



LESSON:

Get Fit Gardening

GRADE LEVEL: K-6

OBJECTIVES:

- Learn new garden-based physical fitness activities
- Complete important garden maintenance tasks
- Prepare and taste a nutritious garden snack

KEYWORDS:

Health: Being sound in body, mind, and spirit.

Workout: A session of exercise or practice to improve fitness.

Heart rate: The number of heartbeats per unit of time usually expressed as 'beats per minute'.

Cardiovascular: The system of our body that transports blood and oxygen from our heart and lungs.

Endurance: The ability to keep up a certain level of physical activity for an extended period of time.

SKILLS:

- Practicing physical activity
- Learning how to monitor heart rates
- Completing garden maintenance tasks
- Safely handling and preparing garden snacks

OVERVIEW:

Over the past 30 years, childhood obesity has steadily increased and reached epidemic proportions in the United States. More than one-third of children and teens (approximately **25 million** kids) are overweight or obese. Obesity is one of the single greatest causes of many chronic diseases.

The good news is, however, that obesity is a relatively new phenomenon and nearly entirely preventable. Physical activity is as important as nutrition and diet for preventing obesity and benefits children in many ways. Getting kids off the couch and outside in the garden running and playing can diminish the chances that they will suffer from obesity as an adult. Not only does regular exercise help keep kids feeling good physically, it has distinct emotional and social payoffs as well. Incidences of depression and anxiety disorders are lower in people who regularly work up a sweat. In addition, studies have shown that children who engage in physical activity on a regular basis also perform better academically. Physical activity is also good for a child's social development. Youth can develop a sense of confidence from physical activity and fitness that may transfer into other areas of their lives, making active kids more comfortable to interact with peers and become better students.

Gardening as physical activity provides three types of exercise: **endurance**, flexibility, and strength. Not only can kids learn about how food grows and basic gardening skills, but they can keep their body and all their systems strong and **healthy**. One of the systems that benefits from physical activity is the circulatory system. Also known as the **cardiovascular** system, it is comprised of the heart, lungs, and blood vessels which carries oxygen-rich blood to the tissues of the body while removing carbon dioxide and other wastes from them. It is extremely important to engage in **cardiovascular** exercise like running or aerobics, as it not only strengthens the heart and lungs but increases energy, promotes restful sleep and boosts the metabolism.

In this lesson, we will learn about how working in the garden and being outside is beneficial to your **health**. Working in the garden requires moving your body in a number of ways that facilitate blood flow. Activity is also good for children's social development. The sense of confidence that often comes with physical fitness carries over into other areas, making active kids more comfortable to interact with peers. After completing essential garden tasks, we will prepare a **healthy** garden snack to nourish our bodies.

QUESTIONS TO CONSIDER:

- What are some great ways to get physical activity?
- How can being outside in the garden make us healthier?
- What does it mean to you to be 'healthy'?
- What else can we do besides eating more fruits and vegetables to add to our health?



MATERIALS:

PART 1:

- Diagram of the cardiovascular system

PART 2:

- Stethoscope
- Piles of woodchips, compost, and/or leaves
- Buckets for each student

PART 3:

- Whole wheat tortillas
- Low-fat shredded mozzarella cheese
- Canned pasta or pizza sauce
- Baby spinach
- Other desired garden produce
- Kitchen knife
- Cutting board
- Plates for serving
- Spoons for spreading sauce



PART I: GARDEN EXERCISE

PROCEDURE (ALL):

