



Grades 1-2

Butterflies and Other Insects

Master Gardeners

The University of California Cooperative Extension (UCCE) Master Gardener Program (MGP) is an educational program designed to teach and effectively extend information to address home gardening and non-commercial horticulture needs in California.

UCCE is the outreach arm of UC's division of Agriculture and Natural Resources (ANR). Master Gardener volunteers (MG volunteers) promote the application of basic environmentally appropriate horticultural practices through UCCE-organized educational programs that transfer research-based knowledge and information.



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Learning Goals

- Learn about the parts of butterflies and other insects.
- Learn how plants and insects, like butterflies, help each other.
- Learn about the lifecycle of butterflies.





Butterflies and Other Insects

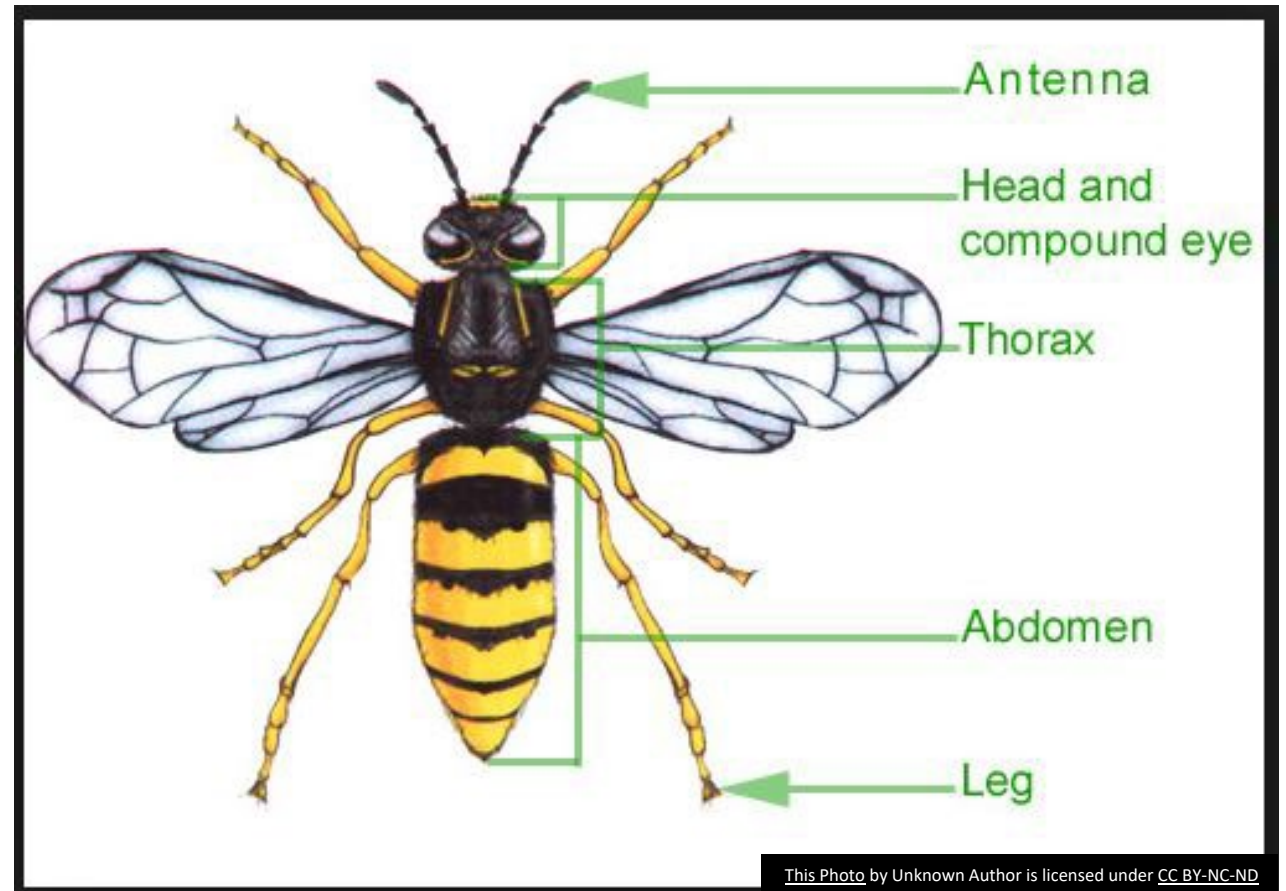
There are about one million different kinds of insects.

