

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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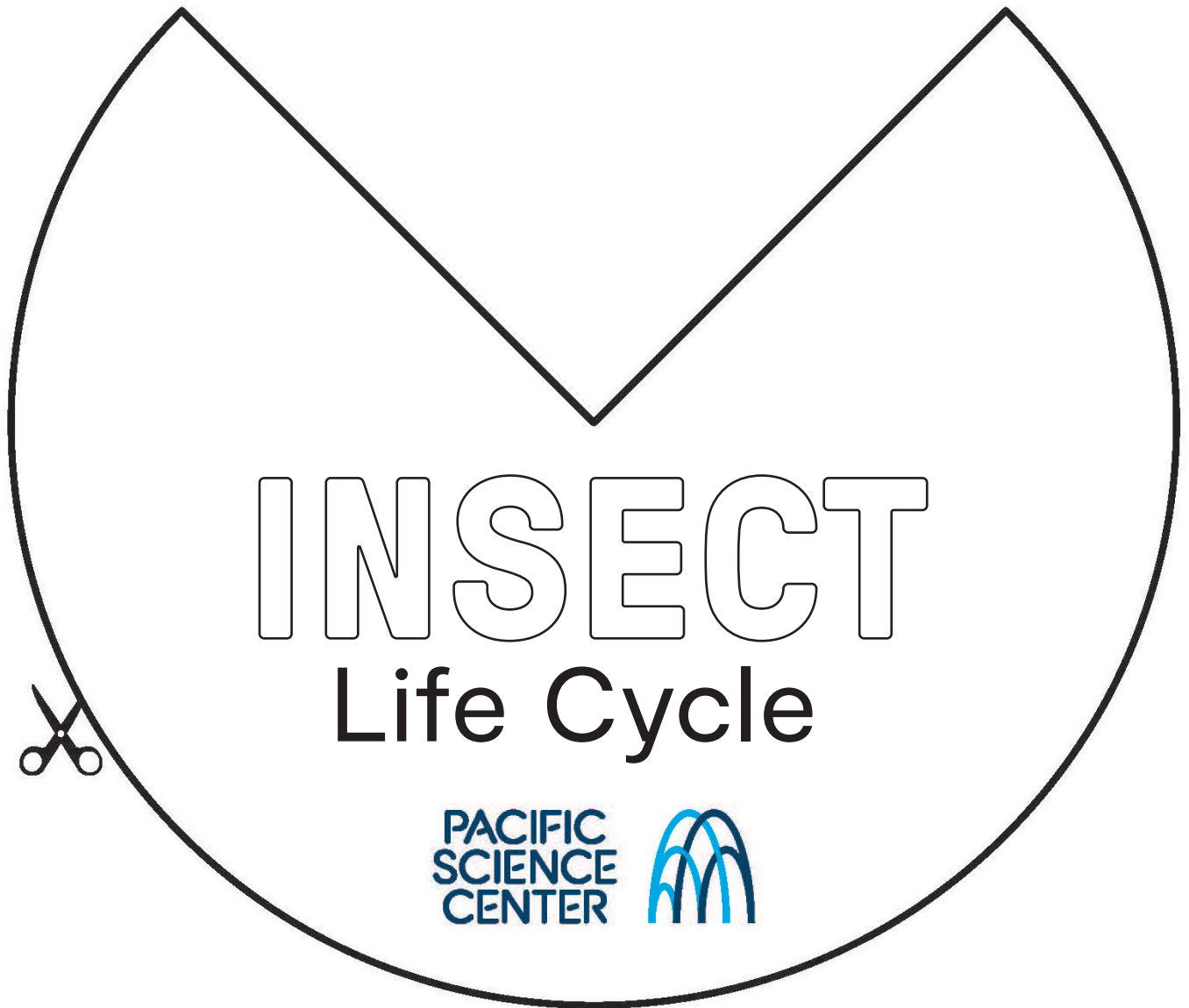


