CURIOSITY AT HOME

MAKE YOUR OWN INSECT LIFE CYCLE

How can a caterpillar and a butterfly look so different, even though they're the same animal? Some insect species undergo a process called metamorphosis, where their shapes change dramatically between the young and adult phases of their lives. In this project, print and color an illustration of an insect's life cycle to learn more about metamorphosis.

MATERIALS

- Life cycle cover sheet (included below)
- Insect life cycle sheets (included below)
- Crayons or markers
- Scissors
- Brad (brass fastener)
- Science notebook or paper
- Something to write with

PROCEDURE

- Print out a cover sheet and one of the three (butterfly, ladybug, or bee) life cycle sheets.
- Color both of your sheets.
- Cut along the solid outer line of the circles.
- With both circles facing up, place the cover circle on top of the insect life cycle circle.
- Use a brad to punch a hole through the center of the circles and to connect them.
- Rotate the cover sheet around to view the various stages of an insect's life cycle.

WHAT'S HAPPENING?

Animals grow and change over the course of their lives. Each animal in a species follows the same pattern of growth and development. When an insect like a bee, butterfly, or ladybug changes its shape over the course of its life, it is said to go through metamorphosis. One advantage of going through metamorphosis is that the young larval stage and the adult stage do not need to compete for food. For example, a caterpillar eats leaves, but after undergoing metamorphosis into a butterfly, it will drink nectar instead.

EXPLORE MORE

There are two types of metamorphosis that an insect can go through—complete metamorphosis and incomplete metamorphosis. Complete metamorphosis means that an insect starts out as a larva, before going into a pupa and coming out looking completely different as an adult. Bees, butterflies, and ladybugs all undergo complete metamorphosis. Incomplete metamorphosis is when the young of an insect change to take on the adult form without an intermediate pupa stage.

Choose an insect that goes through incomplete metamorphosis to make a life cycle wheel for. Some examples include dragonflies and grasshoppers. How many phases did you put on this wheel?

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LIFE CYCLE COVER SHEET

INSECT

Life Cycle

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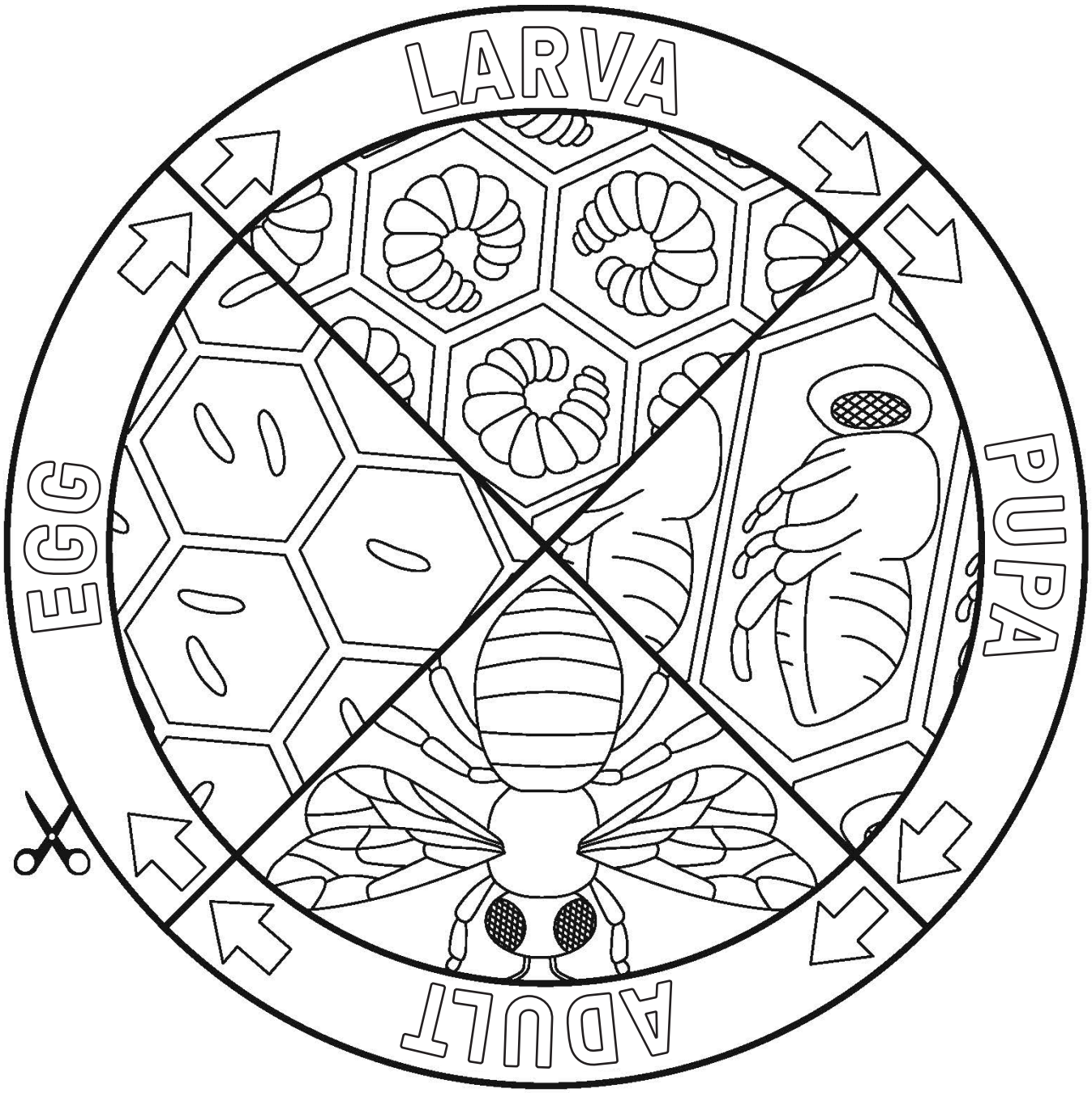
BEE LIFE CYCLE



