

## My First Garden

Rodale Institute's Guide to teaching children where their food comes from and starting a school garden

### Lessons 1: Where does our food come from?

Objective 1: Teach children what plants and animals need to survive

Objective 2: Teach children different parts of plants

Objective 3: To understand the connection between plants, animals and food that we eat.

#### Activities:

**Activity 1: What plants need:** Draw a diagram of a plant on your white board. Hand out flash cards with pictures of things that plants may or may not need to grow. Children place them either with the plant or away from plant diagram depending on whether it is a plant survival need. The coloring page reinforces the lesson.

Materials: Magnetic white board; dry erase markers, flash cards, magnets with adhesive back for cards.

#### Lesson Help:

This activity is meant to help children understand that plants are alive (like they are!) and that they need similar things to survive such as food, water, and air. The students will become stewards of plants' lives through their garden. This lesson will help them understand what is essential for plants to thrive.

There are four main elements to plant survival that the children should be able to identify and why.

- 1) Sun: Plants need food to grow, just like us. Where do they get this food? Plants have a special relationship with the sun. When the sun shines on plants' leaves, the plant uses special organs that help to change sunlight into food that the plant needs to grow. This is called photosynthesis.

If a plant was in a dark closet, it would not be able to make the food that it needs grow and it would not grow strong.

- 2) Water: Like people, plants need water to drink! When we are out playing in the hot sun, we get thirsty; water helps to refresh and replenish the liquids that we need to feel energized and happy. Plants need water in this same way; on a very hot day, a plant without water will start to look and feel droopy, it needs water to be refreshed and happy.

When we eat a meal, we need a drink of water to help our body use the food for the energy we need. Plants need water in this same way; water helps a plant to process sunlight into food.

Ever notice how juicy some fruits are? This comes from the water that the plant drinks while the fruit is forming!

- 3) Soil: Soil is not just dirt. Soil is also made up of food/nutrients, minerals, and water that the plant needs. Soil is the place where a plant's feet or roots are buried helping

the plant to stand up strong. Plant roots also have a special ability to absorb water or food from the soil that the plant needs to be healthy.

The soil is also full of life! Some living creatures we can see like earthworms, and some are so small that we can only see them when we use a special tool called a microscope. But all of these creatures in the soil help to make plants happy and healthy. They can create air space and food underground that the roots send to the rest of the plant.

- 4) Air: Plants are living things and they need to breathe air just like we do. They breathe through their leaves. If you put a plant in a glass jar with no air holes, it would not survive when the air is used up.

Plants also need air space around their roots and their bodies to be healthy. If plants are too crowded together, they may get sick or diseased.

**Activity 2: Eating plant parts:** Draw diagram of plant on magnetic white board. Discuss different parts of plant and label with children: root, stem, leaf, fruit, flower, seed.

Then hand out flash cards with images of different vegetables and fruits. Children will identify picture, then post it up on the plant diagram to indicate what part of plant the food is that we eat. Discuss other ideas of different foods that relate to different plant parts.

Materials: Magnetic white board, markers, flash cards. (You can also make your own by using pictures from seed catalogues!)

Here is a guide to different parts of plants that we eat:

Roots	Stems	Leaves	Flowers	Fruits	Seeds
Beets	Asparagus	Cabbage	Broccoli	Peppers	Corn
Carrots	Celery	Kale	Cauliflower	Cantaloupe	Green Beans
Garlic	Scallions	Lettuce	Artichoke	Cucumber	Peas
Onions		Parsley		Eggplant	Sunflower seeds
Potatoes		Cilantro		Pumpkin	Popcorn
Radish		Collards		Squash	Chick peas/Garbanzo beans
Scallions		Spinach		Tomatoes	
Sweet potatoes				Watermelon	
				Zucchini	

**Activity 3: Where does it come from?** Discuss with children how a lot of our food comes from animals. Then play a game that matches images of different animal products to their source (ex. chickens/eggs; cows/milk; bees/honey). Use magnetic flash cards. Tack up pictures of animals and pictures of their products. Invite children to come up and draw a line between the animal and the food that they give. Use different colors for different animals.

Materials: Magnetic white board, dry erase markers, magnetic flash cards with pictures of animals and animal products.

**Read:** The Tiny Seed by Eric Carle

**Craft: Connecting plant parts:** Cut out different parts of plants (roots, stem, leaf, flower, fruit). Children will glue them together. Can label parts for additional activity. OR use wax

“Wikki Stix” or pipe cleaners to make different parts of plants, then glue to paper. Additionally, students could glue bean seed to paper or a paper plate. Students will draw roots, stem, leaves, flower, fruit.

Materials: Paper plates, construction paper, crayons, wikki stix, pipe cleaners, glue sticks, bean seeds.

**Taste:** Taste different foods that come from different plant parts. For example: celery/stem; carrot/root; snap peas/seed; lettuce/leaf.

**Note:** Remember to always check in with student allergy limitations before making snack!

**Activity 4: What does organic mean?** Healthy soil = Healthy food = Healthy people.

**Objective:** Children understand the difference in organically grown food and the importance to our health & the environment.

Activities:

1. Look at the diagram of healthy soil and talk about the life in the soil that helps everything grow: microscopic organisms, worms, insects, and more! Explain the idea that using poisons to kill bugs or weeds can also kill the “good” organisms too.
2. **Read:** Diary of a Worm by Doreen Kronin

**Helpful Hints:** We have already discussed how important healthy soil is to the life of plants. Healthy soil is more than just dirt, remember it contains all kinds of life and living creatures that work together with plants to help them grow to be healthy. Healthy plants growing in healthy soil produce lots of healthy food for people and other animals.

Some farmers and gardeners spray bug killers on their plants because they think they are protecting the food they are growing. The problem with this is that these sprays not only kill the bugs that eat the plants, but they also kill the creatures that help the plants to be healthy both in the soil and the air.

Earthworms create air and add nutrients to the soil to help the plant grow to be healthy. Bees and butterflies visit and pollinate flowers, which helps the plants to produce their fruits. If we spray these plants with “bug killers” these important creatures could also be harmed.

## Complete Materials Guide

Note that books can also be borrowed from the library to cut costs and that prices are estimations and may vary depending upon region.

### Lesson 1: Where does our food come from?

<b>Material</b>	<b>Quantity</b>	<b>Source</b>	<b>Approx. cost*</b>
Magnetic white board	1	Office Depot/Staples	\$15.00 - \$25.00
Dry erase markers	1 set	Walmart/Target	\$3.50 - \$6.00
Flash cards	1 set	Download	Free
Sticky back magnets	1 pack	Office Depot/Staples	\$6.50 - \$10.00
Book: <i>The Tiny Seed</i>	1	Amazon	\$3.00 - \$7.00
Paper Plates	1/student	Grocery store	\$2.00 - \$3.00
Dry beans	1/student	Grocery store	\$1.50 - \$3.00
Construction paper	1 pack	Walmart/Target	\$3.00 - \$4.00
Crayons		Walmart/Target	\$1.00 - \$3.00
Glue Sticks		Walmart/Target	\$2.00 - \$4.00
Produce Samples	3-4 different tastes/student	Grocery Store	\$7.00 - \$12.00
Book: <i>Diary of a Worm</i>	1	Amazon	\$6.00 - \$9.00
Spray Bottle	1 -2	Walmart/Dollar store	\$3.00 - \$6.00
Raisins	1 box	Grocery	\$2.50 - \$4.00
Book: <i>The Carrot Seed</i>	1	Amazon	\$4.00 - \$6.00