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LIFE CYCLE COVER SHEET



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BEE LIFE CYCLE



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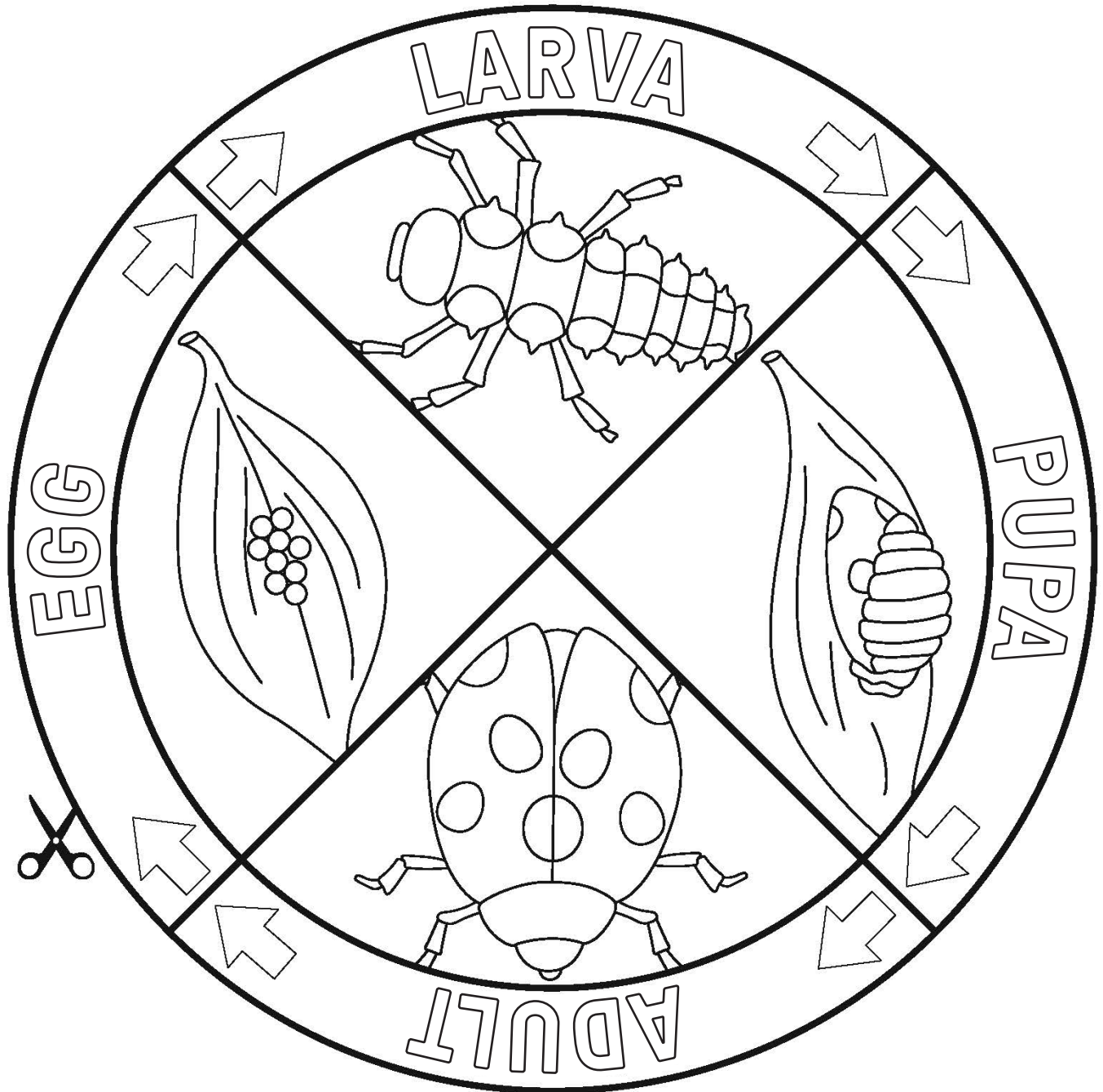