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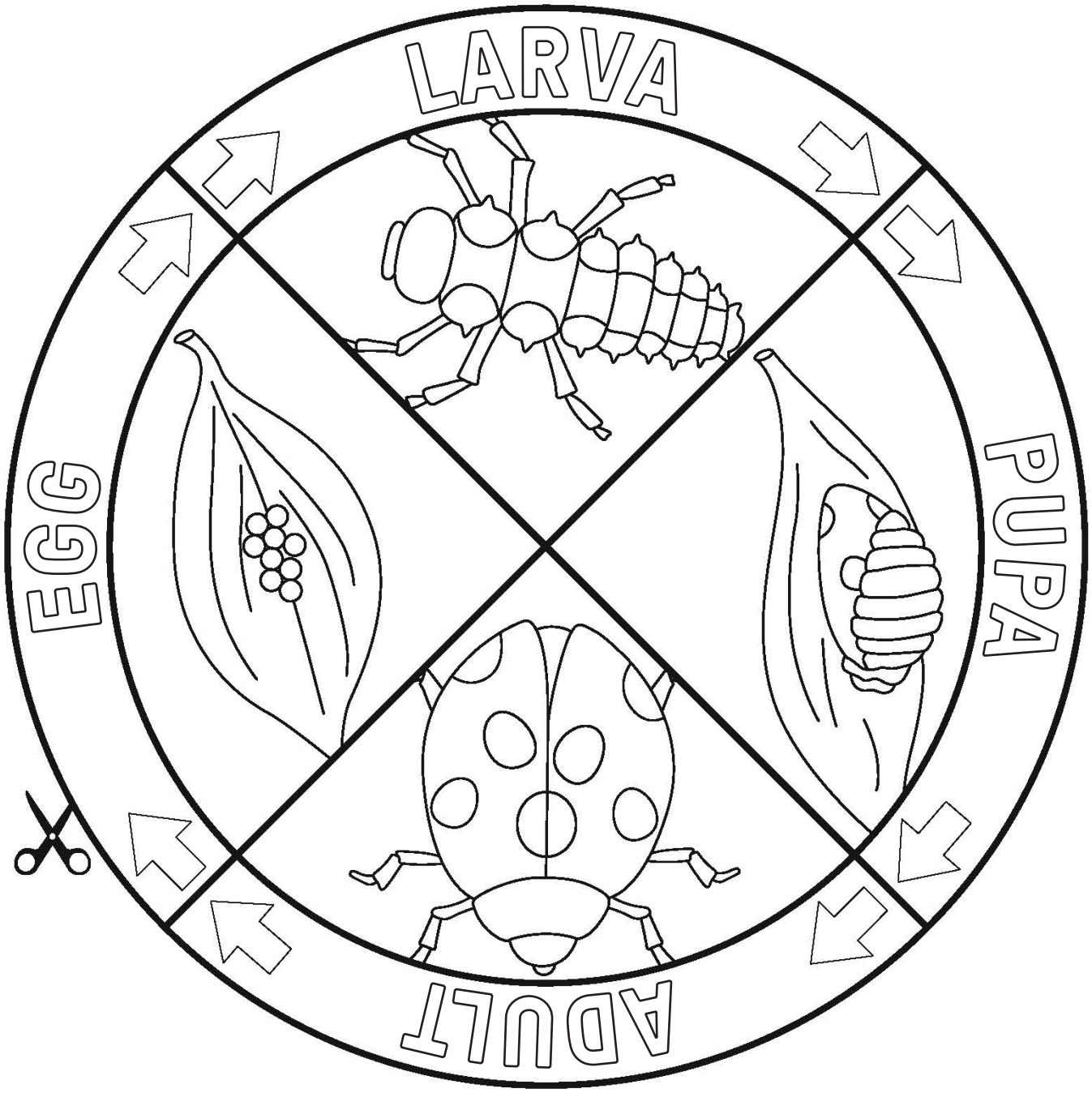
LADYBUG LIFE CYCLE



