Lesson 1

Becoming Physically Fit

Guide to Reading

- **Building Vocabulary**
  As you read this lesson, write down each new highlighted term and its definition.
  - physical activity (p. 60)
  - fitness (p. 60)
  - exercise (p. 60)
  - endurance (p. 62)
  - muscle endurance (p. 62)
  - cardiovascular endurance (p. 62)
  - strength (p. 62)
  - flexibility (p. 63)
  - body composition (p. 63)
  - aerobic exercise (p. 64)
  - anaerobic exercise (p. 64)

- **Focusing on the Main Ideas**
  In this lesson, you will be able to
  - discuss the benefits of physical activity.
  - explain how to increase your strength, endurance, and flexibility.
  - apply advocacy skills to tell others about the benefits of fitness.
  - recognize the influence of body composition on fitness.
  - measure your fitness using fitness tests.

- **Reading Strategy**
  **Skimming** Look over the lesson headings. Write a sentence or two describing what you think the lesson will contain.
  **Foldables® Study Organizer** Use the Foldable® on p. 59 as you read this lesson.

Quick Write

List at least three physical activities you took part in this week. Which do you think does the most good for your health and why?

Physical Activity and Your Health

Your body is constantly on the move! You use it to climb stairs, carry books, and pedal your bike. These movements add up to lots of physical activity. **Physical activity** is any movement that makes your body use extra energy.

Being physically fit is a great strategy for improving and maintaining personal health through all stages of life. It's also a positive health behavior that can prevent many health problems. **Fitness** means being able to handle physical work and play each day without getting overly tired. If you exercise regularly, you will have lots of energy. **Exercise** is planned physical activity done regularly to build or maintain one's fitness. You can handle more activity in your day and not feel tired. Regular exercise also helps you develop skills to play sports.

Reading Check

Define What is physical activity?
Benefits of Physical Activity

Physical activity can benefit your health in many ways, as Figure 3.1 shows. For example, being active helps build and maintain your bones and muscles. It helps you manage your weight. It increases your strength and flexibility. It keeps your blood pressure at healthy levels and makes your heart and lungs work better. All these benefits help you enjoy life more fully. You have more energy. You move more freely and are more athletic. You also sleep better and are in less danger of developing certain diseases now and throughout all stages of life.

Have you ever noticed it just feels good to work out? You usually feel more relaxed or upbeat after playing a sport or going for a brisk walk. That’s because an active lifestyle is good for your brain as well as your body. It improves the way you think and feel.

\*Figure 3.1

**PHYSICAL ACTIVITY HAS MANY BENEFITS**

When you’re active, you sleep better, have more chances to make friends, and think more clearly. How else can physical activity benefit your health?
You have more self-confidence. You’re also more mentally alert because more oxygen is going to your brain. Physical activity can help cut down on stress and give you a more easygoing attitude.

Being physically active can also give your social health a boost. When you sign up for sports teams at school or head outdoors to exercise, you’re likely to meet more people. In a diverse society, physical activity can bring people together who share interests and goals. This leads to new friendships and helps you learn to work well with others. Getting along with others makes your school and community safer.

**Reading Check**

Recall Give one example of how physical activity benefits each side of your health triangle.

**Elements of Physical Fitness**

There are five elements of physical fitness: muscle endurance, cardiovascular endurance, strength, flexibility, and body composition. Learning about these elements will help you assess and improve your own fitness level.

**Endurance**

Endurance (en-DUR-uh-nce) is the ability to perform difficult physical activity without getting overly tired. Muscle endurance is the ability of a muscle to repeatedly use force over a period of time. If you can run several miles and if your legs don’t feel tired, your legs have muscle endurance. You can build your endurance if you spend more time doing a chosen exercise or physical activity.

Cardiovascular (kar-dee-oh-VASS-kyoo-lur) endurance is the measure of how well your heart and lungs work during moderate-to-vigorous physical activity or exercise. If you are breathing so hard you can’t speak in sentences, your activity is vigorous. If you can carry on a conversation, your activity level is light to moderate. Cardiovascular endurance is also a measure of how quickly your heartbeat and breathing return to normal after you stop exercising.

**Strength**

Strength is the ability of your muscles to use force. The amount of work your muscles can do is a measure of strength. By building muscle strength, you can improve your skills for sports and other activities. You also shape and tone your body. Lifting weights is one of the many ways to build and maintain muscle strength.
Flexibility

The ability to move joints fully and easily through a full range of motion is known as flexibility. You can increase your flexibility with regular, gentle stretches. When you become more flexible, you will be more agile, or able to change direction easily. You will also be less likely to get hurt as you exercise or play. Figure 3.2 shows some ways to build not only flexibility, but also endurance and strength.