All insects all have some things in common.

What insects do you see in the pictures?

Insect Body Parts

- **All Insects** have:
 - Three body parts
 - Head
 - Thorax
 - Abdomen
 - Six legs
 - Two antennae
- **Some insects** have wings.



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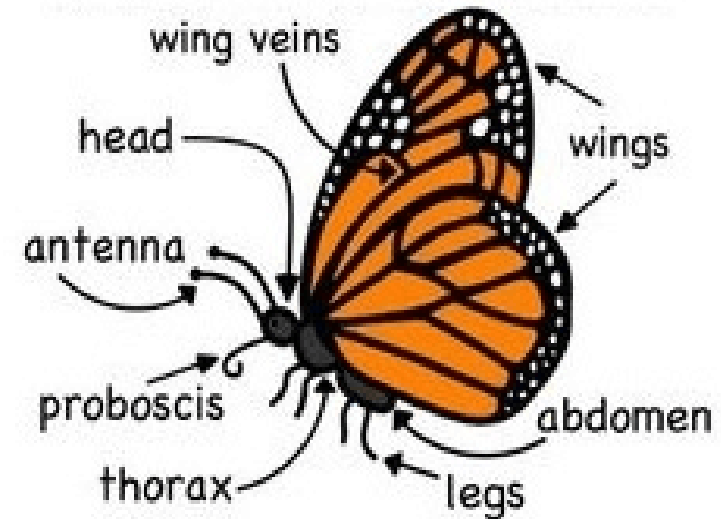
Bee

Butterfly Body Parts

- Butterflies have the same parts as all insects BUT
- Butterflies also have 2 pairs of wings.
 - Wings are different colors for different types of butterflies.



Monarch Butterfly Diagram



Credit: The Joyful Learner

Where Do Insects Live?



Japanese Beetle



Lady Beetle



Honeybees



Butterflies



Ants

- Honeybees live in beehives where they make honey.
- Butterflies sleep on plants.
- Japanese and lady beetles live where they eat, on leaves.
- Many ants live in ant hills in the ground, called colonies.

What Do Insects Eat?

- Some insects eat leaves, roots and other plant parts which can harm a plant.
- Some insects drink plant nectar (sugar created by the plant).
- Some insects eat other insects.
- Some don't eat anything.
- Adult butterflies drink water, nectar and fruit juice.



What Do Beetles Eat?

- Lady beetles eat aphids and other insects that eat plants.
- Japanese beetles feed on about 300 types of plants.
 - Mostly blossoms, fruit and leaves.



What Do Honeybees Eat?

- Bees eat pollen and nectar.
 - Bees get yellow grainy pollen from flowers.
 - Bees get sweet nectar from flowers.
- Bees take nectar and pollen home to the hive to feed everyone.



What Do Ants Eat?

- Ants eat
 - Nectar from flowers
 - Sap from plants
 - Seeds
 - Other insects
 - Milk of aphids



How Do Butterflies and Plants Help Each Other?

- Adult butterflies drink nectar and fruit juice from plants.
- Some butterflies take pollen from plants and leave it where it is needed to help grow fruits and vegetables.

