

Smart Moves Lesson 9

Get Moving and Get Healthy

Overview:

In this activity students calculate their resting heart rates and target heart rates. They complete fitness evaluations and set activity goals using various modes of transportation to improve their health.

Objectives:

Students will be able to:

- Examine personal habits.
- Identify modes of transportation that are also modes of exercise.
- Study the health benefits of walking, biking, and roller blading.
- Calculate resting heart rate (RHR) and target heart rate (THR).
- Make a health goal.
- Explain that exercise is one of the necessary elements of a healthy lifestyle.

Time: 1-2 class periods

Materials:

- Student handout: *Fitness Evaluation*
- Student handout: *My Health and Goals*
- Large wall clock with second hand
- Dictionaries

Before you begin:

You will probably need to demonstrate to your students how to take a pulse rate. If you can, take your students outside or to the gym to exercise so that they can observe their pulse rate increasing during physical activity. Since students will not be able to take a true resting pulse rate until the following morning, allow them to start with a rate taken in class.

You may want students to create a glossary of health terms and their definitions.

The glossary could include the following:

bone density	obesity
anaerobic	resting heart rate
self image	maximum heart rate
metabolism	target heart rate zone
aerobic	cartoid
warm up	lifestyle
anxiety	radial
osteoporosis	metabolism
cool down	cardiovascular
flexibility	cholesterol
depression	blood pressure
fitness	endorphins
pulse	

Procedure:

1. Ask your students if they think they are healthy. What does it mean to be healthy?
2. Explain that they are going to complete a fitness evaluation to find out how healthy they are. Pass out the *Fitness Evaluation* and *My Health and Goals* handouts. Review the steps together. Point out the places where students should

- transfer their calculations and answers onto the *My Health and Goals* handout. Encourage students to look up unfamiliar words in the dictionary.
3. Guide students through the processes of calculating RHR and THR. You may want to model them yourself first.
 4. Move around the room to answer questions and help students do the calculations. Students may bring up the fact that they do other activities, not listed on the evaluation, that contribute to personal fitness. Explain that those are great, and that the list focuses on activities that also happen to be modes of transportation.
 5. Before the students write their health goals on their handouts *My Health and Goals*, pass out the *Health Facts* handout. Read the handout together as a class.
 6. Ask students which facts were the most and least surprising. Ask students if they have participated in some of the activities discussed on the handout. Has anyone experienced the psychological benefits mentioned? Encourage students to share anecdotes from their experiences. What are some benefits that are not noted? This is a good place to emphasize the extra benefits of transportation as exercise: its good for the environment and good for the person doing it.
 7. Give students time to write their goals and to complete the *My Health and Goals* handout. Ask volunteers to share their goal statements out loud.
 8. Check in with students weekly to see how their health goals are coming along. Remind students that getting healthy is a long-term process. You might want to keep a fitness graph or chart to track the class's progress.

Assessment Opportunities:

- Participation in class discussions
- Completion of the *My Health and Goals* handout
- Glossary of health terms (optional)

Extensions:

Research Projects

- Students could research teen health risks such as anorexia, bulimia, obesity, over- and under-exercising, and steroid usage. Have them present their information to the class.
- Students could research the health benefits of alternative modes of transportation. They could create fact sheets about heart disease, the medical costs of poor fitness, rates of car pollution, costs to maintain roads, etc.

Media Analysis

Challenge students to develop a thesis about the images of teens and transportation in the media. What is the message portrayed on television and in the movies? How often do students see images of teens walking, biking, or skating? Students might want to organize their information on charts or graphs, using examples from various media.

Community Health

Students could read articles about the healthiest cities. Many outdoor magazines run yearly articles that rate cities on their healthiness. The availability of alternative modes of transportation is usually one of the criteria used to judge the cities. See *Outdoor* magazine to start.

Experts

- Invite a bike messenger to class. Students could prepare interview questions to ask the messenger. Questions might include: What do you do for a living? Describe a typical day. Describe the benefits that your job has on your personal health and on the environment.
- Invite a doctor or other health expert to talk to your class about the benefits of exercise.

