.
4. Explain that a specific type of exercise that is particularly good for increasing bone mass or strength. These exercises, called “weight-bearing” exercises, use the bones and muscles to lift, push, pull, and move. This doesn’t just mean lifting weights—it means using your bones and muscle to move the weight of your own body. Have students brainstorm a list of weight-bearing exercises (walking, running, jumping, climbing stairs, pushing, pulling or lifting heavy objects, push-ups, pull-ups, jumping rope, etc.)
5. Have students think about the games they play. Ask: “**Can playing games be considered weight-bearing exercise?**” (*Yes—games like baseball, basketball, kickball and other active sports which involve running, catching and throwing are all weight-bearing exercises.*)
6. Ask: “**What games might NOT be weight-bearing exercise?**” (*Jacks, computer games, crossword puzzles, etc.*)
7. Have students think about other activities they participate in at home and at school. Ask: “**Which activities are weight-bearing exercises?**” (*Climbing stairs, carrying books, pushing a lawn-mower, carrying groceries into the house, pulling weeds, emptying the trash, etc.*)
8. Leave these lists on the board for the next activity.

### **Extend (10-15 minutes):**

#### Basic:

- Have each student make a list of weight-bearing exercise that they engage in almost every week. Have them include **both work and play** activities.
- Have students choose **one** weight-bearing exercise that they don’t currently do and add that to the list, written in the color red.
- Next to each activity, have students estimate how many days a week they engage in that activity and write that number next to the activity. (Remind them there are seven days in a week so the highest number they can have by the exercise is seven.)
- Ask: “**How much exercise do you get each week?**” Add it up:

**If you exercise every day your number should be: 7**  
**If you exercise TWICE a day your number should be: 14**

- Discuss with students the recommended amounts of exercise they should be getting to build strong bones. Explain that they should exercise about **one hour** a day. Usually we don't do one activity for an hour, so it would be best to try to do at least two exercise activities a day. Set this as a goal: try to get in at least **two** exercise activities a day.

### **Action Plan for Healthy Bones:**

1. Print out handout. **(See Figure 1)**
  2. There are two columns; **Exercise** and **Not Exercise**.
  3. On the left side of the columns the days of the week are listed. Each day students will record the number of exercise activities they do. For each exercise the student will give himself/herself one tally mark. For each activity they did that was NOT exercise the student will need to give himself/herself a tally mark in the "not exercise" column.
  4. At the end of the week add all the points in the exercise category together and add all the points in the "not exercise" category together. Finally, create a bar graph to see which category has the higher number.
- **Note to Teacher:** As an extension, you may want to combine all the student data. If students did more exercising than not exercising, count one tally mark. Repeat, except count one tally mark for the students who did more non-exercise activities than exercise. Graph the tallies. Did more students engage in *exercise* or *not exercise* activities? As a class, set a goal to try to get **all** or at least **most** of the class in the "exercise" instead of the "not exercise" category by the second week and continue for at least a week.

If the class achieves this goal and does more exercise each day, with less time spent watching TV or playing video games, reward them with an activity that involves exercising, such as a half hour of an active game outside that the students could choose (e.g. kickball.)

### **Home Activity:**

Send home a paper to students' families **(See Figure 2)** Ask parents to do one 30-minute exercise activity with their child (preferably as a whole family) a day. Make suggestions of activities on the paper. Have the student write down what activity they chose, who participated, and finally, have parents record how many minutes they did it. Have students bring the paper back to school at the end of the week. Discuss.

**Evaluate:**

Observation/Group Work: (Including optional Home Activity.)

**Optional Enrichment Activity:****Choose Your Consequences Game (See Figure 3)**

Have students play the game with the questions about exercise. If you wish, after one or two times of playing with the exercise questions, you may add the nutrition questions and make a larger deck of questions. Or, if this is the first time students have played the game, add questions as they complete the other lessons in the unit.

