

GRADE 3: LESSON PLAN 3

EXERCISE: EXERCISE FOR A STRONG HEART

Goals

Students will understand the relationship between physical activity and a healthy heart.

Instructional objectives

Students will be able to

1. Describe the long-term effects of daily physical activity on the heart.
2. Distinguish between aerobic and anaerobic exercises.
3. Set personal goals for daily participation in physical activities that increase the heart rate.

Background information

The heart works as a pump to push blood through the body. Oxygen-poor blood from the body flows to the right side of the heart and is pumped to the lungs. Oxygen-rich blood from the lungs flows to the left side of the heart and is pumped out to the body. You can feel your pulse, or heartbeat, by placing your fingers over the artery in your wrist. You can find your heart rate by counting the number of times your heart beats in a minute or by counting the number of times it beats in 15 seconds and multiplying by 4. Exercises that increase heart rate and breathing and that are done regularly will strengthen the heart muscle and improve overall health.

Materials

1. Jump rope or mini trampoline
2. Clock or watch with second hand or a stopwatch
3. Pictures for discussion
4. Illustration: “Car” (Activity 3–A)
5. Worksheet: “Your Pulse” (Activity 3–O)
6. Worksheet: “Exercise: Heart-Smart Choices” (Activity 3–P)
7. Worksheet: “My Heart-Smart Journal”/“Heart-Smart Student” certificate (Activity 3–Q)

Introduction

Show students a picture of a car (Activity 3–A). Ask them what they think would happen if a car stayed in the garage and was not driven (it wouldn't run well; the battery would have to be charged; parts may be stuck because oil has not circulated through the engine, etc.). Have them tell you what kinds of things need to be done to make sure the car is in good working condition. Ask them what would happen if we were not active and mostly sat all day (we would grow weak; our muscles would not get any exercise; we might get sick; we would gain weight; we would be out of shape, etc.). Ask students about the kinds of things we need to do to keep our bodies healthy and strong. Reinforce what they have been learning—we need to eat the right kind and amounts of food and we need to exercise to keep our hearts healthy.

Lesson procedures/activities

Ask students what kinds of activities they like to do. Write the activities on the board as they list them. Ask students to decide which activities are active and which are inactive (e.g., watching television, reading, listening to music). Point out that just as we need to balance our diets, we also need to balance the types of activities we do. We need quiet activities for learning, rest, and recreation, but we also need to include vigorous exercise to make our hearts strong. Different physical exercises do different things for our bodies. Show an example from a video or model some stretching (flexibility) exercises for



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the students. Ask them to follow along. See if they can determine what this type of exercise does for their bodies (makes them more flexible and relaxes the muscles). Show or model an example of a resistance (strength-building) exercise, such as push-ups or lifting hand weights. Ask them to follow along. (They could even take turns lifting cans of food in each hand.) See if they can determine how this type of exercise would help the body (strengthens muscles and increases endurance). Show an example or model a form of aerobic exercise, such as dancing, jumping jacks, or running. Have students follow along for a couple of minutes, and then ask them what they think this kind of exercise would do for the body (exercises the heart and lungs). Explain that this last type of exercise—the type that makes your heart beat faster—is called aerobic exercise. Aerobic exercise involves the increased need for oxygen. Ask students to think about what kind of exercises would be the opposite of aerobic exercise. Explain that exercise that makes the heart beat faster helps make it strong and healthy. How do we find out how fast our hearts are beating?

Guided practice

Reinforce what the students have been learning about the heart: it works as a pump that pushes blood through the body. Oxygen-poor blood from the body flows to the right side of the heart and is pumped to the lungs. Oxygen-rich blood from the lungs flows to the left side of the heart and is pumped out to the body. Tell them they can feel their pulse, or heartbeat, by placing their fingers over the artery in their wrist. They can find their heart rate by counting the number of times their heart beats in a minute or by counting the number of times it beats in 15 seconds and multiplying by 4.

Show students how to find their pulse. Give them time to locate it. Have them place the first two fingers of one hand over the artery in the wrist of the other hand. Make sure all students are able to locate the pulse in the wrist. Remind them that the heart makes a lub-dub sound when it is beating; therefore, it is a two-syllable sound. A heartbeat is a complete contraction and a complete relaxation of the heart muscle. If it helps, have them count “lub-dub 1, lub-dub 2, lub-dub 3, lub-dub 4” and so on, until they get used to the 2-count heartbeat.

After students have found their pulse and have begun to learn how to count the heartbeats, ask them if they think

their heart or their parents' hearts beat faster. Explain that on average, a child's heart beats 10 more beats per minute than an adult's heart. While they are sitting at their desks, ask them to begin counting their heartbeats when you say “go.” After 15 seconds, say “stop,” and tell them to write down the number on a post-it note that you have provided.

Independent practice

Assist students with either repeated addition or multiplication of their number by 4. Provide the worksheet “Your Pulse” (Activity 3–O) and direct them to chart their pulse number in the “Sitting” column. Ask students to predict which activity on the sheet will cause the heart to beat the fastest. Have them put a star in that column. Give each student a clipboard or something to write on, and take the students outside or to the gymnasium. Instruct students to place their clipboards where they can get to them quickly, and then call them together to make a large circle. Tell them they will walk briskly—but not run—around in the circle until you say “stop.” They will need to count their heartbeats while they are walking. This may be difficult, because it is hard to do two things at one time, so you may suggest they quietly count aloud. After they have recorded their heartbeat, help them in adding or multiplying their count. If classroom calculators are available, you may let groups of four or five students use them. Follow through with the other exercises, following the same procedure. (For the jumping exercise, you will need individual jump ropes.) After everyone has recorded their heart rate, give students an opportunity to discuss with a partner what they have learned.

Adaptations

For those students who can't use a jump rope, a mini trampoline may be used, but someone will need to monitor or “spot” for the student. For students who are physically challenged and can't walk, run, or jump, plan to have a parent volunteer or classroom aide available to assist with alternative exercises that the student can perform.

Extension

For those students who are ready for more complex learning and more difficult tasks, have them conduct a Web search to find what the average heart rate is for people of different ages and for different animals. Have them share what they have found with their classmates.

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Assessment

Give students the worksheet “Exercise: Heart-Smart Choices” (Activity 3–N) to complete. Have them draw or cut out a picture from a magazine that represents an activity they like to do. Have them describe the activity, determine whether it is an aerobic or anaerobic activity, and explain how the activity helps their heart. Have them repeat the procedure for an activity that they want to learn. Have them describe the activity, determine whether is aerobic or anaerobic, and write how they think it will help their heart.

You will be able to examine their assignment and combine it with observations of the students’ responses during group activities to assess their understanding of the lesson objective.

Objective	Demonstrated lesson objective	Partially demonstrated lesson objective	Did not demonstrate understanding of the objective
Described the effects of daily physical activity on the heart	X		
Set a personal physical activity goal that will exercise the heart		X	
Distinguish between aerobic and anaerobic exercises			X

Challenge

Encourage students to think of a personal goal to increase their participation in activities that will exercise the heart. Using the “My Heart-Smart Journal” (Activity 3–Q), ask them to write down their goal. Give them an example, such as “I will increase my heart-healthy exercises to 30 minutes a day, five times a week.” Next, ask them to take their “Heart-Smart Journal” home and share their goal with

their parents. Encourage students to involve their families in their plans for healthy activities. Have them record their daily results by placing check marks beside the activities they complete each day. At the end of one week, have student bring their journals to school to share with their classmates.