

Changing Land, Changing Water

Trace how human actions reshape land and water.

SC.7.E.6.6 "Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each human action in the passage. Circle its stated impact, then write the same number by each action-and-impact pair.

A River Under Pressure

- ① Along a wooded riverbank, a company clears trees for a new field. Tree roots once held soil in place and slowed rainwater. After the clearing, rain washes loose soil downhill, causing erosion. The soil enters the nearby river as sediment, making the water cloudier. Cloudy water can block sunlight needed by water plants and can cover fish eggs. This example shows how deforestation can change both land and water quality for living things.
- ② On the edge of the same town, builders replace fields with roads, roofs, and parking lots. These hard surfaces prevent much rain from soaking into the ground. Instead, water runs quickly across pavement into storm drains and then into the river. Faster runoff can raise the river level quickly and increase flooding after heavy rain. Runoff may also carry litter, fertilizer, or other pollutants, which can lower water quality. This is one impact of nearby urbanization.
- ③ Farther upstream, a dam stores river water in a reservoir, and canals divert some water to farms. Less water may flow downstream during dry periods, changing habitats for fish and other organisms. In dry grasslands, people may also graze too many animals on the same land. When grasses are eaten faster than they regrow, bare soil is exposed to wind and rain. Continued soil loss can contribute to desertification, where land becomes drier and less able to support plants.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How did clearing trees lead to cloudier river water?

2 What change in the water cycle happens when roads, roofs, and parking lots replace fields?

3 How can a dam and canals affect the river downstream during dry periods?

4 What human action can contribute to desertification, and why?

3 YOUR TURN _____ Your own words

Write exactly three sentences about a human action not named in the passage that changes land or water. Describe the action and explain two impacts it could cause, including one impact on water flow, water quality, or erosion.

PART 1 • READ AND MARK

Underline each human action in the passage. Circle its stated impact, then write the same number by each action-and-impact pair. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did clearing trees lead to cloudier river water?	Without tree roots holding soil in place, rain washed loose soil downhill into the river as sediment.
2	What change in the water cycle happens when roads, roofs, and parking lots replace fields?	Less rain soaks into the ground, and more water runs quickly over pavement into storm drains and the river.
3	How can a dam and canals affect the river downstream during dry periods?	They can leave less water flowing downstream, which changes habitats for fish and other organisms.
4	What human action can contribute to desertification, and why?	Grazing too many animals can contribute because grasses are eaten faster than they regrow, exposing soil to wind and rain and leading to continued soil loss.

PART 3 • YOUR TURN (SAMPLE ANSWER)

A neighborhood drains a wetland to build a shopping center. Because the wetland no longer holds as much rainwater, more water can flow quickly into a nearby stream. That runoff can carry sediment into the stream and make its water cloudier.

Accept accurate action-and-impact links supported by the passage for Part 2. For Your Turn, accept any exactly three-sentence response that names a new human action and accurately explains two linked impacts, including a water-flow, water-quality, or erosion impact.