Spots That Matter

How differences among guppies can affect survival and mating

3-LS4-2 "Use evidence and reasoning to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. (SEP: 6; DCI: LS4.B..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline how the male guppies' spots differ. Circle one sentence about hunters and one about females to find evidence of how spots can affect survival and having young.

Guppies in a Rocky Stream

1. In a rocky stream, guppies dart between plants and stones. These small fish are all the same species, but they do not look exactly alike. Some male guppies have many bright orange spots. Others have fewer orange spots and look less bright. These differences can matter when a guppy must avoid a hungry fish or find a mate.

2. A larger fish hunts guppies by sight. Near dark stones, a male with fewer bright spots may be harder for the hunter to see. That male might escape while a bright male is caught. Staying alive gives the less bright male more time to find food and a mate. Spot color does not make any guppy safe from every danger.

3. Female guppies often choose males with bright orange spots as mates. A bright male that avoids hunters may be more likely to mate and have young than a male with fewer orange spots. Young guppies can inherit traits from their parents, though they may not look exactly like either parent. The same bright spots that help attract mates can also make a guppy easier for a hunter to see.

2 ANSWER WITH EVIDENCE

Use the passage

1. Near dark stones, how might having fewer bright spots help a male guppy survive? Use a detail from the passage.

2. How might bright orange spots help a male guppy have young? Use evidence from the passage.

3. Why might bright orange spots be both helpful and risky for a male guppy? Use two facts from the passage.

4. A male with fewer bright spots escapes a hunter. Does this prove he will have more young than a bright male? Explain using the passage.

3 YOUR TURN

Your own words

Imagine two mice of the same species living through a cold winter. One has thick fur, and one has thin fur. In two sentences, explain how fur could help one mouse survive and later have young. Use the winter and fur as evidence.

ANSWER KEY

Spots That Matter

GRADE 3 · 3-LS4-2

PART 1 · READ AND MARK

Underline how the male guppies' spots differ. Circle one sentence about hunters and one about females to find evidence of how spots can affect survival and having young. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Near dark stones, how might having fewer bright spots help a male guppy survive? Use a detail from the passage.	**A male with fewer bright spots may be harder for a hunting fish to see near dark stones, so he might escape.**
2	How might bright orange spots help a male guppy have young? Use evidence from the passage.	**Female guppies often choose males with bright orange spots, so a bright male that avoids hunters may be more likely to mate and have young.**
3	Why might bright orange spots be both helpful and risky for a male guppy? Use two facts from the passage.	**Bright spots may help a male attract a mate, but they may also make him easier for a hunter to see.**
4	A male with fewer bright spots escapes a hunter. Does this prove he will have more young than a bright male? Explain using the passage.	**No. Escaping gives him more time to find a mate, but females often choose males with bright orange spots.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The mouse with thick fur may stay warmer in the cold winter than the mouse with thin fur. Staying warm may help it survive long enough to have young.

Accept answers that connect a trait to a possible advantage and support the connection with the given details. Students should describe an advantage as possible, not certain.