Follow the Water

How moving water shapes land

E.3.9 "Students will demonstrate an understanding of how the Earth's systems (i.e., geosphere, hydrosphere, atmosphere, and biosphere) interact in multiple ways to affect Earth's surface materials and processes..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two places that tell where water moves. Circle two places that show water changing soil or land.

From Hill to Lake

1. On a cloudy morning, rain falls on a rocky hill. Rain comes from clouds in the air, or atmosphere. Some drops soak into the ground. Other drops run downhill across soil and stone, which are part of the geosphere. The moving water is part of the hydrosphere. Tiny streams join and make a larger stream. The shape of the hill helps choose the water's path.

2. The stream flows past a patch of grass and then around a bend. Grass roots hold some soil in place. Where the stream moves fast around the outside of the bend, water carries loose soil away. Where it slows down on the inside, some soil settles. Over time, these changes can move the edge of the stream. Plants, part of the biosphere, help change how much soil washes away.

3. Farther downhill, the stream reaches a lake and slows down. It drops sand and mud it carried from the hill. Over many years, these bits can build up where the stream enters the lake. This new land is a delta. Fish may swim in the shallow water near it. Rain, rocks, water, and living things all have roles in this changing place.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does the shape of the hill affect where rainwater goes?

2. How can the stream take soil away in one part of the bend but leave soil in another part?

3. How does the stream make new land where it enters the lake?

4. How do grass roots change what happens when water flows past the grass?

3 YOUR TURN

Your own words

Imagine rain falling on a sloped school garden. Draw a model that labels the atmosphere, hydrosphere, geosphere, and biosphere, with arrows showing where water moves. Write two sentences explaining how the water may move soil and how plants may change what happens.

ANSWER KEY

Follow the Water

GRADE 3 · E.3.9

PART 1 · READ AND MARK

Underline two places that tell where water moves. Circle two places that show water changing soil or land. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does the shape of the hill affect where rainwater goes?	**The hill's slope guides rainwater downhill, where tiny streams join.**
2	How can the stream take soil away in one part of the bend but leave soil in another part?	**Fast water carries soil away from the outside of the bend. Slower water lets soil settle on the inside.**
3	How does the stream make new land where it enters the lake?	**The stream slows and drops sand and mud. Over many years, these bits build up into a delta.**
4	How do grass roots change what happens when water flows past the grass?	**Grass roots hold some soil in place, so less soil washes away.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Drawing: A cloud labeled atmosphere has an arrow pointing to falling rain labeled hydrosphere. Arrows lead down a sloped patch of soil labeled geosphere, past flowers labeled biosphere. Water runs down the slope and carries loose soil to the bottom. Flower roots hold some soil in place, so less soil washes away near the flowers.

Accept other correctly labeled models with arrows showing water's path. The explanation should connect moving water to soil movement and plants to a change in that movement.