**Missouri Standards****Health Frameworks:****I. Functions of Interrelationships of Systems****A. Body Systems**

What all students should know:

2. Daily activities can affect Body System functioning.

What all students should be able to do:

- a. Evaluate how certain behaviors influence Body System functions in order to determine a cause and effect relationship.

**II. Health Maintenance and Enhancement****D. Life Management Skills**

What all students should know:

1. Basic life management includes skills in decision making, problem solving, goal setting, refusal and stress management.

What all student should be able to do:

- a. Develop and record short-term goals regarding personal health and/or fitness.

**V. Physical Activity and Lifetime Wellness****A. Personal Fitness/Wellness**

What all students should know:

1. Gaining basic knowledge of the components of health-related fitness is essential to understanding that exercise contributes to good health.

What all student should be able to do:

- a. Identify the components of health-related fitness and relate their importance to individual well-being.

What all students should know:

2. Learning the internal and external body parts and their relationship to developing a healthy body helps in understanding their physical self.

What all students should be able to do:

- a. Identify the major structures and functions of the Skeletal System and relate that to the development of a healthy body.

## **Science Grade Level Expectations**

### **Strand 7: Scientific Inquiry**

1. Science Understanding is developed through the use of science process skills, scientific knowledge, investigation, reasoning, and critical thinking.
  - A. Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigation methods in order to obtain evidence relevant to the explanation.
    - a. Pose a question about objects, materials, organisms, and events in the environment.
  - B. Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations.
    - a. Make qualitative observations using the five senses.
  - C. Evidence is use to formulate explanations
    - a. Use qualitative and quantitative data as support for reasonable explanations.
  - D. Scientific Inquiry includes evaluation of explanations in light of scientific principles.
  - E. The nature of science relies upon communication of results and justification of explanations.
    - a. Communicate simple procedures and results of investigations and explanations through: oral presentations, drawings and maps, data tables, graphs, writings.

**Figure 1**

Name: \_\_\_\_\_

Record the different activities you do for the week. Give yourself one tally mark for every activity you do.

Exercise Activities: basketball, baseball, running, jumping, running, mowing lawn, gardening, etc...

Not Exercise Activities: watching television, computer games, movies, etc...

Day of the Week	Exercise Activity	Not Exercise
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
TOTAL	GOAL:	



## Figure 2

Dear Parent/Guardian:

Unfortunately, children in our society tend to engage in less weight-bearing exercise than in the past. We spend far less time in active exercise than in the past. The goal of this activity is to help students become more active every day **and** more aware of their activity level. Children should have 60 minutes of physical activity daily. To grow and maintain strong and healthy bones at least half of that should be weight-bearing exercise (examples: lifting, pushing, pulling, walking, jumping, and running.)

This activity level can occur during play, household chores, sports, and routine daily activities. Helping students become aware of the benefits of using and moving their bodies can encourage them to become active, healthy adults.

As a class project we are asking for your assistance. **For one week please spend at least 30 minutes a day with your child engaging in an exercise activity, preferably one that includes the entire family.** Please help your child record EACH DAY the activity in which the family was engaged, including who participated. Please help the student record the amount of time spent doing that activity. Have the student bring back the paper when completed.

Students must return complete this project and turn it in by \_\_\_\_\_.

Day	Exercise Activity	Who Participated	# of Minutes
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

