Continuous Relay

Level: High school

NATIONAL STANDARDS FOR K-12 PHYSICAL EDUCATION

| Standard 3: | The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness. |

NATIONAL HEALTH EDUCATION STANDARDS

| Standard 1: | Students will comprehend concepts related to health promotion and disease prevention to enhance health. |
| Standard 7: | Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks. |

Learning Objectives

- Students will elevate to and maintain an appropriate exercise heart rate (60% to 85% max) during a continuous relay for a predetermined period of time.
- Students will self-monitor their activity levels using beats per minute.
- Students will work to maintain or increase their fitness level as needed, with the goal of sustaining cardiorespiratory endurance activity for 20 minutes.

Health-Related Fitness Component

Cardiorespiratory endurance

Fitness Concepts

- Intensity
- Time
- Type
Equipment

- Appropriate fast-paced music and player
- Pencils, one per student
- Jump ropes (optional), enough for two-thirds of the class
- Stopwatch or wall clock with a second hand
- Heart rate monitors, if available
- Pedometers (optional), one per student
- See Teaching Tips for other potential equipment needs

Reproducibles

- Individual Workout Log
- Heart Rate Based on a 10-Second Count Poster

Duration

One class period

Setup

Organize students into groups of three. Student 1 is located on one end line of a basketball court, student 2 on the center line, and student 3 on the other end line. If a lined space is not available, use another type of marker (e.g., cones).

Introduction of Concepts

Intensity refers to the level at which an activity is performed, ranging from low to moderate to vigorous. To reach their target heart rate during exercise, students must raise their heart rate to at least 60 percent of maximum. The goal of a cardiorespiratory endurance session is to exercise in the target heart rate zone for at least 20 minutes.

Time refers to the duration of activity. An increase in time can lead to improved cardiorespiratory endurance.

Directions

1. Introduce the activity by briefly discussing the importance of target heart rate zone for developing cardiorespiratory endurance, what type of activities elevate heart rate, and what a lower resting heart rate may indicate.
2. Ask students to calculate their target heart rate zone (60% to 85% max), or provide students with typical numbers for the age range of the class.

3. Direct students to take their heart rates before beginning the activity. To help students quickly compute their heart rates, you can use the poster titled Heart Rate Based on a 10-Second Count.

4. Start the music.

5. End-line students perform rope-jumping skills (if you have no ropes, students can still perform the skills with an imaginary rope). The middle student, known as the runner, begins running toward one of the end-line students. When the runner arrives, the jumper becomes the runner and heads toward the teammate located at the other end of the gym. Students continue this activity for two to three minutes.

6. After one round, stop the music and signal students to check their heart rates. Remind them to see if they are in their appropriate zone or if they need to increase or decrease their exercise intensity. Ask them to note their heart rate and zone in their recording log.

7. Restart the music and recommence the activity for another round of two to three minutes.

8. Stop the music and direct students to check their heart rates again and record the information in their log.

9. Continue in this manner for the desired amount of time or number of rounds.

Closure
Bring students together to discuss the definitions and concepts taught in this activity—for example, intensity, target heart rate zone, and cardiorespiratory endurance.

Assessment
- Ask students to share their beginning and ending heart rates with their team members and discuss the significance of their numbers.

Teaching Tips
- For students who are new to using their target heart rate zone, display a large poster to help them check whether their heart rate is at an appropriate level (e.g., a chart showing the numbers for the age range of the class).
- Base the total activity time on the fitness levels of your students.
- Schedule rest periods as needed.
- Ask students use pedometers to track their number of steps, then add all three students’ counts together. Remember that number of steps taken is affected by height; therefore, it’s best not to compare a team’s count with that of another team unless the students are of similar height.
Review the logs that students maintained during the activity. Then save them for students to add to when revisiting this activity. (You may want to avoid having students stop to record numbers too often, which defeats the purpose of keeping the heart rate elevated. Taking preexercise and postexercise heart rates is usually enough to enable a good discussion.)

If using pedometers, students can record both their individual and group scores to be compared when the activity is revisited in the future.

As you revisit the activity, note how long the class or individual students can maintain the activity.

Question students both orally and in writing about intensity, time, and how to adjust their heart rate and maintain it in the target heart rate zone. Here is a sample question: If you want to participate in an activity for a long time, at what intensity should you work? (Answer: low to moderate—that is, toward the lower end of the target heart rate zone.)

Variations

Ask students on the center line to perform activities for muscular strength and endurance (e.g., variations of sit-ups or push-ups) or to perform a specific stationary ball skill (e.g., figure-eight passes at the knee with a basketball) before running to an end-line team member.

Vary the activity performed at the end lines with each round. Students can identify stationary activities that will increase or maintain an appropriate exercise heart rate—for example, line jumps, jumping jacks, or stretching (for students who need to lower their heart rate).

Adaptation and Inclusion

Students who use a wheelchair can self-propel (wheel) from one end of the facility to the other and perform appropriate activities at the end lines.

Students who use a wheelchair can substitute arm movements for leg movements.

Home Extension

Encourage students to participate in a favorite game or activity after school and record their intensity level using the Individual Workout Log. Ask them to have the sheet initialed by a parent or guardian.