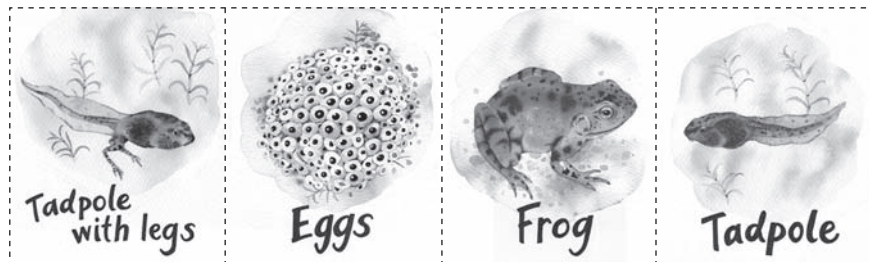
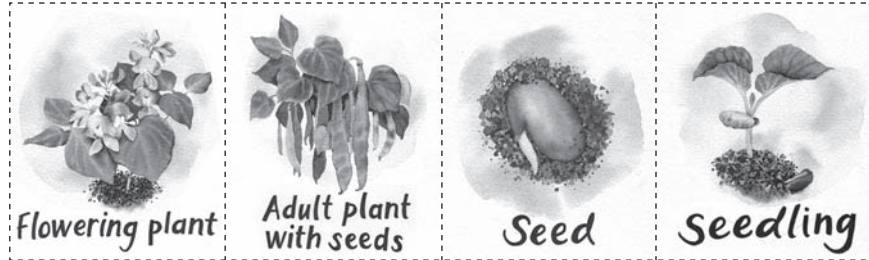


Life Cycles Sequencing Cards

Directions: Cut out the pictures below. Arrange them so they show the life cycle from egg (or seed) to adult. Glue them on a sheet of paper.