## CHOOSE YOUR CONSEQUENCES

### Nutrition:

<p>You want an afternoon snack that is good for your bones. You choose:</p> <ul style="list-style-type: none"> <li>a) a candy bar</li> <li>b) a flavored drink</li> <li>c) a piece of celery with cheese</li> </ul>	<ul style="list-style-type: none"> <li>a) Candy is not good for your bones. Go back two squares.</li> <li>b) Flavored drinks are not good for your bones. Go back two squares.</li> <li>c) Cheese and celery is a great choice. Move forward two squares.</li> </ul>
<p>For breakfast you want a balanced meal that is good for your bones. You choose whole wheat toast, peanut butter and a glass of:</p> <ul style="list-style-type: none"> <li>a) grape juice</li> <li>b) milk</li> <li>c) soda</li> </ul>	<ul style="list-style-type: none"> <li>a) Grape juice is a good drink, but it isn't high in calcium for your bones. Stay where you are.</li> <li>b) Milk is high in calcium and a great choice. Go forward three squares.</li> <li>c) Soda is terrible for your bones. Go back three squares.</li> </ul>
<p>For lunch you have a tuna sandwich and carrot sticks. You can buy one food item to go with it. You buy:</p> <ul style="list-style-type: none"> <li>a) a cup of strawberry yogurt</li> <li>b) a piece of cake</li> <li>c) a bag of chips</li> </ul>	<ul style="list-style-type: none"> <li>a) Good choice! Yogurt is high in calcium and good for your bones. Go forward three squares.</li> <li>b) Cake might taste good, but it isn't very good for you. Go back two squares.</li> <li>c) Chips might taste good, but they don't contain anything good for your bones. Go back two squares.</li> </ul>
<p>For dinner you have a chicken drumstick, half a potato, and some vegetables. What vegetable would be a good choice for calcium?</p> <ul style="list-style-type: none"> <li>a) spinach</li> <li>b) corn</li> <li>c) eggplant</li> </ul>	<ul style="list-style-type: none"> <li>a) Correct! A half cup of cooked spinach has more than 100 mg of calcium. Go forward one square.</li> <li>b) Corn is a good vegetable, but it doesn't have as much calcium as spinach. Stay where you are.</li> <li>c) Eggplant is a good vegetable, but it doesn't have as much calcium as spinach. Stay where you are.</li> </ul>
<p>You want a dessert that is good for your bones. What do you choose?</p> <ul style="list-style-type: none"> <li>a) a piece of apple pie</li> <li>b) a candy bar</li> <li>c) a small dish of ice cream</li> </ul>	<ul style="list-style-type: none"> <li>a) Apple pie tastes great, but it doesn't have a lot of calcium. Stay where you are.</li> <li>b) Candy bars aren't very nutritious. Go back one square.</li> <li>c) Ice cream is made from milk, so it has calcium. Go forward one square.</li> </ul>

<p>You're at your friend's house after school and she offers you something to drink. You choose:</p> <ul style="list-style-type: none"> <li>a) a glass of milk</li> <li>b) a soda</li> <li>c) a flavored fruit drink</li> </ul>	<ul style="list-style-type: none"> <li>a) Milk has lots of calcium. Good choice! Move forward three squares.</li> <li>b) Soda has lots of sugar and carbonation—not a good combination for your bones. Move back three squares.</li> <li>c) Flavored fruit drinks have lots of sugar and not much calcium. Back two squares.</li> </ul>
<p>You want to eat a breakfast that is good for your bones. You've chosen oatmeal and raisins. What should you have with it?</p> <ul style="list-style-type: none"> <li>a) milk</li> <li>b) toast</li> <li>c) yogurt</li> </ul>	<ul style="list-style-type: none"> <li>a) Milk is a good choice. Move forward three squares.</li> <li>b) Toast is fine, but doesn't have much calcium. Stay where you are.</li> <li>c) Yogurt is a good choice. Move forward three squares.</li> </ul>
<p>You want a snack that is high in both calcium and magnesium. What would you choose?</p> <ul style="list-style-type: none"> <li>a) grapes</li> <li>b) an apple</li> <li>c) figs</li> </ul>	<ul style="list-style-type: none"> <li>a) Grapes are a good food, but not really high in calcium or magnesium. Stay where you are.</li> <li>b) Apples are a good food, but not really high in calcium or magnesium. Stay where you are.</li> <li>c) Figs are a great choice! They're high in both calcium and magnesium. Go forward two squares.</li> </ul>
<p>You had a cheese sandwich with two slices of cheese, celery, carrot sticks, and an apple for lunch. Do you need more calcium at this meal?</p> <ul style="list-style-type: none"> <li>a) Yes</li> <li>b) No</li> </ul>	<ul style="list-style-type: none"> <li>a) Two slices of cheese gives you a lot of calcium. You don't really need any more at this meal. Stay where you are.</li> <li>b) Correct! Two slices of cheese gives you a lot of calcium. You don't really need any more at this meal. Move forward two squares.</li> </ul>
<p>You're having dinner at a friend's house. His mother has made tofu with broccoli for dinner. How much calcium is in this meal?</p>	<ul style="list-style-type: none"> <li>a) Think again. Both tofu and broccoli have calcium. Stay where you are.</li> <li>b) It has even more than that. Tofu and broccoli are both high in calcium. Stay where you are.</li> <li>c) You're right—tofu and broccoli have almost as much calcium as a glass and a half of milk. Move forward three squares.</li> </ul>

