



# SCIENCE

## HEALTHY HEART SCOOTER TAG

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**Description:** In this game of tag played on scooters, students representing cholesterol chase students representing healthy hearts. Once caught, the healthy hearts have to stop playing tag and begin cardiovascular exercises in the “Fix Your Heart” area.

### Learning Objectives:

- Students will learn the function of the heart.
- Students will learn the role cholesterol plays in blocking arteries.
- Students will learn how to make nutritious food choices.
- Students will learn about the role staying active plays in heart health.

**Activity Time:** 30 minutes

### Materials:

- Scooters (one per student, minus six)
  - Can be played as tag without scooters if necessary
- Laminated construction paper hearts (5”–6”) for 2/3 of the class
- Five to six yellow laminated construction paper circles (5”–6”)
- Several jump ropes
- Enough cones to designate the fitness area
- Signs for the “Fix Your Heart” stations
- CD (upbeat music) and CD player
- Gymnasium

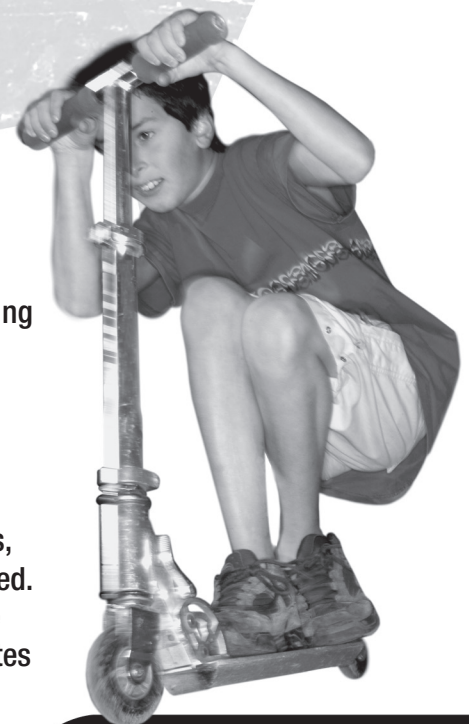
### Directions:

#### Set up:

- Set up half of the gym with “Fix Your Heart” (cardio) stations, including jump rope, jogging in place, jumping jacks and squats. Place signs indicating the station’s activity at each station.
- Gather enough scooters for all but six students.

#### Activity:

- Before the activity begins, talk about and demonstrate, with pictures, the function of the heart and what happens when arteries get clogged. Discuss the attached Healthy Heart Background Information and the cholesterol information. Also, talk about nutrition and how it correlates to cholesterol levels.





- Designate six students to begin the game in the “Fix Your Heart” area. (These students will not receive a heart or circle.)
- Hand out hearts, representing a healthy heart, and circles, representing cholesterol, to all other students and have them get on a scooter.
- Turn on upbeat music, and have students at the “Fix Your Heart” stations begin their exercises as the students on scooters begin playing tag.
- The students with circles (cholesterol) will chase those with hearts (healthy hearts). Once they tag a student with a heart, they will exchange symbols.
- The student who now has the circle (cholesterol) must immediately turn their scooter upside down. He or she will take the circle to the “Fix Your Heart” area and give it to someone who has been exercising.
- He or she then begins exercising, and the person who receives the circle (cholesterol) finds an upside-down scooter, gets on and chases the students with hearts.
- The game continues for a designated period of time. Watch to be sure that no one drops their symbol and that everyone moves safely.

**Note:** Could be team-taught with physical education teacher.

*Submitted by Carol Wagoner, LeClaire Elementary, Edwardsville, Illinois*

**Correlation to National Curriculum Standards:**

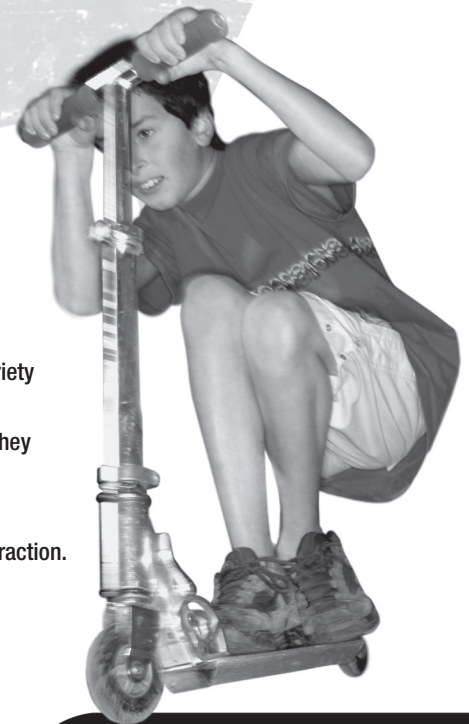
- Science as Inquiry: Content Standard A-
  - Design and conduct a scientific investigation
  - Use appropriate tools to gather, collect and analyze data
  - Use mathematics in all aspects of scientific inquiry
- Life Science: Content Standard C-
  - Structure and function of living systems