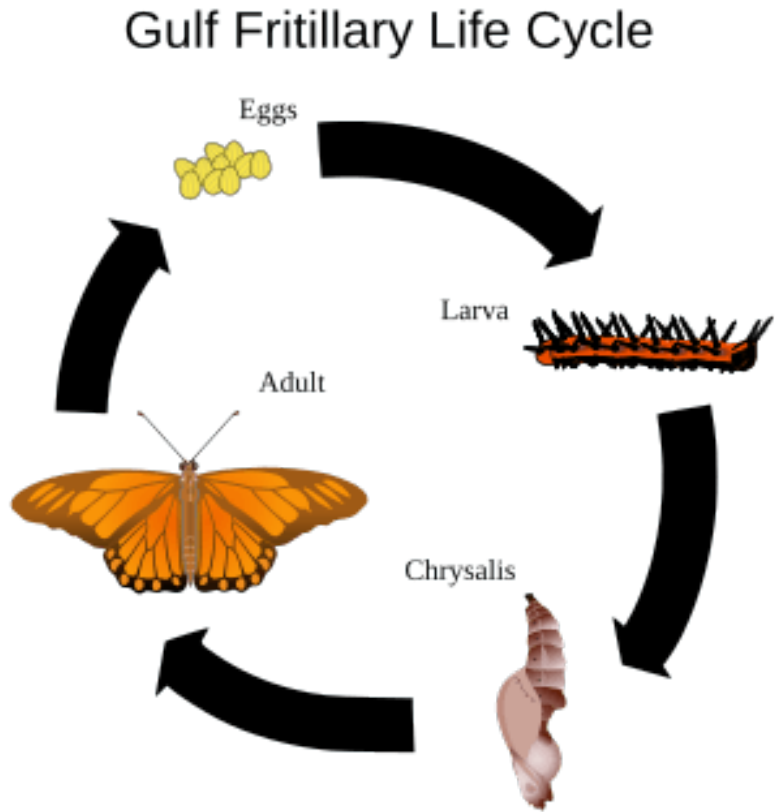


Other Insects Help Plants

- Many other insects also spread pollen to plants so they can grow fruits and vegetables, including:
 - Bees
 - Wasps
 - Hornets
 - Flies
 - And more



Butterfly Cycle of Life



- Butterflies go through several stages of life:
 - Eggs
 - Larva
 - Chrysalis
 - Adult
- The pictures shows the life cycle of a Gulf Fritillary butterfly.

Video: All the Butterflies Around Us

- This video describes the life cycle of a butterfly:
- [All the Butterflies Around Us](#)





Review

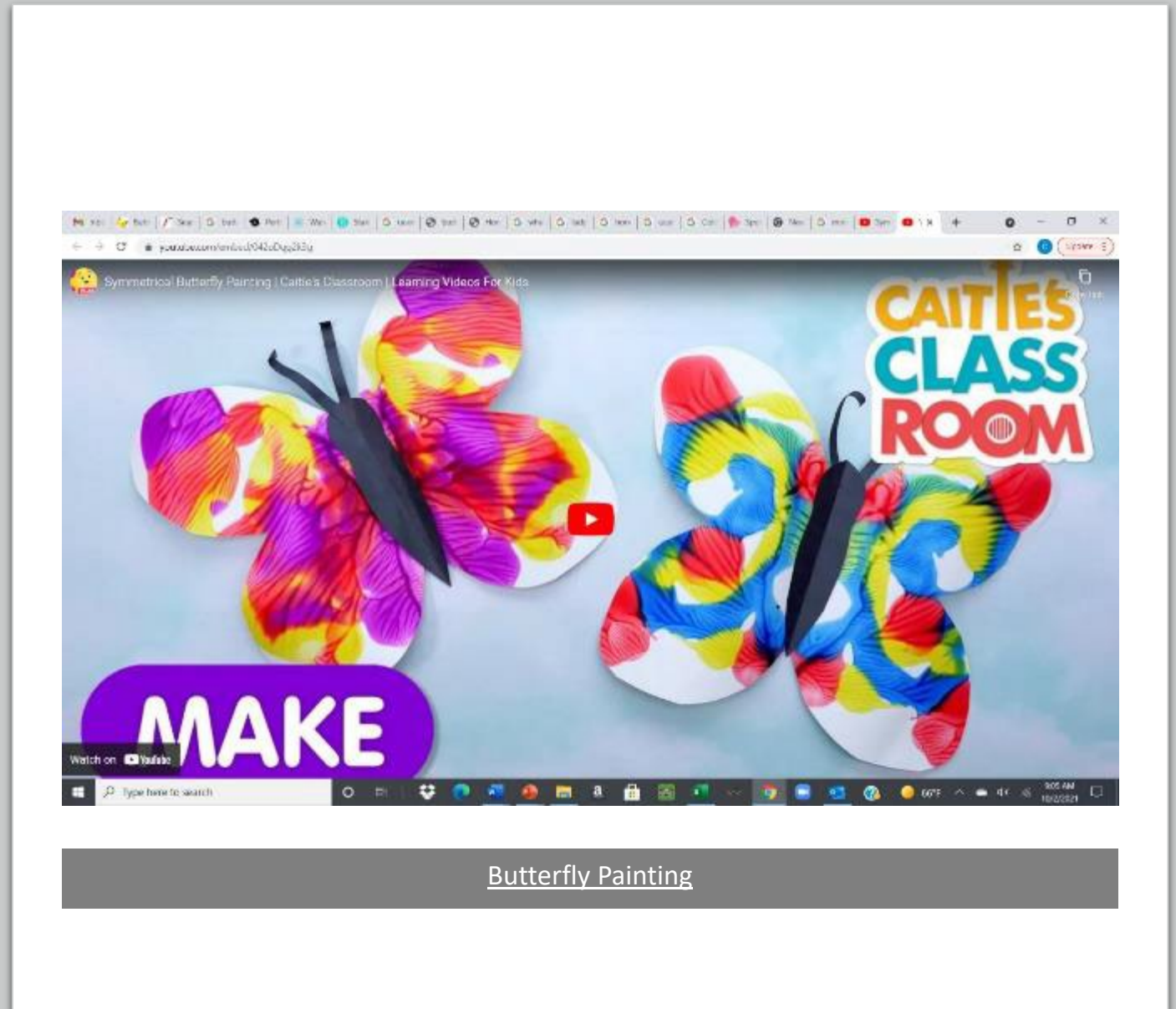
- Name three body parts that all insects have.
- How many pairs of wings does a butterfly have?
- What do adult butterflies drink?
- What do other insects eat?
- Do some insects harm plants?
- What do butterflies and other insects spread on plants that helps vegetables and fruits grow?
- Name one of the four stages of a butterfly's life?