## Exercise:

<p>You're going out to recess with friends and you want to do something good for your bones. You decide to:</p> <ul style="list-style-type: none"><li>a) run laps around the track</li><li>b) play on the swings</li><li>c) sit in the shade</li></ul>	<ul style="list-style-type: none"><li>a) Good choice. Running is good for your bones and your heart. Move forward three squares.</li><li>b) Playing on the swings is good fun, but it doesn't help your bones. Stay where you are.</li><li>c) Sitting is restful, but not good exercise. Go back one square.</li></ul>
<p>After school you want to do something good for your bones. You decide to:</p> <ul style="list-style-type: none"><li>a) arm wrestle a friend</li><li>b) play a video game</li><li>c) play basketball</li></ul>	<ul style="list-style-type: none"><li>a) Arm wrestling is a fun contest, but doesn't help your bones. Go back one square.</li><li>b) Playing video games doesn't help your bones. Go back two squares.</li><li>c) Playing basketball is good exercise. Go forward three squares.</li></ul>
<p>It's time for recess. What do you choose that is good exercise and will build strong bones?</p> <ul style="list-style-type: none"><li>a) playing kickball</li><li>b) playing handball</li><li>c) jumping rope</li></ul>	<ul style="list-style-type: none"><li>a) Right—kickball is very good exercise and good for your bones! Go forward three squares.</li><li>b) Right—handball is good exercise, especially when you run a lot. Go forward two squares.</li><li>c) Right—jumping rope is great for your bones. Go forward three squares.</li></ul>
<p>After school you have some time to play. What can you do that's good for your bones?</p> <ul style="list-style-type: none"><li>a) play jacks</li><li>b) play catch</li><li>c) run a relay</li></ul>	<ul style="list-style-type: none"><li>a) Playing jacks doesn't give you much exercise. Move back one square.</li><li>b) Playing catch can be good if you run a lot. Move forward one square.</li><li>c) Running relays can be very good for your bones. Move forward two squares.</li></ul>
<p>You've finished your homework and want to do something that is good exercise for your bones. You choose to:</p> <ul style="list-style-type: none"><li>a) play cards</li><li>b) do 50 push ups</li><li>c) jump rope</li></ul>	<ul style="list-style-type: none"><li>a) Playing cards might be good for your mind, but not for your body. Go back one square.</li><li>b) Doing pushups is good for your bones. Go forward two squares.</li><li>c) Jumping Playing cards might be good exercise rope is great for your bones. Go forward two squares.</li></ul>

