

When Water Vanishes

Track how differences help living things respond to drought.

SC.5.L.15.1 "Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each change in the environment. Circle each difference between individuals, then number the outcomes: 1 for survive and reproduce, 2 for die, and 3 for move to a new location.

Life Along a Drying Stream

- ① Desert pupfish and cottonwood seedlings can live near a small desert stream. Even members of one kind are not exactly alike. Some pupfish can handle warmer, saltier water better than others. Some cottonwood seedlings grow roots deeper into the ground. These differences do not matter much when the stream is full, cool, and surrounded by wet soil.
- ② One summer, little rain falls for many weeks. The stream becomes a few warm pools, and the soil near the banks dries. Seedlings with shallow roots cannot reach enough water. Many of them die before making seeds. Seedlings with deeper roots reach moist soil below. They stay alive, grow, and later produce seeds that can grow into new cottonwood trees.
- ③ The shrinking pools also change life for the pupfish. Fish that tolerate the warmer, saltier water remain in the pools and reproduce. Other pupfish swim through a connected channel to a cooler spring. Fish that cannot tolerate the changed water and cannot reach another place may die. The population that remains has more young from fish able to survive those conditions.

2

ANSWER WITH EVIDENCE

Use the passage

1

What environmental changes happen when little rain falls?

2

How does root depth affect which cottonwood seedlings survive and reproduce?

3

What are three different outcomes for pupfish after the pools shrink?

4

Why might the remaining pupfish population have more young from fish that can survive warm, salty water?

3

YOUR TURN

Your own words

Create a new example for one kind of plant or animal. In both rows, name the same environmental change, then show how two different individual differences lead to different results.

ENVIRONMENTAL CHANGE	INDIVIDUAL DIFFERENCE	RESULT

PART 1 • READ AND MARK

Underline each change in the environment. Circle each difference between individuals, then number the outcomes: 1 for survive and reproduce, 2 for die, and 3 for move to a new location. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What environmental changes happen when little rain falls?	The stream shrinks into a few warm pools, the water becomes saltier, and the soil near the banks dries.
2	How does root depth affect which cottonwood seedlings survive and reproduce?	Seedlings with shallow roots cannot reach enough water and may die before making seeds. Seedlings with deeper roots reach moist soil, survive, grow, and produce seeds.
3	What are three different outcomes for pupfish after the pools shrink?	Some tolerate the warm, salty water and reproduce. Some move through a channel to a cooler spring. Some die if they cannot tolerate the water or reach another place.
4	Why might the remaining pupfish population have more young from fish that can survive warm, salty water?	Pupfish that tolerate the changed water remain alive and reproduce, while pupfish that die or move do not reproduce in the remaining pools.

PART 3 • YOUR TURN (SAMPLE ANSWER)

ENVIRONMENTAL CHANGE	INDIVIDUAL DIFFERENCE	RESULT
A long, cold winter begins.	One rabbit has thicker fur.	It survives, mates in spring, and has young.
A long, cold winter begins.	Another rabbit has thinner fur.	It dies before spring.

Accept accurate examples in which the same environmental change affects individuals differently because of a specific difference. Results should show survival and reproduction, death, or movement to another location.