Benchmarks:

English

Reading

Locate information and clarify meaning by skimming, scanning, close reading, and other reading strategies.

- Locate information and clarify meaning by using tables of contents, glossaries, indexes, headings, graphs, charts, diagrams, and/or tables.

Demonstrate literal comprehension of a variety of printed materials.

- Identify sequence of events, main ideas, facts, supporting details, and opinions in literary, informative, and practical selections.

Health

Healthy and Fit Body

Understand and integrate concepts of physical, mental, and emotional health.

Understand and analyze the relationships among nutrition, physical activity, psychological factors (such as stress) and personal hygiene and their effects on personal health and well being.

Understand key concepts of growth and development and their relationship to lifetime wellness.

Mathematics

Calculations and Estimations

Compute with whole numbers, fractions, decimals, and integers using paper and pencil, calculators, and computers.

- Perform calculations on whole numbers fractions, decimals, and integers using paper and pencil, calculators, and computers.

Physical Education

Physical Fitness

Demonstrate a physically active lifestyle (e.g., progressing from participating in physical education classes to independently pursuing a regular schedule of physical activity).

Pursue and maintain a health-enhancing level of physical fitness by developing a personal physical activity plan based on an accurate fitness assessment (e.g., progressing from informally exploring one's aerobic endurance, muscular strength and endurance, flexibility and body composition to accurately assessing, setting goals, and pursuing strategies to improve and maintain healthy standards).

Recognize the relationship of health-related fitness to the pursuit of physical activity.

Resources:

There are many Web sites on teen health and exercise, including:

City Bikes -- A great resource for bicycle riders.

<http://www.citybikes.com>

Cool Nurse -Teen Health and More

<http://coolnurse.com/>

International Inline Skating Association

<http://www.iisa.org>

Teens' Health -- A searchable database with hundreds of articles about teens

<http://www.teenshealth.org>

The Cool Place for Health

<http://coolmd.com/>

World Resource Center

<http://www.wri.org/enved/suscom-portland.html>

HANDOUTS

Handout 1 - Fitness Evaluation

Directions: Follow the steps below. Use these steps to help you complete your *My Health and Goals* handout.

1) Choose all of the modes of transportation that you use at least once a week and record them on your *My Health and Goals* handout.

walking

biking

skate boarding

running

skiing

rowing

hiking

roller blading

skipping

galloping

using a scooter

others

2) Next to each mode of transportation that you entered on *My Health and Goals*, write down how often, how intensely, and how long you use the mode. Use the following as a guide for your answers.

How often? How intensely? How long per session?

Once per week light 0-10 minutes

2 X per week moderate 10-20 minutes

3 X per week vigorous 20-30 minutes

4 X per week 30-40 minutes

5 X per week 40-50 minutes

6 X per week 50-60 minutes

3) Calculate the **total time** that you spend using each mode of transportation.

Determine, **overall**, if the level of activity is light, moderate, or vigorous. Record both on your handout.

4) Read the information below and then determine the recommended amount of activity for a person your age.

For middle school people, a healthy goal is 30-60 minutes of moderate activity almost every day, during which you get your heart rate up. (You'll learn more about this in a bit.) But a well-rounded program that improves not only your fitness, but also your strength and flexibility, is recommended. To improve your strength, add 2 to 3 days of strength training to your aerobic routine. Finish your aerobic and strength training activities with stretches to improve your flexibility.

Record the recommended amount of activity on your handout.

5) Read about heart rate:

Heart rate (HR) is the number of times that your heart beats in a specific amount of time – usually 10 seconds. In order to get the most from exercise, you want your heart to beat faster at different times during your exercise activity. Read on to find out how fast you want it to beat during different parts of your workout.

At the start: After your warm-up, your HR should be close to the lower end of your target zone. (You'll learn about the target zone in step number 7 below.) If you're over the upper limit of your target HR zone, slow down the next time you do your warm-up.

In the middle: Halfway into your workout, your HR should be up. If it is higher than the upper limit, pull back and ease off on the intensity that you are working.

Before you finish: Toward the end of your workout, your HR should still be up. If your HR is within the lower end of your zone, work harder on your next workout.