From NSES <http://newton.nap.edu/html/nses/6d.html#csa58>

**Physical Education:**

1. Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.
2. Demonstrates understanding of movement concepts, principles, strategies and tactics as they apply to the learning and performance of physical activities.
3. Achieves and maintains a health-enhancing level of physical fitness.
4. Values physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

From NASPE [http://www.aahperd.org/naspe/template.cfm?template=pr\\_032504.html](http://www.aahperd.org/naspe/template.cfm?template=pr_032504.html)





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### Healthy Heart Background Information

The heart is located in the center of the chest. An adult's heart is a little larger than a fist with the other hand around it. A child's heart is a little larger than the child's fist.

The heart is an involuntary muscle. It pumps blood carrying oxygen and other nutrients into the circulatory system and throughout the body.

The heart is divided into two sides. Each side has two chambers, an atrium and a ventricle, which are separated by valves. Blood returning from the body collects in the right atrium, then flows into the right ventricle, which pumps the blood to the lungs. In the lungs, the blood releases the carbon dioxide it collected from the body and picks up oxygen. Then the blood returns to the heart. It fills the left atrium, then flows into the left ventricle, which pumps the oxygen-rich blood to every part of the body.

The most serious cardiovascular problems are heart attacks and strokes. They are caused by a reduction in the blood supply to the heart (heart attack) or the brain (stroke) due to blood clots or narrowing of the blood vessels. People can reduce their risk of heart attack and stroke by not smoking, controlling their cholesterol intake and their blood pressure, getting regular physical activity and controlling weight.

**Source:** *The American Heart Association Web site:*

<http://www.americanheart.org/presenter.jhtml?identifier=3003305>

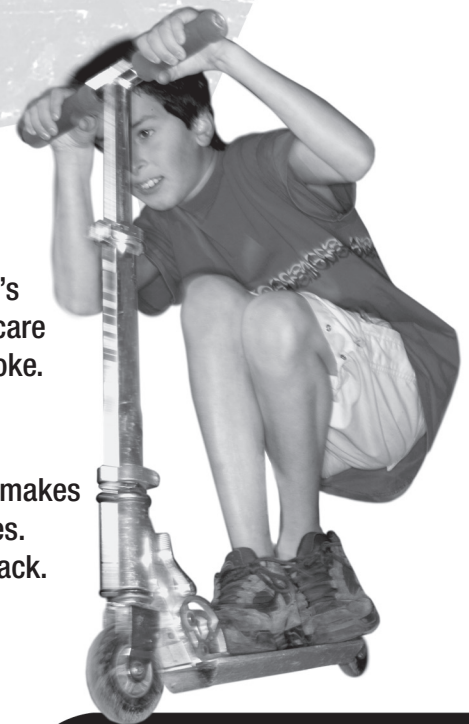
### What is Cholesterol?

Cholesterol is a waxy substance made by the liver and also supplied in the diet through animal products such as meats, poultry, fish and dairy products. Cholesterol is needed (in the body) to insulate nerves, make cell membranes and produce certain hormones. However, the body makes enough cholesterol, so any dietary cholesterol isn't needed.

Too much cholesterol in the blood can lead to cardiovascular disease – America's No. 1 killer. Understanding the facts about cholesterol will help you take better care of your heart and live a healthier life, reducing your risk for heart attack and stroke.

### The Good...

High-density lipoprotein, or HDL, is known as the "good" cholesterol. Your body makes HDL cholesterol for your protection. It carries cholesterol away from your arteries. Studies suggest that high levels of HDL cholesterol reduce your risk of heart attack.





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### The Bad...

Low-density lipoprotein, or LDL, is known as the “bad” cholesterol. Too much LDL cholesterol can clog your arteries, increasing your risk of heart attack and stroke.

### ...and The Ugly

When there is too much cholesterol in your blood, cholesterol and other substances build up in the walls of your arteries. This build up is called plaque. Over time, it causes “hardening of the arteries” so that arteries become narrowed and blood flow to the heart is slowed down.

**Source:** *The American Heart Association Web site:*

*[http://www.cholesterolldown.org/what\\_is\\_cholesterol/index.html](http://www.cholesterolldown.org/what_is_cholesterol/index.html)*

