Fur on the Lava

Trace how a population can change across generations.

3.4.a "populations may adapt over time;"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle the two fur colors, and underline the sentences that explain how one fur color can become more common over many generations.

Rock Pocket Mice

1. On a desert lava field, some rock pocket mice have dark fur, while others have light fur. Dark lava covers much of the ground. Owls hunt these mice by sight. A dark mouse can be harder to spot on dark lava. A light mouse may stand out more clearly for owls against the black rocks.

2. At first, both fur colors are found in the mouse population. Mice with dark fur that avoid owls more often may live long enough to have babies. Fur color can be passed from parents to young. Over many generations, more young mice may have dark fur because their parents had dark fur. The whole population slowly changes.

3. The lava field will not make one dark mouse turn light. Instead, changes happen in a population across many generations. If pale sand later covers the lava, light-furred mice may be harder for owls to see. More light-furred mice could survive and have young. Over time, light fur could become more common in that population.

2 ANSWER WITH EVIDENCE

Use the passage

1. What two kinds of fur are found in the rock pocket mouse population?

2. How can dark fur help a mouse living on dark lava?

3. How can dark fur become more common in the population over many generations?

4. If pale sand covers the lava, which fur color could become more common over time? Why?

3 YOUR TURN

Your own words

Create your own example of a population that may adapt over time. Write three sentences that name two versions of a trait, tell which version helps in its environment, and explain how that version could become more common over many generations.

ANSWER KEY

Fur on the Lava

GRADE 3 · 3.4.a

PART 1 · READ AND MARK

Circle the two fur colors, and underline the sentences that explain how one fur color can become more common over many generations. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What two kinds of fur are found in the rock pocket mouse population?	**Dark fur and light fur.**
2	How can dark fur help a mouse living on dark lava?	**Dark fur can make the mouse harder for owls to spot on the dark lava.**
3	How can dark fur become more common in the population over many generations?	**Dark-furred mice may avoid owls, survive, and have babies. Their young can inherit dark fur, so more mice may have dark fur over many generations.**
4	If pale sand covers the lava, which fur color could become more common over time? Why?	**Light fur could become more common because light-furred mice may be harder for owls to see on pale sand.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

A population of beetles has green and brown shells and lives on green leaves. Birds can spot brown beetles more easily, so more green beetles may survive and have young. Over many generations, green shells may become more common in the beetle population.

Accept answers that show variation in a population, a trait that helps some organisms survive or reproduce in an environment, and that the helpful inherited trait can become more common over generations. Do not accept an explanation that says one organism changes its own trait during its lifetime.