Finger Pulse Oximeter Lesson Plan

Subject Area: Physical Education

Lesson Title: Introduction to Finger Pulse Oximeters and Cardiovascular Fitness

Grade Level: 5th Grade

Time Required: 90 minutes (Three 30 minute lessons)

Engineering Connection: Application of sensor technology to physical education and lifelong fitness.

Educational Standards:
● PE Standard 2: Demonstrates understanding of movement concepts, principles, strategies and tactics as they apply to the learning and performance of physical activities.
● PE Standard 4: Achieves and maintains a health-enhancing level of physical fitness.

Learning Objectives:
● Students know that a finger pulse oximeter measures the heart rate and blood oxygen level.
● Students know how to use and read a finger pulse oximeter.
● Students know and can communicate how the muscles and cardiovascular system responds to exercise.
● Students understand that the blood oxygen level may decrease during exercise as the muscles consume oxygen.
● Students understand that the heart rate increases during exercise as the heart must work harder to move oxygen from the lungs to the muscles.
● Students have an idea about what homeostasis is all about.

Materials
● Finger Pulse Oximeter
● Pencil
● Table Sheet
● Chart Sheet
● Pretest
● Posttest

Procedure
1. Day 1
   a. Administer the pretest.
   b. Discuss how the body responds to exercise and the resting, activity, and recovery heart rate and oxygen level.
   c. Explain what a finger pulse oximeter measures and how it measures it.
   d. Demonstrate its use.
   e. Students practice using the finger pulse oximeters.

2. Day 2
   a. Students will collect data on their resting, activity, and recovery heart rate and oxygen levels into tables.

3. Day 3
   a. Students chart their data.
   b. Students will review their data and discuss what it means.
   c. Compare students data charts with each other.
d. Administer the Posttest

**Assessments:**  Pretest and Posttest

**Modifications/Extensions:**  
- Provide and/or use more than one finger pulse oximeter.