

Keep It Moving!

Grade Band: 3-5

Student Objectives:

- Identify benefits of physical activity
- Calculate heart rates before and after physical activity
- Develop an argument to persuade someone to be physically active

Materials:

- Two sets of the “Benefits of Physical Activity Cards” – reproduced and cut out
- 20 cones
- 2-4 rings that could fit over cone tops
- Music source
- Jump ropes (one per group)
- Access to the Internet

Suggested Time Frame: 1-2 class periods (based on 45 minute intervals)

Instant Expert:

As students have learned in previous lessons, an important foundation of helping children become health literate is teaching them about **wellness**. Wellness is more than just being healthy. It is the active process of becoming aware of and making choices toward a healthy and fulfilling life. In this lesson, students will learn that regular physical activity is an important part of maintaining physical wellness, mental/emotional wellness, and social wellness.

In fact, it is recommended that kids aged 6-17 get an average of 60 minutes or more of physical activity every day. Specific benefits of regular physical activity include:

Physical

- Burns calories
- Increases muscle strength
- Increases efficiency of heart and lungs
- Increases stamina
- Increases bone strength
- Improves circulation
- Lowers blood pressure
- Maintains a healthy body weight
- Helps with digestion

- Increases resistance to disease
- Boosts energy
- Improves posture
- Helps to maintain calorie balance

Mental/Emotional

- Reduces stress
- Reduces anxiety
- Improves sleep
- Reduces the chance for depression
- Builds self confidence
- Increases enthusiasm
- Establishes good habits

Social

- Provides a fun way to share an activity with family and friends
- Helps with problem-solving and getting along with others
- Promotes collaboration working with others

Some studies even suggest that regular physical activity can improve students' attention level and improve academic performance.

According to the CDC, childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years. The percentage of obese 6-to 11- year olds in the United States increased from 7% in 1980 to nearly 18% in 2012. Similarly, the percentage of obese 12- to 19-year olds increased from 5% to nearly 21% over the same period. In 2012, more than one third of children and adolescents were overweight or obese. Studies have shown that obese children and teens are more likely to become obese as adults. Some experts believe that if the trend continues, the current generation of children will become the first in American history to have shorter projected life spans than their parents.

There are many contributing factors to the high rate of childhood obesity. Some reasons are related to diet, such as increased portion sizes for food and beverages. Other reasons are related to living in a modern society. Children today spend more time sitting in a car or bus as opposed to walking places. In many schools today, there is no free time allotted for physical activity. In fact, nearly 1 in 4 children does not participate in any free time physical activity. Another reason for the rise in childhood obesity stems from the sedentary lifestyle of many children. Tweens (8 to 12 year olds) spend an average of about six hours per day being entertained by various forms of media. These include watching TV, movies, and online videos; using social media; using the internet; reading; playing games by video, computer, or with a

mobile device; and listening to music. Tweens average more than four and a half hours of daily screen time. Non-screen time includes listening to music and reading print. In addition to less physical activity, this sedentary lifestyle may also contribute to increased energy consumption through excessive snacking and eating meals in front of the TV.

To demonstrate one benefit of physical wellness, students see firsthand how aerobic activity impacts their heart by measuring their heart rate before and after physical activity. During aerobic activity, our pulse rate and breathing rate increase. During each heartbeat, the muscles of the heart contract causing a wave of pressure which forces blood through their arteries. This wave of pressure is called a pulse. The normal heart rate varies with age. At six to eight years of age, the heart rate should be between 70 and 115 beats per minute. From nine to eleven years of age, the normal heart rate should be between 60 and 100 beats per minute. During aerobic physical activity, the heart rate increases to supply the muscles with more oxygen to produce extra energy. To meet the body's need for oxygen during aerobic exercise, it beats faster and harder to get more blood out in each beat-stroke volume. But it can only beat harder if it has been strengthened through exercise. Like other muscles, the heart enjoys a good workout. When we give the heart this kind of workout regularly, it will get stronger and more efficient in delivering oxygen (in the form of oxygen-carrying blood cells) to all parts of the body.

Note: As always, you will want to be sensitive to students' unique situations and follow your school or district's policy when it comes to the collection of personal information related to minors.

