Pondside Life Cycles

Read, mark, and model how living things change.

L.4.2 "Students will demonstrate an understanding of life cycles, including familiar plants and animals (e.g., reptiles, amphibians, or birds). Compare and contrast life cycles of familiar plants and animals..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Number the stages in each life cycle, starting with 1 at the egg or seed. Underline one way the cycles are alike, and circle one way they differ.

Two Lives by the Pond

1. On a rainy spring night, a female frog lays eggs in a pond. Tiny tadpoles hatch from the eggs. A tadpole swims with a tail and breathes through gills. As it grows, legs appear, lungs develop, and its tail shrinks. The young frog can leave the water. When it becomes an adult, it may reproduce, and a female can lay eggs that begin another cycle.

2. Beside the pond, a bean plant begins as a seed in the soil. With water, air, and warmth, a root and shoot grow out. The small sprout grows leaves and becomes a mature plant. Flowers on the plant can develop into pods that hold new seeds. A seed may fall to the ground and grow into another bean plant. Unlike a tadpole, a sprout does not grow legs.

3. Both stories can be shown as life cycle models. Arrows connect each stage to the next, with a final arrow pointing to new eggs or seeds. The frog and bean plant begin life, grow, and can produce new living things. Each eventually dies, but its young may continue the cycle. Their paths differ: the frog changes from a swimming tadpole to a land animal, while the plant stays rooted in one place.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does each life cycle begin? Name the frog's first stage and the bean plant's first stage.

2. How does a tadpole change as it grows? How is that different from the way a bean sprout grows?

3. What does each mature organism produce that can begin another life cycle?

4. In a model of each cycle, why should an arrow lead from the adult stage toward new eggs or seeds?

3 YOUR TURN

Your own words

Choose a bird, draw and label four stages of its life cycle in the box, and use arrows to show how the cycle repeats. Write one sentence telling how its cycle is like a frog's and one sentence telling how it differs.

ANSWER KEY

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GRADE 4 · L.4.2

PART 1 · READ AND MARK

Number the stages in each life cycle, starting with 1 at the egg or seed. Underline one way the cycles are alike, and circle one way they differ. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does each life cycle begin? Name the frog's first stage and the bean plant's first stage.	**The frog begins as an egg, and the bean plant begins as a seed.**
2	How does a tadpole change as it grows? How is that different from the way a bean sprout grows?	**A tadpole grows legs and lungs and loses much of its tail. A bean sprout grows leaves and stays rooted in one place.**
3	What does each mature organism produce that can begin another life cycle?	**A female adult frog lays eggs. A mature bean plant produces pods that hold seeds.**
4	In a model of each cycle, why should an arrow lead from the adult stage toward new eggs or seeds?	**Adults can reproduce, so their eggs or seeds can begin the next generation.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Drawing labels and arrows: egg → chick → young chicken → adult chicken → egg. Both chickens and frogs begin as eggs and grow into adults that can reproduce. A chicken hatches as a chick, while a frog hatches as a tadpole.

Accept accurate bird cycles with four stages in order and an arrow showing the return to eggs. Comparisons should name a true similarity and a true difference from the frog's cycle.