

Frog Difference Detectives

Use evidence to link frog variations with survival, mating, and offspring.

3-LS4-2 "Use evidence 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..."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Circle each variation in a frog characteristic. Underline each observation that shows an advantage, then label it S for survival, M for finding a mate, or O for producing offspring.

Leopard Frogs at Willow Pond

- ① At Willow Pond, leopard frogs are the same species, yet they are not exactly alike. Some have darker spots, while others have lighter spots. Male frogs also make calls that differ in length. These differences are variations in characteristics. A variation does not make one frog a different species. It may matter when frogs hide from predators or when they try to find a mate.
- ② Scientists watched the frogs near pale sand and dark mud. A frog with spots that matched the ground was harder for a heron to see. Herons caught more frogs whose spots stood out against the ground. This is evidence that matching spots can give a frog a survival advantage. Frogs that avoid being eaten have more chances to live long enough to reproduce.
- ③ During spring, female leopard frogs moved toward some calling males more often than others. In one study area, males with longer calls were visited by females more often. A male that is visited more often may have a better chance to mate. After mating, females lay eggs. Therefore, a call that attracts females may give a male an advantage in producing offspring, although it does not guarantee offspring.

2 ANSWER WITH EVIDENCE Use the passage

1 What are two variations among the leopard frogs in the passage?

2 Explain how spots that match the ground can help a frog survive. Use evidence from the passage.

3 What observation is evidence that longer calls may help a male frog find a mate? Explain the cause and effect.

4 Why does the passage say a longer call may help a frog produce offspring but does not guarantee offspring?

3 YOUR TURN Your own words

Frog A has spots that match dark mud. Frog B makes a longer call. Write 2 or 3 sentences that explain one advantage each frog may have, using at least two facts from the passage.

PART 1 • READ AND MARK

Circle each variation in a frog characteristic. Underline each observation that shows an advantage, then label it S for survival, M for finding a mate, or O for producing offspring. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What are two variations among the leopard frogs in the passage?	Spot color can be darker or lighter, and male calls can differ in length.
2	Explain how spots that match the ground can help a frog survive. Use evidence from the passage.	A matching frog is harder for a heron to see. Herons caught more frogs whose spots stood out, so matching spots may help a frog avoid being eaten.
3	What observation is evidence that longer calls may help a male frog find a mate? Explain the cause and effect.	Females visited males with longer calls more often. More visits may give a male a better chance to mate.
4	Why does the passage say a longer call may help a frog produce offspring but does not guarantee offspring?	A female visiting a male gives him a chance to mate, but it does not guarantee mating or that offspring will be produced.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Frog A's spots match the dark mud, so a heron may have trouble seeing it. This may help Frog A live to reproduce, while Frog B's longer call may attract females more often and improve its chance to mate and produce offspring.

Accept explanations that connect matching spots to being harder for herons to see and longer calls to more female visits. Students should use may or another word showing that an advantage does not guarantee survival, mating, or offspring.