<p>You're helping with some chores. In order to help your bones also, you choose to:</p> <ul style="list-style-type: none"> <li>a) dust the furniture</li> <li>b) bring in the groceries</li> <li>c) mow the lawn</li> </ul>	<ul style="list-style-type: none"> <li>a) Dusting the furniture is a helpful thing to do, but it doesn't help your bones much. Stay where you are.</li> <li>b) Bringing in the groceries is good exercise, especially if you are carrying heavy bags or going up and down stairs. Go forward two squares.</li> <li>c) Mowing the lawn is great exercise. Pushing the lawnmower really works your bones. Go forward three squares.</li> </ul>
<p>You're helping with some chores. In order to help your bones also, you choose to:</p> <ul style="list-style-type: none"> <li>a) take the dog for a walk</li> <li>b) wash windows</li> <li>c) carry the heavy laundry basket upstairs</li> </ul>	<ul style="list-style-type: none"> <li>a) Taking the dog for a walk is good exercise, especially if you walk fast and you go for at least 20 minutes. Go forward two spaces.</li> <li>b) Washing windows is very helpful and can be some exercise. Go forward one space.</li> <li>c) Carrying the laundry upstairs can be very good exercise if the basket is heavy. Go forward two squares.</li> </ul>
<p>You decide to do more weight-bearing exercise each day. You choose to:</p> <ul style="list-style-type: none"> <li>a) climb stairs</li> <li>b) walk the dog</li> <li>c) play more video games</li> </ul>	<ul style="list-style-type: none"> <li>a) Climbing stairs is good weight bearing exercise. Go forward two squares.</li> <li>b) Walking the dog is good weight bearing exercise, especially if you walk fast and go for at least 20 minutes. Go forward two squares.</li> <li>c) Playing more video games does nothing for your bones. Go back two squares.</li> </ul>
<p>You decide to do more weight-bearing exercise each day. You choose to:</p> <ul style="list-style-type: none"> <li>a) watch more TV</li> <li>b) run laps around the yard</li> <li>c) do push ups</li> </ul>	<ul style="list-style-type: none"> <li>a) Watching more TV does nothing for your bones. Go back three squares.</li> <li>b) Running laps around the yard is good exercise. Go forward two squares.</li> <li>c) Doing push-ups is great weight-bearing exercise. Go forward two squares.</li> </ul>
<p>You've finished your homework and want to do something good for your bones. What do you choose?</p> <ul style="list-style-type: none"> <li>a) watching TV</li> <li>b) eating dessert</li> <li>c) take out the trash</li> </ul>	<ul style="list-style-type: none"> <li>a) Watching TV does nothing for your bones. Go back two squares.</li> <li>b) Eating dessert doesn't do much for your bones unless it has a lot of calcium. Go back two squares.</li> <li>c) Taking out the trash could be very good for your bones if you lift and carry heavy objects. Go forward two squares.</li> </ul>

## Safety:

<p>You are going skateboarding. What do you do to protect your bones?</p> <ul style="list-style-type: none"><li>a) go slowly</li><li>b) go with a buddy</li><li>c) wear a helmet, knee and elbow pads</li></ul>	<ul style="list-style-type: none"><li>a) Going slowly doesn't work very well when you're skateboarding. Go back one square.</li><li>b) Going with a buddy doesn't help protect your bones much. Go back one square.</li><li>c) Wearing protective gear is the best idea. Go forward three squares.</li></ul>
<p>Your friend meets you to go skateboarding. For protective gear she's wearing elbow and knee pads. What is she missing?</p> <ul style="list-style-type: none"><li>a) a wrist watch</li><li>b) her helmet</li><li>c) a hair band</li></ul>	<ul style="list-style-type: none"><li>a) A wrist watch won't help prevent broken bones. Go back one square.</li><li>b) Right! A helmet is essential in preventing broken bones. Go forward three squares.</li><li>c) A hair band does nothing to prevent broken bones. Go back two squares.</li></ul>
<p>Your friend meets you to go bicycling. For protective gear he's wearing a helmet and knee pads. What is he missing?</p> <ul style="list-style-type: none"><li>a) a wrist brace</li><li>b) elbow pads</li><li>c) sunglasses</li></ul>	<ul style="list-style-type: none"><li>a) A wrist brace could help prevent injury to your wrist. Go forward one square.</li><li>b) Right! Elbow pads will help prevent broken bones. Go forward two squares.</li><li>c) Sunglasses do nothing to prevent broken bones. Go back two squares.</li></ul>
<p>You're on a soccer team and the team is getting new protective gear. Which item is not essential for protecting your bones?</p> <ul style="list-style-type: none"><li>a) elbow pads</li><li>b) t-shirt</li><li>c) knee pads</li></ul>	<ul style="list-style-type: none"><li>a) Elbow pads are essential protective gear. Go back one space.</li><li>b) Right! A t-shirt doesn't really protect your bones. Go forward one space.</li><li>c) Knee pads are essential protective gear. Go back one space.</li></ul>
<p>In baseball, what do batters wear for extra protection?</p> <ul style="list-style-type: none"><li>a) wrist braces</li><li>b) shoes</li><li>c) a hard helmet</li></ul>	<ul style="list-style-type: none"><li>a) Many players wear wrist braces, but the batter wears something even more important for extra protection. Go forward one square.</li><li>b) Good shoes are important, but they're not extra protection while you are at bat. Stay where you are.</li><li>c) Yes, a hard helmet protects the batter from being hit by a fast moving ball. Go forward two squares.</li></ul>

