

FOCUS➤

CARDIORESPIRATORY ENDURANCE

Grades 3, 4

Standard 3

The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

Grade-Level Outcomes

- Identifies the heart as a muscle that grows stronger with exercise, play, and physical activity (S3.E3.1 review)
- Identifies physical activity as a way to become healthier (S3.E1.3b)
- Analyzes opportunities for participating in physical activity outside physical education class (S3.E1.4)

Lesson Objectives

The learner will:

- Define cardiorespiratory endurance
- Recognize that different activities contribute differently to cardiorespiratory endurance
- Identify an exercise or physical activity that improves cardiorespiratory endurance
- Analyze physical activity options for their contribution to cardiorespiratory endurance (grade 4)

Materials and Equipment

- Valentine heart
- Model or picture of the human heart
- Playground balls (one per student)
- Jump ropes (one per student)

Introduction

Earlier in the year, we discussed the concept of fitness and the importance of fitness to good health. Who can tell me what physical fitness means? Today, we are going to focus on one component of fitness—cardiorespiratory endurance. Cardiorespiratory is a really big word for the heart and lungs. Does the human heart look like this? (Show valentine heart.) No, the human heart is a muscle that looks like this. (Show model.) Like all muscles, it becomes stronger by exercise and physical activity. Today, we will analyze various activities to determine whether they are good for the heart.

LEARNING EXPERIENCE: PULSE RATE

When we had our earlier lesson on fitness, you learned to count your pulse. Let's practice counting our pulse for a few seconds. Remember to listen for the beat.

- Allow students enough time to find their pulse. Remind them to count to themselves. On your signal "Go," allow them six seconds to count. Then ask them to multiply by 10.
- Repeat for another count.

(Don't be concerned if students' count of the pulse rate is not accurate; the number will increase with the exercise or activity. The goal is to have children learn the level of activity needed to increase the pulse rate.)

LEARNING EXPERIENCE: INCREASING CARDIORESPIRATORY ENDURANCE

Let's do various activities and see whether our pulse rate increases, decreases, or stays about the same.

Sticky Popcorn

Have students stand in self-space. On your signal, they begin jumping up and down in that self-space (30 seconds). On your next signal, each student jumps carefully toward another person, touching shoulders with that person and continuing to jump up and down (30 seconds). On your next signal, the two partners jump carefully to “stick” with two other persons; now, four are jumping together (30 seconds). On your next signal, the four jump to “stick” with another four, forming a group of eight. The group continues jumping until you give the signal to stop. (Jumping alone, with a partner, with a group of four, with a group of eight—30 seconds four times.)

Have students stop and quickly position their fingers for a pulse count. They check their pulse for six seconds and multiply by 10.

Sit and Reach

- Have students sit in self-space with their legs in a V, a comfortable distance apart. While keeping their legs flat on the floor, students walk their fingers from the knees to their socks, shoelaces, or toes, stretching gently as far as they can reach. They hold for four counts.
- Instruct students to move their legs closer together and repeat.
- Have students move their legs together and bend one leg upward with the foot flat on the floor and the ankle close to the knee. Then have them walk their fingers up the extended leg. They repeat with the other leg extended.
- Have students check their pulse rate. Ask whether their pulse rate is faster or slower than it was when they were jumping.

Dribbling in Self-Space

- Have students select a playground ball for dribbling and stand in self-space. On your signal, they begin dribbling the ball in self-space, using either the preferred or alternate hand. They move from self-space only if they lose control of the ball. They continue dribbling in self-space for two minutes; on your signal, students place the ball between their feet for safekeeping and are ready for your signal to check their pulse rate.
- Have students check their pulse rate.

Dribbling and Traveling

- Instruct students to dribble while traveling in general space, either walking briskly or jogging. Students continue dribbling and traveling for two minutes; on your signal, they place the ball between their feet for safekeeping and are ready for your signal to check their pulse rate.
- Challenge students to travel as fast as they can while controlling the ball and the body (grade 4). (Monitor students for fatigue; reduce the number of minutes for the activity if you see students stopping to rest or walking slowly.)
- Have students check their pulse rate.

Jumping Rope

- Have each student select a jump rope. Instruct them to stand in self-space with enough room for safe jumping. On your signal, they begin jumping rope. Remind them that the type of jump is not important; they should just continue jumping until they hear your signal. They continue jumping for one minute, stop, and get ready for the pulse count.
- Challenge students to jump as fast as they can without losing their balance (grade 4). (Students who have difficulty jumping can use “magic rope” (invisible rope) or place the rope on the ground and jump continuously forward and backward (grade 4, really fast).)
- Have students check their pulse rate.

Assessment

Grade 3

Ask students to rank the activities from the lesson on their contribution to cardiorespiratory endurance, with 5 being the highest and 1 the lowest, and discuss the reasons for their rankings.

Grade 4

Ask students to list opportunities for physical activity outside the school day. Write them on the whiteboard or chart. Have students score each activity on a scale of 1 to 3, with 3 contributing the most to cardiorespiratory endurance, 2 somewhat, and 1 none or limited cardio. Have them compare and discuss the results in small groups.

Closure

Discuss the various activities that the class did and the way that each affected their pulse rates.

- What was the focus of our lesson today?
- Tell your neighbor what “cardiorespiratory” means.
- What does pulse rate mean? How is it measured?
- Which activities caused the pulse rate to increase?
- What type of activity is necessary to increase pulse rate?
- How does that help us build cardiorespiratory endurance?
- What does this tell us about exercising for a healthy heart?

Recess

Ask students to participate in at least one activity to improve cardiorespiratory endurance during recess. For example, they could run a lap around the track, jump rope, or play a game of tag with their friends.

Homework

Challenge students to participate in at least 30 minutes of physical activity each day that increases their heart rate. Better yet, have them include their families in 30 minutes of physical activity outside and teach everyone how to check pulse rate.

Reflection

- Can students discuss the link between cardiorespiratory fitness and good health?
- Can they identify activities that contribute to cardiorespiratory endurance, as well as those that do not?