Creek Choices

Tracing how community choices change a creek ecosystem.

SS.7.G.5 "Understand how human actions can impact the environment."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Read the passage. Underline each human action, circle each environmental impact, and number the connected action-and-impact pairs.

Changes Along Cedar Creek

1 Along Cedar Creek, a growing town replaced wetlands with parking lots and rooftops. During heavy rain, water now runs quickly across these hard surfaces and carries oil, trash, and soil into the creek. Muddy water can block sunlight needed by underwater plants. The lost wetlands once soaked up some rain and filtered pollutants before they reached the stream. Faster runoff also raises the risk of flooding near homes and can wash away soil from creek banks during storms.

2 To reduce these impacts, the town installed rain gardens beside a school parking lot and planted native shrubs along the creek. Rain gardens hold water long enough for some pollutants to settle, and plant roots help keep soil in place. Students also organized a cleanup day, removing litter before rain could carry it downstream. These actions do not return every lost wetland, but they reduce pollution and erosion while creating habitat for insects and birds.

3 Upstream, some farms began using cover crops, plants grown between main crops. Their roots protect bare soil from wind and rain, so less soil enters the creek. Other farmers repaired leaking irrigation pipes, saving water that would otherwise be lost. However, clearing a wooded strip beside the creek for more fields would remove shade and roots. Warmer water holds less oxygen, which can stress fish, and unprotected banks may erode more easily there during storms.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did replacing wetlands with parking lots and rooftops affect Cedar Creek during heavy rain? Include two effects.

2. How do rain gardens and native shrubs reduce harm to the creek?

3. What do the restoration actions not do, and why are they still helpful?

4. What two environmental impacts could result from clearing the wooded strip beside the creek?

3 YOUR TURN

Your own words

Think of one human action at school, at home, or in your community that could harm nearby water, soil, or habitat. Write four sentences that name the action, explain its environmental effect, propose a change, and explain how that change would reduce the effect.

ANSWER KEY # Creek Choices

GRADE 7 · SS.7.G.5

PART 1 · READ AND MARK

Read the passage. Underline each human action, circle each environmental impact, and number the connected action-and-impact pairs. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did replacing wetlands with parking lots and rooftops affect Cedar Creek during heavy rain? Include two effects.	**Hard surfaces caused faster runoff that carried oil, trash, and soil into the creek. The runoff made the water muddy, increased flooding risk, and could wash away creek-bank soil.**
2	How do rain gardens and native shrubs reduce harm to the creek?	**Rain gardens hold water so some pollutants can settle. Shrub roots help hold soil in place, reducing erosion.**
3	What do the restoration actions not do, and why are they still helpful?	**They do not return every lost wetland. They still reduce pollution and erosion and create habitat for insects and birds.**
4	What two environmental impacts could result from clearing the wooded strip beside the creek?	**Removing shade could warm the water, which holds less oxygen and can stress fish. Removing roots could leave banks unprotected and increase erosion.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

At our school, leaving litter on the playground can harm a nearby storm drain. Rain can carry the litter into a stream, where animals may be injured or water may be polluted. Students could place labeled trash and recycling bins near the playground. Using the bins would keep waste from being carried away by runoff.

Accept equivalent cause-and-effect explanations that are supported by the passage. For Your Turn, accept any realistic human action, accurate environmental impact, practical change, and a clear explanation of how the change reduces harm.