Life Loops

Model how three organisms grow and begin new cycles

L.4.2.2 "Develop and use models to explain the unique and diverse life cycles of organisms other than humans (e.g., flowering plants, frogs, or butterflies) including commonalities (e.g., birth, growth, reproduction, or death)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each change in an organism's form, and circle the words that show how its life cycle starts again.

Three Ways Life Begins Again

1. On a milkweed leaf, a monarch butterfly begins life inside an egg. A caterpillar hatches and eats leaves as it grows. Next, it forms a hard case called a chrysalis. Inside, its body changes. An adult butterfly comes out with wings. Adult butterflies can mate, and females lay eggs on milkweed. Those eggs begin new cycles. Like other living things, each monarch eventually dies.

2. In a pond, a frog begins as an egg in a jellylike cluster. A tadpole hatches with a tail and gills for breathing in water. As it grows, it develops legs and lungs, and its tail gets shorter. The young frog can leave the water. Adult female frogs return to water to lay eggs, starting new cycles. Frogs, too, eventually die.

3. A sunflower begins as a seed rather than an egg. When the seed sprouts, roots grow down and a stem grows up. The plant grows leaves and then a flower. After pollen reaches the flower, seeds can form. Some seeds fall and sprout into new sunflowers. The parent sunflower later dies. All three life cycles include a beginning, growth, reproduction, and death, but their stages look different.

2 ANSWER WITH EVIDENCE

Use the passage

1. Write an arrow model of the monarch's life cycle, beginning with an egg. Show how the cycle starts again.

2. A frog model shows egg → tadpole → young frog → adult frog. What changes as the tadpole becomes a young frog?

3. Complete this sunflower model: seed → sprout → grown plant → ? → new seeds. What happens at the missing stage that helps new seeds form?

4. Compare the butterfly and frog life cycle models. Name one stage they share and one way their growing stages differ.

3 YOUR TURN

Your own words

Draw a labeled arrow model for a frog in one panel and a sunflower in the other, showing at least four stages and how each new cycle begins. Below the panels, write two sentences explaining one event both share and one way their life cycles differ.

ANSWER KEY

Life Loops

GRADE 4 · L.4.2.2

PART 1 · READ AND MARK

Underline each change in an organism's form, and circle the words that show how its life cycle starts again. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Write an arrow model of the monarch's life cycle, beginning with an egg. Show how the cycle starts again.	**Egg → caterpillar → chrysalis → adult butterfly → new eggs, which begin the cycle again.**
2	A frog model shows egg → tadpole → young frog → adult frog. What changes as the tadpole becomes a young frog?	**It develops legs and lungs, and its tail gets shorter.**
3	Complete this sunflower model: seed → sprout → grown plant → ? → new seeds. What happens at the missing stage that helps new seeds form?	**The missing stage is a flower. After pollen reaches the flower, seeds can form.**
4	Compare the butterfly and frog life cycle models. Name one stage they share and one way their growing stages differ.	**Both begin as eggs. A butterfly grows as a caterpillar and changes inside a chrysalis, while a frog grows as a tadpole and develops legs and lungs.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Frog panel: egg → tadpole → young frog → adult frog → new eggs (back to egg). Sunflower panel: seed → sprout → leafy plant → flower → new seeds (back to seed). Both organisms grow and produce the beginnings of new life cycles. A frog begins as an egg and grows into a tadpole, while a sunflower begins as a seed and grows into a plant with a flower.

Accept models that show the stages in the correct order and connect reproduction to the start of a new cycle. For the comparison, accept any accurate shared event and difference supported by the passage.