

# Garden as a System

SIXTH GRADE

Systems are all around us. A system is a group of two or more things that work together to form a whole. The school garden is a perfect example of a system that depends on many different inputs to be in balance. In this activity, students will explore the garden to identify many parts that make up the school garden system.

## SUBJECT

SCIENCE

## TIME

30 - 45 MIN

## MATERIALS

Garden System Worksheet, 1 per student

Pencils, 1 per student

Clipboards, 1 per student

## DIRECTIONS

- Find a shady spot in the garden to lead a class discussion. Elicit student ideas about what they think is the definition of a system. Give an example of the human body. The human body is a system made up of many parts. Would the human body function properly if one of its organs were removed, like the heart? No, it wouldn't. The heart is an essential part of the human body's system. What is another essential part?
- Ask if they think the school garden is a system and ask them to name all of its parts—record ideas on the board. Write the word "Garden" in the center and the parts listed around it.
- The main parts of a garden system are sunlight, soil, water, air, plants, animals, and people. Accept other ideas if they make sense and have students record all the parts on their worksheet.
- Explain that in today's activity, they will explore all the parts of the school garden's system to become more familiar with them and then answer the following questions: What is the function of each part? How does each part interconnect with other parts? What would happen to the garden system if we removed one of the parts?
- Send students out into the garden to explore all the parts. After students have answered the questions, lead a group discussion so students can share their ideas. Also, ask if they observed any failing parts in the garden (i.e., droopy or dead plants could mean not enough water, excessive weeds could mean not enough maintenance, etc.). What needs to be done to fix that part of the system?
- Ask students if any of the solutions to the identified problems could be done immediately. Then, spend the rest of the time weeding, watering, cleaning up, etc.
- These observations will be helpful to the school garden's caretaker - feel free to share with Barbara Larson [barbara@bckprograms.com](mailto:barbara@bckprograms.com).

## SOURCE

- BCK Programs



# Garden System Worksheet

GARDEN PART (Ex. Soil)	FUNCTION and INTERCONNECTIONS	WHAT WOULD HAPPEN IF REMOVED?



# Example: Garden System Worksheet

GARDEN PART (Ex. Soil)	FUNCTION and INTERCONNECTIONS	WHAT WOULD HAPPEN IF REMOVED?
Sunlight	Provides light and heat. Plants need light for photosynthesis; light keeps people and animals warm.	Plants would die, and without plants as a food source, animals would not survive.
Air	Provides oxygen. Plants and animals/people need oxygen to breathe, plants for photosynthesis.	Plants and animals/people would not survive.
Water	Provides hydration. Plants and animals/people need water to survive.	Plants and animals would not survive.
Soil	Provides nutrients and foundation. Plants get their nutrients from the soil. It also provides a foundation for roots and a habitat for decomposers.	Plants would need to get nutrients and stability from another source; decomposers would not survive.
Plants	Provide food and shade, absorb CO <sub>2</sub> , release oxygen back into the air. Plants provide food, shelter, and shade to people and animals, and they help clean the air for people to breathe.	People and animals would have to get food elsewhere.
Animals	Decomposers break down plants to provide nutrients, pollinators help plants reproduce to make food, predator insects protect plants from bad insects.	Plant and animal waste would not break down into nutrients in the soil; many plants would not produce edible parts (i.e., fruits), many plants could be destroyed without predator insects to protect them.
People	Make sure plants have what they need to grow by watering, weeding, making sure the soil is healthy, plant, harvest, and eat garden crops. People breathe air, drink water, tend to the soil, take care of and eat plants, leave garden animals alone to do their jobs.	Likely, a school garden would not exist without people to taking care of it.