Body Composition

The last element of fitness is body composition. Body composition is the proportions of fat, bone, muscle, and fluid that make up body weight. A healthy body generally has more bone, muscle, and fluid than fat. Your body composition is the result of your eating habits, your level of physical activity, and genetics—the genes you inherited from your parents.

Effect of Body Composition on Fitness

You can improve your body composition by eating healthy foods and increasing your physical activity. If you exercise regularly, your body can gain muscle and lose fat. This helps you stay within a healthy weight range and helps to protect you against diseases like heart disease and cancer. Eating healthy foods and exercising also helps keep your cholesterol levels down. Cholesterol is a fatty substance in the blood that the body uses to build cells. High cholesterol levels can contribute to heart disease.

\[ \text{FIGURE 3.2} \]

Exercises for Endurance, Strength, and Flexibility

Different exercises improve different elements of fitness. Give examples of other exercises that can build endurance, strength, and flexibility.

- **Endurance**
  Swimming is one way to build endurance.

- **Strength**
  Weight training is one way to build strength.

- **Flexibility**
  Stretching is one way to build flexibility.
Types of Exercise

Whether they build endurance, strength, or flexibility, most physical activities and exercises can be described as aerobic or anaerobic. **Aerobic** (ah-ROH-bik) exercise is *rhythmic, moderate-to-vigorous activity that uses large amounts of oxygen and works the heart and lungs*. Dancing, running, swimming laps, and bicycling are examples of aerobic exercise. **Anaerobic exercise** is *intense physical activity that builds muscle but does not use large amounts of oxygen*. Lifting weights is one type of anaerobic exercise. Sprinting is another example of anaerobic exercise.

**Reading Check**

Compare and Contrast What is the difference between aerobic and anaerobic exercise?

Measuring Your Fitness

Here are a few examples of common fitness tests that can help you measure your fitness level. **Figure 3.3** below shows typical results for teens your age. Compare your results with those in the chart.

- **Flexibility.** The Sit and Reach can help you measure your flexibility. Sit on the floor with your legs straight. Place a ruler between your feet with your heels at the end of the ruler. Keep your knees straight and slowly reach forward with both hands. How many inches past your toes can you reach?

**FIGURE 3.3**

**Healthy Fitness Zones**

These fitness assessments can be used to measure your fitness level. Take these fitness tests and compare your results with the typical results for your age and gender. **Are there any areas of fitness that you need to work on?**

<table>
<thead>
<tr>
<th>Healthy Fitness Zones for Ages 13 and 14</th>
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<tbody>
<tr>
<td><strong>Test</strong></td>
</tr>
<tr>
<td>Curl-ups</td>
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<tr>
<td>1-mile run (in minutes and seconds)</td>
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<tr>
<td>Girl</td>
</tr>
<tr>
<td>Modified Pull-ups</td>
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<td>(# completed)</td>
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<tr>
<td>Push-ups</td>
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<tr>
<td>(# completed)</td>
</tr>
<tr>
<td>Sit and Reach</td>
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<td>(inches)</td>
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</tbody>
</table>
**Strength.** To test abdominal strength, do crunches for one minute. To test upper-body strength, do as many modified pull-ups or push-ups as you can in one minute.

**Cardiovascular endurance.** You will need a 12-inch-high block or bench for this test. Before you start, take your pulse for 1 minute to determine your heart rate. Step up on the block, then step down. Repeat this stepping motion in a regular rhythm for 3 minutes. Take your pulse again for 1 minute. The more fit you are, the less your heart rate will increase.

**Body composition.** The main method for measuring body composition is the skinfold test. This test involves pinching a fold of skin on the back of your upper arm and on the inside of your lower leg. Ask your physical education teacher for help with the skinfold test.

▲ Assess your fitness by seeing how long you can exercise before getting tired. Biking, for example, can measure cardiovascular endurance. **What other physical activities test cardiovascular endurance?**

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### Lesson 1 Review

#### After You Read

Review this lesson for new terms, major headings, and Reading Checks.

### What I Learned

1. **Restate** Name three ways that physical activity can benefit mental/emotional health.

2. **Vocabulary** Define strength.

3. **List** What are the five elements of fitness?

4. **Describe** What is body composition?

### Thinking Critically

5. **Infer** Why might stretching help a person perform better at a sport?

6. **Evaluate** In a brief paragraph, describe your own thoughts and feelings about the benefits of being physically fit.

### Applying Health Skills

7. **Goal Setting** Complete a personal fitness evaluation using the fitness tests provided in this lesson, or other tests recommended by your teacher. Use the results of your evaluation to set fitness goals. Develop a fitness program to help you reach your goals.