Application: Butterflies Are Colorful!

- **Materials**

- Heavy white paper
- Black construction paper
- Paints in squeeze bottles
- Pencil
- Glue
- Scissors (Use with adult's help)

- Click on [Butterfly Painting](#) for instructions.



Extension: Pollinators

- Insects are not the only animals that spread pollen to flowers to help grow fruits and vegetables. Name the animals, including some insects, in this picture of pollinators.



Pollinators spread pollen on plants to help fruits and vegetables grow.

Next Generation Science Standards

First Grade

1st Grade

LS1.A: Structure and Function

All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. (1-LS1-1)

LS1.B: Growth and Development of Organisms

Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)

LS1.D: Information Processing

Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. ...(1-LS1-1)

Next Generation Science Standards

Second Grade

2nd Grade

LS4.D: Biodiversity and Humans

There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

LS2.A: Interdependent Relationships in Ecosystems

Plants depend on animals for pollination or to move their seeds around. (2-LS2-2)

Resources

- California Master Gardener Handbook, Dennis Pittenger, ed., UNANR, 2005.
- Join the Pollen Nation, UCANR
[https://ucanr.edu/sites/PollenNation/Meet The Pollinators/Butterflies/](https://ucanr.edu/sites/PollenNation/Meet%20The%20Pollinators/Butterflies/)
- Learn About Nature, The Butterfly Site, www.thebutterflysite.com
- North American Butterfly Association, <https://www.naba.org/qanda.html>
- Japanese Beetle Repeatedly Eradicated from California, UCANR,
<https://www2.ipm.ucanr.edu/Invasive-and-Exotic-Pests/Japanese-Beetle/>
- National Geographic Kids,
<https://kids.nationalgeographic.com/animals/invertebrates/facts/ladybug>
- National Wildlife Foundation, <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Invertebrates/Bees>

Resources (Continued)

- National Geographic, <https://www.nationalgeographic.com/animals/invertebrates/facts/ants>
- Video: All the Butterflies Around Us, The Sage Project, https://www.youtube.com/embed/Gvzcl_SC9Vc
- Video: Symmetrical Butterfly Painting, Catie's Classroom, <https://www.youtube.com/watch?v=042uDqg2k3g>
- Images: UCANR, The Joyful Learner: <https://www.factsjustforkids.com/insect-facts/butterfly-facts-for-kids/monarch-butterfly-facts/>, www.kids.kiddle.co, Creative Commons, www.dreamstime.com, www.animaldiversity.org, University of Florida, Britannica, www.natgeokids.com , www.bbc.co.uk

Gardening Questions?

- Email or Call the UCCE Master Gardeners of Riverside County
- Email Helpline
 - anrmgriverside@ucanr.edu
- [Riverside Master Gardeners Website](#)
- Email: mgschoolgardens@gmail.com



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