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LADYBUG LIFE CYCLE



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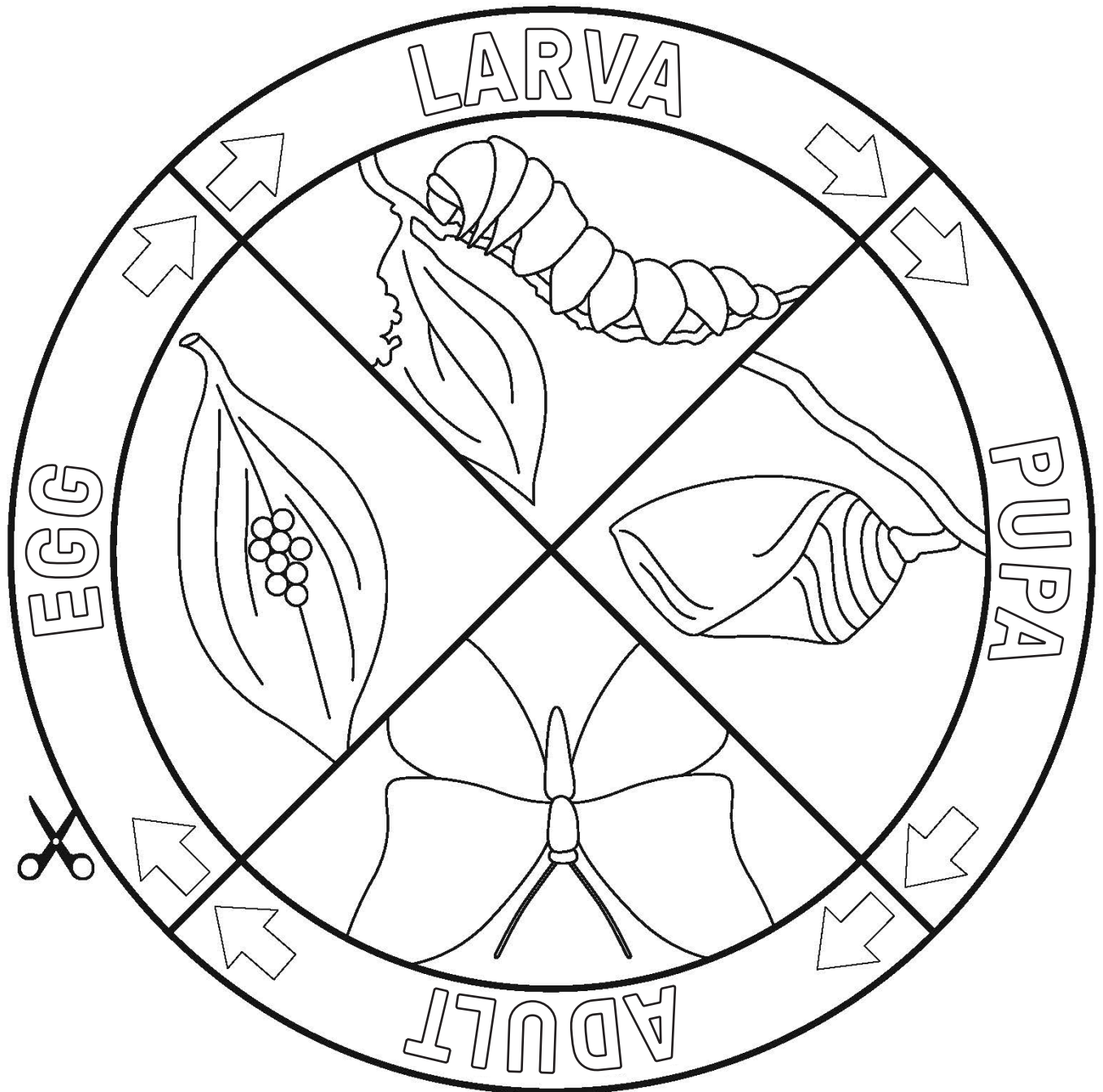


CURIOSITY AT HOME

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BUTTERFLY LIFE CYCLE



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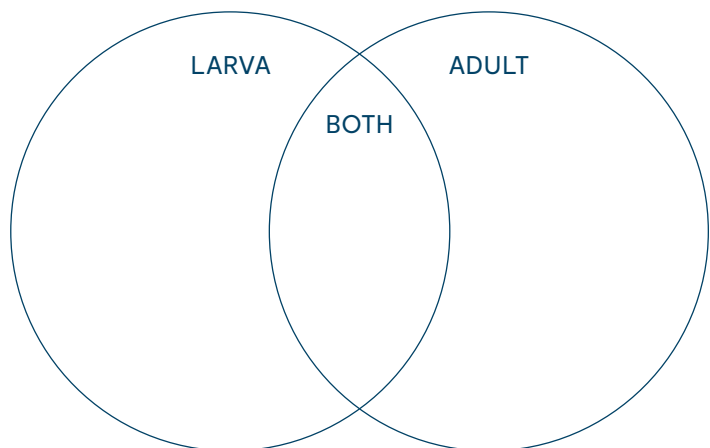
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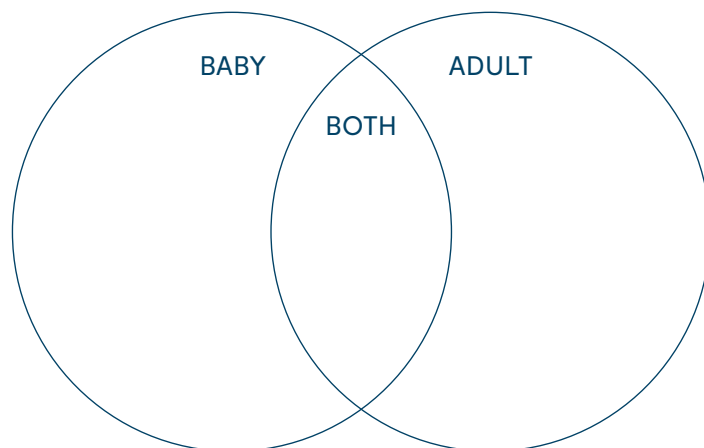
3–5 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- 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 **Venn diagram**. In a Venn diagram, two circles represent two things or ideas. Where the circles do not overlap, you write the things that are different between the two, and where the circles do overlap, you write the things that are the same.
- Copy the Venn diagram below into your science notebook. Compare the larval stage of the insect you made a life cycle for against the adult stage. What's the same and what's different? Make sure to label what insect the diagram is for.



- 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 Venn diagram in your science notebook comparing the baby of this species to the adult. Make sure to label what species you're talking about.



- Think about the life cycles of the two creatures you investigated. What things in their life cycles are different, and most importantly, what's the same in all the life cycles you looked at today?



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