Additional Resources:

- How to Take Your Heart Rate
http://www.move.va.gov/docs/NewHandouts/PhysicalActivity/P09_HowToTakeYourHeartRate.pdf
- Centers for Disease Control and Prevention: Measuring Physical Activity Intensity
<http://www.cdc.gov/physicalactivity/basics/measuring/heartRate.htm>
- Physical Activity Guidelines for Americans: Youth Physical Activity Recommendations
<http://health.gov/paguidelines/midcourse/youth-fact-sheet.pdf>
- Let's Move <http://www.letsmove.gov/action>
- Centers for Disease Control and Prevention. Body and Mind BAM! Physical Activity
<http://www.cdc.gov/bam/activity/index.html>
- Fact Sheet for Health Professionals on Physical Activity Guidelines for Children and Adolescents.
http://www.cdc.gov/physicalactivity/downloads/pa_fact_sheet_children.pdf
- Office of Disease Prevention and Health Promotion. Examining the relationship between physical activity and health. <http://health.gov/paguidelines/guidelines/chapter2.aspx>

- SHAPE America Lead-up Games
<http://www.shapeamerica.org/publications/resources/pa/lead-up-games.cfm>

Procedure:

Session 1: What's the Benefit?

1. Before students enter the room, clear a large space and place cones a few feet from each other within that space. Cut out two sets of the “Benefits of Physical Activity Cards” so there are 40 cards. Place two cards under each of the 20 cones.
2. After students enter the room, read the following statement and poll students to see if they agree: “Regular physical activity is good for your health.” In all likelihood, most if not all students will agree. Then follow up with the following question, “Why is it good for your health?” Encourage students to share everything they know about why activity is good for them. Record answers.
3. Tell students that they are going to play a game to learn 20 ways that physical activity contributes to their overall wellness (physical, mental/emotional, and social). Divide students into two teams. Distribute two rings to each team. Tell students that under each cone they will find a card that lists a benefit of being physically active. Their team goal is to collect all 20 cards. In order to collect a card, a player must throw the ring toward one cone while standing next to another cone. If the ring lands directly over the cone, their team may collect the card under it. If the ring does not land directly over the cone, all team members must do 10 jumping jacks, hop for 10 seconds, or jog in place for 30 seconds. Once all team members have had a turn (or once 20 turns have been taken), it is the second team’s turn to collect the second set of cards. The team that collects the most cards wins!
4. After the game, have each team read their list of benefits and see if 20 have been collected. If not, try to guess the remaining ones and uncover the cones to see if guesses were right. Ask students to share what they know about each benefit and how it relates to physical activity.
5. Challenge student groups to look at the cards and group them based on commonalities. For example, grouping cards that contribute to physical wellness, cards that contribute to social wellness, or cards that contribute to mental/emotional wellness. Give students a few minutes to group and if they are having difficulty, provide guiding questions or statements.
6. Invite students to reflect on why physical activity is so important for each of the components of wellness (physical, mental/emotional, and social), based on the grouping of cards.

Session 2: Persuade Me

- If this is a new session, invite students to review what they have learned about the benefits of physical activity.
- Tell students that they are going to conduct a demonstration on themselves to see how physical activity benefits their hearts. Have students locate their pulse points, either on their wrists or neck. Refer students to visuals to show where to find pulse point, like online resources from the Centers for Disease Control and Prevention. Once everyone has located their pulse point, challenge students to count the number of times they feel a beat in 6 seconds. Time them for 6 seconds and have them write down the number. Then have them add a zero to the end of that number (or multiply by 10). Explain that this is their resting heart rate, or the number of heartbeats in one minute at rest.
- Draw the following table on the board and collect the heart rates of students before exercise (you may want to explain that if their heart rate is not shown or if they are not in the largest group, it is probably because they are inexperienced at this type of measurement.)

| <i>Range of heart rate</i> | <i>Heart rate before activity Number of students</i> | <i>Heart rate after activity Number of students</i> |
|----------------------------|--|---|
| <i>Less than 60</i> | | |
| <i>60 to 70</i> | | |
| <i>71-80</i> | | |
| <i>81-90</i> | | |
| <i>91-100</i> | | |
| <i>101-115</i> | | |

- Put on music and lead students in one or more of the following activities for one to two minutes: jump rope, run in place, or dance to music. Before starting the clock, challenge students to predict what will happen to their heart rate. Will it increase? Decrease? By how much? During the activity, have students reflect on their body changes. Are they starting to get hot? Sweat? Do they feel their heartbeat faster? Is it easy to talk to a friend while doing the exercises or sing? Time students for one to two minutes and repeat the heart rate test. Record the results. If you have time, have students rest for a few minutes and repeat so they see that their heart rate goes back to normal. The exact numbers here are not important, but students should understand the pattern, which is that their heart rate increases after exercise and then goes back to normal after a period of rest.

