

Science Guides Communities

Trace how evidence guides local environmental action.

5-ESS3-1 "Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the information each community gathered, and circle the action it took to protect a resource or the environment, so you can connect science information to community decisions.

Local Science, Lasting Care

- ① In the coastal town of Bayview, heavy rain once washed soil, oil, and litter from streets into the bay. Town engineers tested the water after storms and mapped where runoff entered. Using those results, Bayview built rain gardens beside parking lots and planted grasses along ditches. The plants slow water, trap some sediment, and help keep pollutants out of the bay.
- ② Dry Creek is a farming community that depends on groundwater for homes and crops. Farmers studied soil-moisture sensor readings and local weather forecasts. They installed drip irrigation, which sends water slowly to plant roots, and they watered only when the soil needed it. These choices reduce water wasted through evaporation or overwatering. Saving groundwater leaves more water available during dry months and protects the local water supply.
- ③ In Lakeford, trash audits showed that many lunch leftovers and food scraps went to the landfill. The school district used the audit results to start a compost collection program. Science explains that tiny organisms break down food scraps into compost under the right conditions. Grounds crews use the compost in school gardens, which returns nutrients to soil and reduces the material sent to the landfill.

2 ANSWER WITH EVIDENCE Use the passage

- 1 What information did Bayview engineers gather, and what did the town build because of the results?

- 2 Which two kinds of information did Dry Creek farmers study before changing how they watered crops?

- 3 What did Lakeford's trash audits show, and what program did the school district start?

- 4 How are Bayview and Lakeford alike in the way they used information to protect the environment?

3 YOUR TURN Your own words

Choose an environmental concern in your school or community. Write three numbered sentences that name information to gather, a science idea to use, and an action that would protect a resource or the environment.

PART 1 • READ AND MARK

Underline the information each community gathered, and circle the action it took to protect a resource or the environment, so you can connect science information to community decisions. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What information did Bayview engineers gather, and what did the town build because of the results?	They tested storm water and mapped where runoff entered. Bayview built rain gardens and planted grasses along ditches.
2	Which two kinds of information did Dry Creek farmers study before changing how they watered crops?	They studied soil-moisture sensor readings and local weather forecasts.
3	What did Lakeford's trash audits show, and what program did the school district start?	The audits showed that many lunch leftovers and food scraps went to the landfill. The district started a compost collection program.
4	How are Bayview and Lakeford alike in the way they used information to protect the environment?	Both communities gathered evidence about a problem, then used the results to choose an action that reduced environmental harm.

PART 3 • YOUR TURN (SAMPLE ANSWER)

1. Our school community would record electricity-meter readings and note when lights are left on. 2. We would use the idea that efficient LEDs use less electrical energy to replace old hallway bulbs and add motion sensors. 3. Using less electricity would conserve energy resources and lower pollution from power plants.

Accept answers that clearly connect gathered information to a science-based action and an environmental benefit. The open response may address any realistic school or community concern.