<p>Your brother is riding his new scooter. You tell him to be sure to wear what?</p> <ul style="list-style-type: none"> <li>a) his helmet</li> <li>b) his knee pads</li> <li>c) his elbow pads</li> </ul>	<ul style="list-style-type: none"> <li>a) Yes—go forward two spaces.</li> <li>b) Yes—go forward two spaces.</li> <li>c) Yes—go forward two spaces.</li> </ul>
<p>Your brother and sister are running relays on their in-line skates. What is one thing they should wear to protect themselves?</p> <ul style="list-style-type: none"> <li>a) helmets</li> <li>b) socks</li> <li>c) sunglasses</li> </ul>	<ul style="list-style-type: none"> <li>a) Yes—go forward two spaces.</li> <li>b) No—socks won't help you protect your bones. Go back one square.</li> <li>c) No—sunglasses won't protect your bones. Go back one square.</li> </ul>
<p>You are going to ride your bike. What's an important piece of protective equipment?</p> <ul style="list-style-type: none"> <li>a) a t-shirt</li> <li>b) a helmet</li> <li>c) sunglasses</li> </ul>	<ul style="list-style-type: none"> <li>a) A t-shirt won't help prevent broken bones. Go back one square.</li> <li>b) A helmet could help prevent broken bones. Go forward two squares.</li> <li>c) Sunglasses won't help prevent broken bones. Go back two squares.</li> </ul>
<p>You are riding in the backseat of the car on your way to school. What's the most important thing you can do to protect yourself?</p> <ul style="list-style-type: none"> <li>a) be very quiet</li> <li>b) keep your hands to yourself</li> <li>c) fasten your seat belt</li> </ul>	<ul style="list-style-type: none"> <li>a) Being quiet can be helpful, but it won't prevent broken bones. Stay where you are.</li> <li>b) Keeping your hands to yourself is a good idea, but it won't prevent broken bones. Stay where you are.</li> <li>c) Fastening your seat belt is a great idea and will help you in case of an accident. Go forward two spaces.</li> </ul>
<p>You are wearing protective gear and riding your scooter on a busy walking path. What can you do to protect other people?</p> <ul style="list-style-type: none"> <li>a) Push people out of the way so they won't slow you down.</li> <li>b) Be very careful when passing people on the walkway.</li> <li>c) Ride with three friends so you take up the whole path.</li> </ul>	<ul style="list-style-type: none"> <li>a) This could be very dangerous for other people. Go back four spaces.</li> <li>b) Yes, if you are aware of other people and very careful when you pass, then everyone will be protected. Go forward three spaces.</li> <li>c) This is impolite and could be dangerous for others. Go back four spaces.</li> </ul>