11. Have students look at the heart rate before and after the physical activity and ask them what they see? Is before the same as after? How is it different? What causes the heart to beat faster or slower?
12. Write the word “aerobic” on the board. Have students reflect and share with a partner what they think aerobic means and how it relates to the activities they just completed. Aerobic means “with air”, so physical activities that are aerobic require oxygen. Breathing takes in oxygen from the air, the more movements the body makes, the more oxygen it needs. Breathing increases during physical activity. This causes the body to pump blood faster, take more breaths, and sweat. The more the body works out and does physical activity, the better the body is at moving the oxygen to muscles and all parts of the body. Ask students to look again at the patterns of before and after activity and talk with a partner about what they see using the word “aerobic” in their conversation.
13. Ask students if they know that exercise makes their heart happy. The heart is a muscle and it works by pumping blood every day of your life. Ask students if they know why this is so important? When the heart pumps blood it is carrying oxygen to all parts of the body, so that the body can function from sleep to physical activities.
14. Write the word “persuade” on the board and elicit its meaning from students. Explain that persuasion involves trying to convince someone to do something. Ask students for examples of when they have tried to persuade their family, friends, and teachers. Discuss the techniques that typically work best. Explain that it is often easier to persuade someone by using factual information and evidence from experts or trustworthy sources.
15. Invite volunteers to explain how they might use what they learned from the pulse point activity to persuade someone to be physically active. Ask other students if and how the argument would persuade them, and why.
16. Challenge students to use what they have learned to write a script that will persuade a friend to do one or both of the actions below. Note that students may need to research facts and evidence to support their argument. If time and resources allow, direct students to the websites in the additional resources section.
 - Get 60 minutes or more of physical activity per day
 - Make most of their physical activity aerobic

17. Invite students to persuade a partner using the script they have developed. Switch roles so that both students have a chance to persuade and be persuaded. Invite student volunteers to share whether they felt persuaded by their partner and why.
18. Complete a 3-2-1 closure with the students.
 - a. Ask students what are three (3) benefits of physical activity that they learned today?
 - b. What are two (2) aerobic physical activities?
 - c. What is one (1) physical activity you will explore to meet the 60 minutes of physical activity goal per day?

You Decide: *This feature helps to reinforce decision-making with students and can be integrated into the lesson or serve as an extension*

Nicole is 10-years-old. She loves to play with friends and family. She loves to play instruments and make crafts with her friends. Here is Nicole’s physical activity for the week.

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------------------|--------------------------|--------------------------------------|---------------------------|---|---------------------------|----------------------------------|
| Walk the dog (30 minutes) | Play soccer (60 minutes) | Play music with friends (60 minutes) | Walk the dog (30 minutes) | Take sister to the park and play (60 minutes) | Walk the dog (30 minutes) | Crafts with friends (60 minutes) |
| Ride a bike (60 minutes) | | | | | | Soccer game (60 minutes) |

1. Is Nicole getting 60 minutes or more of physical activity every day?
2. Is Nicole getting enough moderate-to-vigorous physical activity?
3. How would you advise Nicole to help her meet the physical activity guidelines for kids her age?

Family Connection:

Ask students to survey family members to see how many benefits of physical activity they can identify. If they can collectively identify 18-20, they are physical activity experts!

For other tools to extend learning outside of the classroom, refer to the School-to-Home activities on TogetherCounts.com. Begin these activities together at school and then encourage students to continue them with their families.

Community Connection:

Direct students to create a survey to learn how much daily physical activity community members do each day. After collecting answers, have students graph and analyze their data by gender, age, or job title. Once complete, ask each class to combine data to create a community physical activity profile.

Standards Correlations:

National Health Education Standards

- Students will analyze influence of family, peers, culture, media, technology, and other factors on health behaviors.
- Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Students will demonstrate the ability to use decision-making skills to enhance health.
- Students will demonstrate the ability to use goal-setting skills to enhance health.
- Students will demonstrate the ability to advocate for personal, family, and community health.


SHAPE America, National Physical Education Standards

- The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.
- The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction

Common Core State Standards for English Language Arts

- Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
- Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
- Employ technology thoughtfully to enhance reading, writing, speaking, listening, and language use.
- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- Conduct short research projects that build knowledge about a topic.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.

BENEFITS OF PHYSICAL ACTIVITY CARDS



| | |
|---|---|
| Burns calories and helps to maintain Energy Balance | Boosts energy |
| Increases muscle strength | Improves posture |
| Increases efficiency of heart and lungs | Reduces stress |
| Increases stamina | Improves sleep |
| Increases bone strength | Reduces the chance for depression |
| Improves circulation | Builds self confidence |
| Lowers blood pressure | Increases enthusiasm |
| Maintains a healthy body weight | Establishes good habits |
| Helps with digestion | Provides a way to share an activity with family and friends |
| Increases resistance to disease | Helps with problem-solving and getting along with others |