Rainwater Decisions

Combine community observations and science ideas to explain a conservation plan.

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

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two things volunteers observed, circle two science ideas, and number two actions the town took. Use your marks to connect what the town learned with what it did.

Brookbend Rethinks the Rain

1 After a hard rain, people in Brookbend noticed brown water rushing off the library roof and parking lot into a street drain. The drain emptied into a nearby creek. Volunteers found that the creek looked cloudier after storms than on dry days. A local science club explained that fast-moving runoff can carry loose soil into streams. Too much soil in water can make it hard for fish to find food.

2 The town planted a rain garden beside the library. A shallow dip in the ground catches some roof runoff before it reaches the drain. Water slowly soaks into the soil, and plant roots help hold that soil in place. The club suggested native plants because they are suited to the area's usual rainfall. Once established, these plants may need less extra watering than plants that need wetter conditions.

3 The library also put a covered rain barrel under a roof downspout. It stores rainwater for watering the garden during dry spells, so gardeners use less treated tap water. The cover keeps mosquitoes from reaching the stored water. After storms, volunteers check whether water still races toward the drain. They also record how often they use barrel water instead of tap water. Those notes help the town decide what to improve.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do the volunteers' creek observations and the club's explanation together show why Brookbend needs to slow runoff?

2. How does the rain garden use two science ideas to reduce what reaches the drain or creek?

3. How do the native plants and rain barrel work together to conserve treated tap water?

4. Which two volunteer records could the town combine to judge whether its changes are helping? Explain what each record shows.

3 YOUR TURN

Your own words

A community center can afford either a rain garden or a covered rain barrel, but not both. Roof water runs across its walkway after storms, and gardeners use tap water during dry spells. Choose the better first step, explain what it would and would not solve, and name one observation that could test your choice.

ANSWER KEY # Rainwater Decisions

GRADE 5 · 5-ESS3-1

PART 1 · READ AND MARK

Underline two things volunteers observed, circle two science ideas, and number two actions the town took. Use your marks to connect what the town learned with what it did. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do the volunteers' creek observations and the club's explanation together show why Brookbend needs to slow runoff?	**The creek looked cloudier after storms, and the club explained that fast runoff can carry soil into streams. Slowing runoff could keep some soil from reaching the creek.**
2	How does the rain garden use two science ideas to reduce what reaches the drain or creek?	**The shallow dip catches some runoff so it can soak into the soil instead of reaching the drain. Plant roots help hold the garden's soil in place.**
3	How do the native plants and rain barrel work together to conserve treated tap water?	**Established native plants may need less extra watering, and the barrel provides stored rainwater for watering instead of treated tap water.**
4	Which two volunteer records could the town combine to judge whether its changes are helping? Explain what each record shows.	**Volunteers check whether water still races toward the drain after storms, which shows whether runoff remains a problem. They record how often they use barrel water instead of tap water, which shows whether they are saving treated water.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would put a rain garden where roof water reaches the walkway. Its shallow dip would catch some water, and the soil would absorb it, so less water would cross the pavement. I would choose it first because the walkway floods after storms, but it would not store water for dry weeks. Workers could compare how long the walkway stays wet after storms of similar size.

Accept either choice if the student connects it to a science idea in the passage, identifies the problem it leaves unsolved, and proposes a relevant observation. Do not require a claim that either option stops all runoff or eliminates tap water use.