Afterward: At the end of your cool-down, your heart rate should be around your resting rate. If it is still up, take a little more time just to walk around a bit and bring your heart rate down. The transition from working out to a dead stop can be hard on your heart.

6) Take your pulse rate.

Using two fingers, press lightly against the place where you are going to take your pulse. Use your index and middle finger, not your thumb to take your pulse. If you use your thumb, you can feel a different pulse and that pulse is going at a different rate than the other pulse points.

Take a pulse check at your carotid (the area on your neck below the jaw), your radial (on the wrist on the same side as your thumb), or your chest (the area that is just above your heart and slightly to the side). Calculate your resting heart rate (RHR):

- Take your heart rate on a regular basis right after you wake up in the morning (before you even get out of bed) to find out what your real resting heart rate is.
- Count how many heartbeats per ten seconds. By keeping track of your resting heart rate you will notice that as you become more fit, your resting heart rate will lower. The average resting heart rate is 12-13 beats per ten seconds.

Record your RHR on your *My Health and Goals* handout.

7) Calculate your target heart rate zone (THR):

- Subtract your age from 220.
- This is your maximum heart rate (MHR).
- Multiply your MHR by 0.8 and divide whatever number you get by 6. This is the upper limit of your target heart rate zone in a ten second count.

- Multiply your MHR by 0.6 and divide the resulting number by 6. This is the lower limit of your target heart rate zone in a ten second count.
- Your target heart rate zone is between the upper and lower limit of beats per ten seconds. Your maximum heart rate is the most your heart rate should reach after a strenuous workout. Checking one's heart rate is also known as taking a pulse check.

Record your THR on your *My Health and Goals* handout.

8) Read the handout *Health Facts*.

9) Set a goal for yourself. Identify the activities you would like to do and how often you will do them. Record where your heart rate should be during the activity. Describe the benefits that are the most important to you. Record your responses on your *My Health and Goal* handout.

Handout 2 - Health Facts

Benefits of Walking

- Walking helps control weight, blood sugar, and cholesterol levels.
- A brisk walk can burn up to 100 calories per mile or 300 calories per hour.
- Walking improves cardiovascular fitness. As an aerobic exercise, walking gets the heart beating faster to transport oxygen-rich blood from the lungs to the muscles.
- The heart and lungs grow more efficient with a regular walking regimen, reducing blood pressure and resting heart rate.
- Psychologically, walking generates an overall feeling of well-being and can relieve depression, anxiety, and stress by producing endorphins, the body's natural tranquilizer. A brisk walk will relax you and stimulate your thinking.

Benefits of Roller Blading

- On the average, inline skating at a steady, comfortable rate expends 285 calories per 30 minutes and produces a heart rate of 148 beats per minute.
- Roller blading builds up hip and thigh muscles, develops hamstring muscles, and improves muscle tone in the entire upper leg, rear end, hips, and lower back. Muscles in the upper arms are also developed when arms are swung vigorously while skating.

Benefits of Biking

- Biking expends 360 calories per 30 minutes and increases heart rate to 148 beats per minute.
- Biking can also help prevent high blood pressure, and even lower blood pressure that is above normal levels.
- Biking supports your body weight so it is less stressful on joints than running.

General Benefits of Daily Physical Activity

- Reduces the risk of heart disease by improving blood circulation throughout the body
- Keeps weight under control
- Prevents bone loss
- Boosts energy level
- Helps manage stress
- Releases tension
- Improves the ability to fall asleep quickly and sleep well
- Improves self-image
- Counters anxiety and depression and increases enthusiasm and optimism
- Increases muscle strength, increasing the ability to do other physical activities
- Provides a way to share an activity with family and friends

(Based on information provided by the American Heart Association.)

Handout 3 - My Health and Goals

Name _____ Date _____

Mode How Often? How Hard? How long?

- 1.
- 2.
- 3.
- 4.
- 5.

Total Activity Time =

Overall, the intensity level of my activities are =

How much activity a person my age should do =

My Resting Heart Rate(RHR) =

My Target Heart Rate (THR) =

My Health Goals:

- Physical Activities (including biking, walking, skating)
- Where my heart rate should be during the activity
- Desired Health benefits