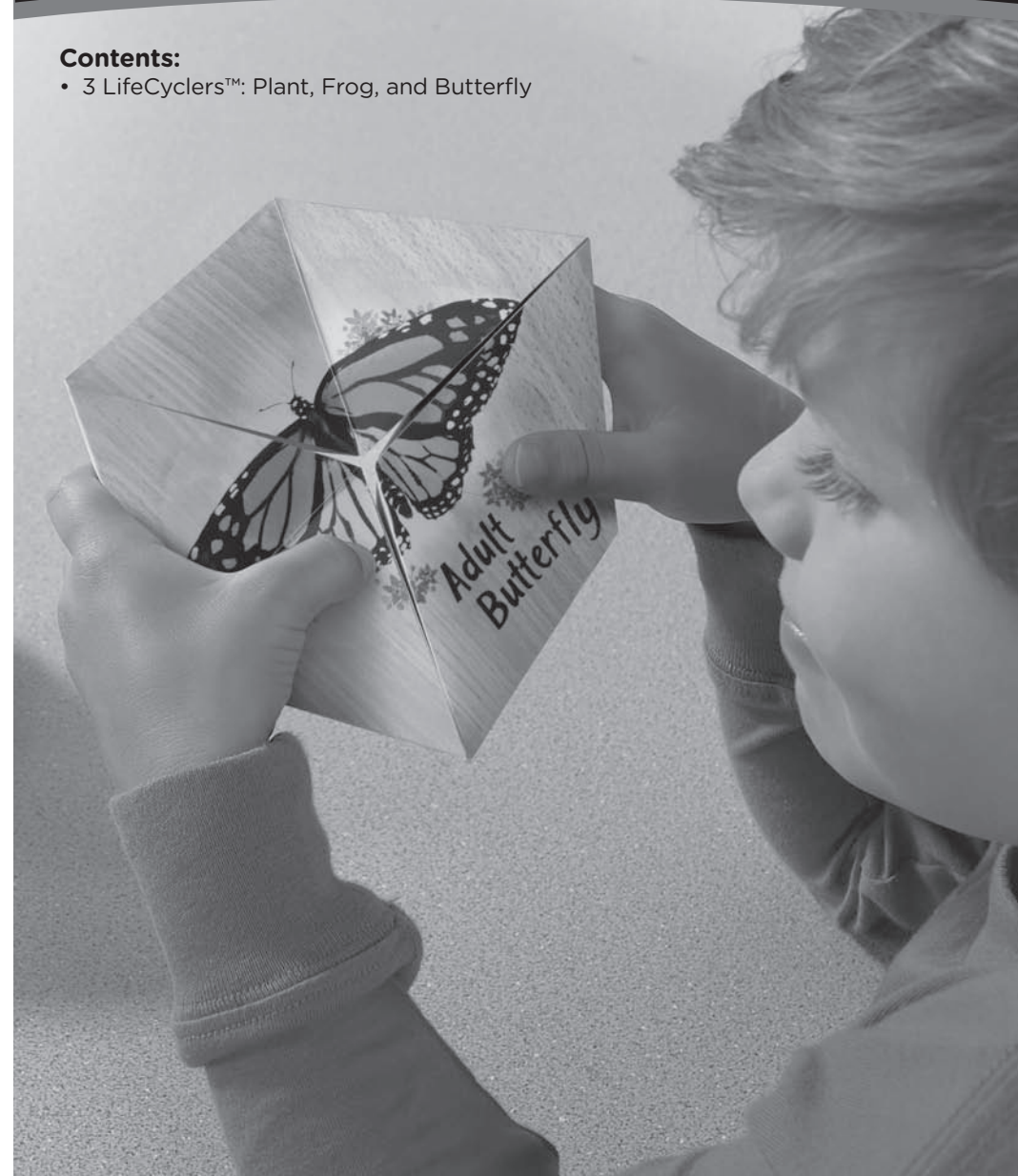


LifeCyclers™

Plant, Frog, and Butterfly

Contents:

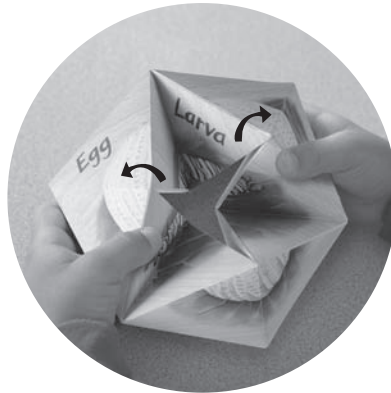
- 3 LifeCyclers™: Plant, Frog, and Butterfly



LifeCyclers™ are a hands-on way for students to literally see how life cycles...cycle!

To Use:

1. Grasp a LifeCycler in both hands.
2. Use your thumbs to pull outward while your fingers push up from underneath to change the image. Note: If you do not see a complete picture, turn the LifeCycler over.
3. Repeat this motion and you will see the LifeCycler rotate through the life cycle!



As students use LifeCyclers, you may wish to explain each life cycle stage. Then, put them at a center for students to explore. Place copies of the reproducible (along with scissors) at the center (see page 4) for students to practice putting life cycles in order.

Bean Plant Life Cycle

seeds The life of a bean plant begins as a seed. The seeds are enclosed in a pod. Each seed contains an *embryo*, which is a tiny plant. The outer shell of the seed is called the *seed coat*. When a seed is placed in moist soil, a root breaks through the seed coat. This is called *germination*.

seedling A young plant is called a seedling. As the roots grow down, a stem grows up. The seed coat breaks open and falls off. Two leaves open first. As the seedling continues to grow, more leaves form.

flowering plant When the bean plant is big enough, it will form flowers. Each flower contains an egg. Bees and other insects visit the flowers, spreading pollen from one flower to the next. This pollen fertilizes the egg.

adult plant with seeds The fertilized eggs develop into seeds. In a bean plant, the seeds are enclosed in pods. The entire structure is called a *bean*. Beans grow from the flowers. People and other animals eat beans. Beans that are not eaten eventually dry out. The dry pods pop open, spilling the seeds. The cycle begins again.

Frog Life Cycle

eggs The life of a frog begins as an egg. Most frogs lay their eggs in water. These eggs are called *spawn*. Adult female frogs often lay hundreds or thousands of eggs at a time. In many frog species, the eggs are fertilized as they are laid.

tadpole Tadpoles hatch from frog eggs. Tadpoles live underwater and use their long tails to swim. Like fish, they breathe through gills.

tadpole with legs As tadpoles grow, they develop legs. Their tails become shorter. Their gills disappear as they develop lungs in order to breathe on land. The tadpoles metamorphose into *froglets* (young frogs). The froglets leave the water to live on land.

adult frog The tail has completely disappeared in an adult frog. Adult frogs mate in order to reproduce. The female frog lays eggs. The cycle begins again.

Butterfly Life Cycle

egg The life of a butterfly begins with an egg. An adult female butterfly lays many eggs. The eggs are laid on leaves, which become food for the larvae when they hatch.

larva A butterfly larva is called a *caterpillar*. The caterpillar hatches from the egg. It eats almost constantly in order to grow. The caterpillar *moults* (sheds its skin) as it grows.

pupa A butterfly pupa is also called a *chrysalis*. It is encased in a hard covering and hangs upside down. Inside, wings and jointed legs are forming. The entire body is undergoing a transformation into an adult. These changes are called *metamorphosis*.

adult butterfly A full-grown adult butterfly emerges from the chrysalis. Adult butterflies mate in order to reproduce. After mating, the female butterfly lays eggs. The cycle begins again.