1. Ask students if they can tell you what it means to be healthy? Explain that health is how you feel, inside and out. What are some things that contribute to being healthy? (i.e. a balanced diet, exercise and positive social interaction with peers)
2. Ask students why we need air? Discuss where the air goes when we breathe. Where does the air go after it goes in our lungs? All parts of our body need oxygen and our blood gets it to them.
3. Tell students that our body is made up of many systems. The circulatory system or cardiovascular system is what pushes blood through our body. If we don't move around too much our blood doesn't flow right and we get tired. Show students a diagram of the cardiovascular system. Explain that **cardio** means heart and **vascular** means veins.
4. Explain to students that we are going to wake up our bodies by doing some exercises. Ask the students if they ever stretch when they get out of bed or when they have been sitting for a long time. After sitting or lying down for long periods of time our internal organs are all squished together and need to stretch out. A good stretch opens up the chest and lifts the abdomen allowing fresh oxygen into the system while increasing our flexibility.
5. Lead students in a number of stretches- remind students that they should only stretch as far as they are able so they don't hurt themselves! Here are some examples:
 - a) **Turtle Weeding:** Bring students to a weedy part of the garden. Demonstrate bending over, stretching and breathing deeply while pulling weeds as slowly as possible.
 - b) **Bean Sprouting:** Stand with feet about a foot apart. Raise your hands to the top of the bean stalk; try to reach for the sky. Stretch your whole body upward and grow as much as you can.
 - c) **Toma-toe Stretch:** Stand with your feet together. Step to the left. Bend down with both hands and touch your left toes. Stand up and repeat on the right side.
 - d) **Strawberry Squat and Pick:** Stand with your feet a foot a part. Squat down and lean forward. Reach out one hand at a time as if picking strawberries.



PART II: PUMP UP THE BEAT

PROCEDURE (ALL):

1. Make sure students understand the importance of stretching before any strenuous physical activity so that we don't pull any muscles. Explain to students now that they have stretched they are going to get that big muscle in their chest (the heart) working hard by raising their **heart rate**.
2. Explain to students what their heart rate is. Have children place two fingers on the left side of their neck (right next to the Adam's apple) to find their pulse. Ask the students if they have ever gone to the doctor and had the doctor use a stethoscope to listen to their hearts. Show them a stethoscope. Tell students doctors use this tool to listen to how strong our hearts are.
3. Have them count their heartbeat for 30 seconds. Make sure they count in their head or quietly to not influence others! Ask a few students how many beats they counted. Have them double the number to get their heart rate. .
4. Line the students up and have them run to a certain point and then back. Once they catch their breath have them count their heart beats again. Is it higher?
5. Ask them to name other activities that raise their **heart rate**. Explain that they should try to exercise their heart and lung muscles every day by trying some of the activities they listed.
6. If there is time have the students move woodchips, leaves, or compost around the garden according to the time of year and the tasks necessary for the current season.

PART III: HEALTHY HEART COOKING

PROCEDURE (ALL):

1. Explain to students besides exercising there are other ways to keep our hearts healthy. One of these ways is eating heart healthy foods like tomatoes, carrots, nuts, and blueberries.
2. Tell students that they are going to feed their hearts with a healthy snack- Garden Pizza Roll Ups!
3. Have students spilt into multiple teams (sauce team, cheese team, veggie team). Just like our body has many systems that work together, students are going to work together. Have students line up in their teams, one student behind the next.
4. Start the cooking portion by placing the tortilla on the plate and passing it to the sauce team. Tell students that we are using whole wheat tortillas because whole grain is heart healthy and helps lower the risk of heart disease. The first student on the sauce team should spread sauce on the tortilla, pass to the next team, and move to the back of the line. Repeat this until all students have had a chance to help make our healthy snack.



RECIPE: GARDEN PIZZA ROLL-UP

For each roll up

- 1 8-inch whole-wheat flour tortilla
- 2 Tbsp. prepared pizza sauce
- 12 Baby spinach leaves
- Any garden produce that is available (peppers, broccoli, peas, or beans are great raw options)
- 3 Tbsp. Shredded part-skim mozzarella

PREPARATION:

1. Place tortilla on a plate and spread pizza sauce over it.
2. Top with an even layer of spinach and sprinkle cheese on top.
3. Carefully roll the tortilla up. Slice into pieces.
4. Serve and enjoy!



Keep Growing Detroit is cultivating a food sovereign city where the majority of fruits and vegetables consumed are grown by Detroiters within the city's limits. For more information visit keepgrowingdetroit.org or contact Keep Growing Detroit at (313) 757-2635 or info@keepgrowingdetroit.org.