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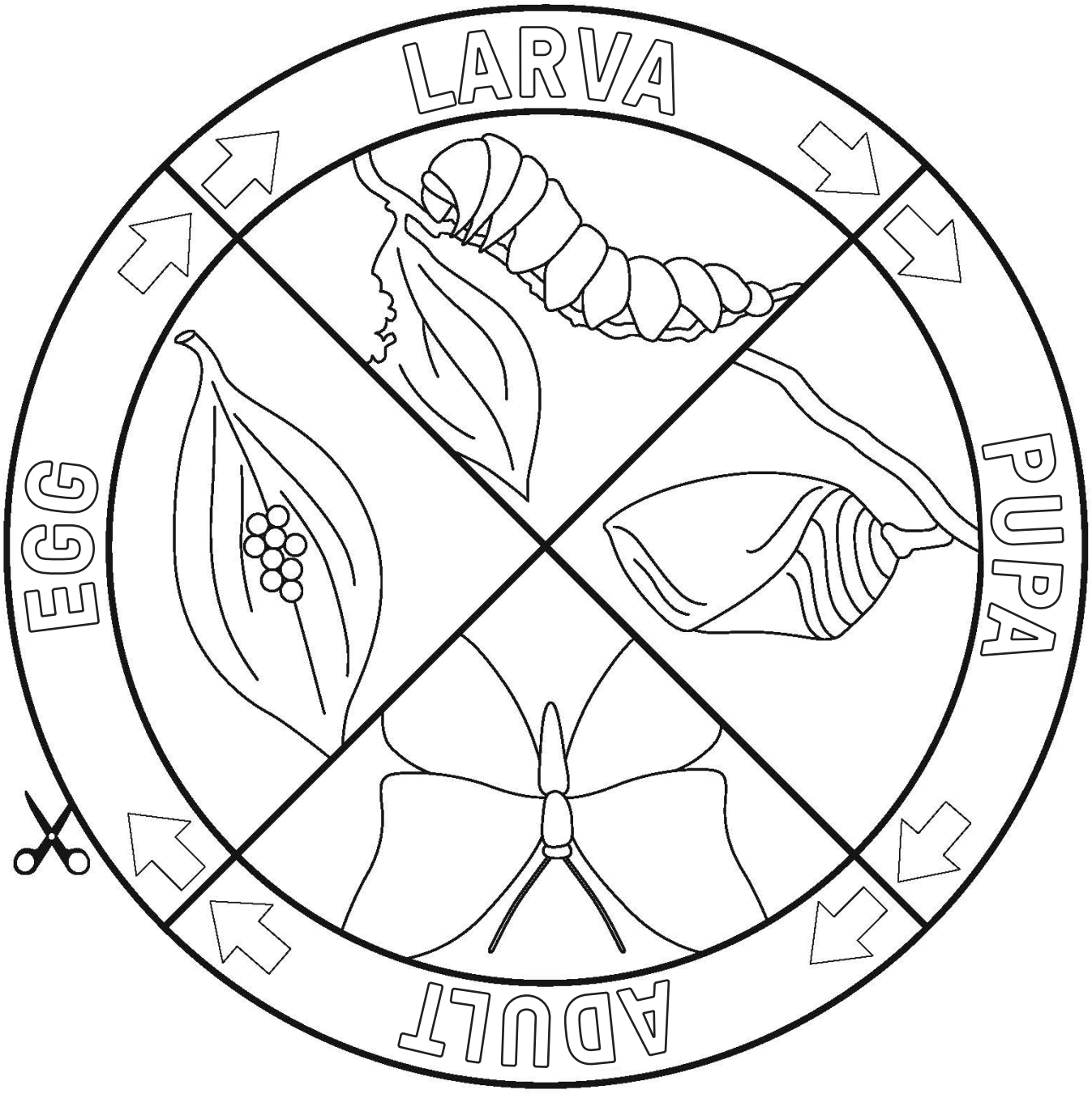
BUTTERFLY LIFE CYCLE



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K–2 GRADE EXPLORATION

- There's a lot that's the same and a lot that's different between a larva and its adult stage. One way to look at the similarities and differences is with something called a table. Draw the table below in your science journal. On one side of the table, write or draw things that you notice about the larval insect. On the other side, write or draw things that are true about the adult insect. Make sure to record things that are the same in both columns.

Larva	Adult

- Only some creatures go through metamorphosis, but all animals grow and change over their lives. Choose an animal you've seen the baby of that does not go through metamorphosis: for example, a kitten, a puppy, or a baby human. Make a table comparing the baby of this species to the adult. What's the same and what's different?

Baby	Adult

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