

# CURIOSITY AT HOME

## INSECT EXPLORATION



*In today's activity, we'll explore what makes an insect, an insect, and get an up-close look at the bugs that live around you. Then learn about which insects pollinate which plants, based on color, shape and smell!*

### MATERIALS

- Colored pencils/markers/crayons
- White or light colored sheet, pillowcase, or t-shirt
- Science notebook or paper
- Something to write with
- **Optional:** Magnifying glass

### PROCEDURE

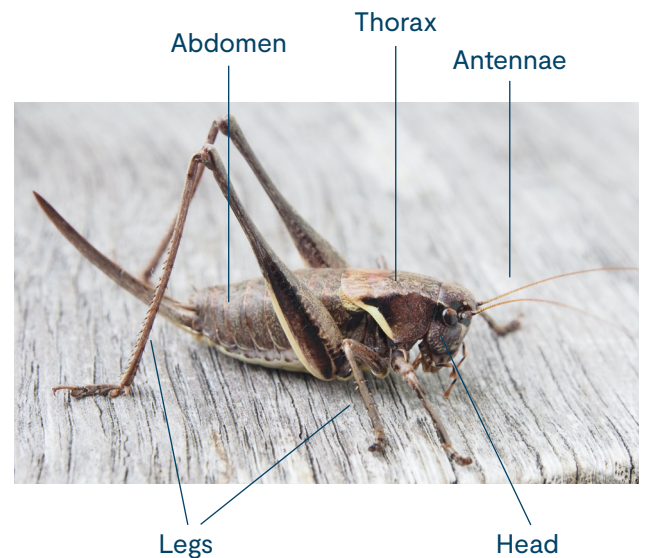
- In your backyard or a nearby park, find a small tree, bush or shrub. Look for a medium-sized plant, whose trunk or branches you can reach. Make sure this tree or bush has room at its base for you to spread out a sheet.
- Spread out your sheet under the tree or bush, tucking it around the base of the plant.
- Grasp the trunk and shake the bush and its branches over your sheet. Give it a good shake for 10–20 seconds, while being careful not to bend or break the trunk.
- What did you notice falling down onto the sheet? Pull the sheet aside and spend some time observing any collected items. Do you see anything moving? Ask an adult to help you identify creatures that are safe to pick up (such as ladybugs, worms and sow bugs) if you would like to gently hold some.
- Use your science notebook to record the number, shape, size, and color, of each bug you observe on your sheet. Draw pictures of the creatures, if you'd like! What similarities and differences do you notice across all of the ones you found.
- Which of these creatures do you think are insects? You can identify an insect by looking for 3 main body parts (head, thorax and abdomen), 6 legs, and 2 antennae.



Sow Bug

Planthopper

Ladybug



*Experiment continued on next page...*

Sow Bug photo courtesy of batwrangler.



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### PROCEDURE *continued...*

- Now, try putting the sheet under a different type of tree, and repeat the previous steps. When finished, be sure to gently shake the insects and plant matter back onto the ground.
- Did one tree have more insects than another? Why do you think that is? Does it have to do with the amount of leaves on the tree? The tree's location? The vigor of your shake? Time of day? Record your observations and predictions in your science notebook.

### TRY THIS

Do you think any of the insects you found are pollinators? Why or why not? What makes an insect a good pollinator? Most pollinating insects can fly, but some other insects, like ants and beetles, can also be pollinators.

Each pollinator has certain plants that it prefers to pollinate. Take a walk to a park, through a neighborhood, or in your yard and observe some flowers. Predict which pollinator might like to visit that flower. Do you think an insect pollinates this flower? If so, which insect? Why do you think so?

Use this chart to give you clues about which flying insect might visit that type of flower.

Insect Pollinator	Flower Color	Flower Shape	Flower Smell
<b>Bee</b>	Brightly colored usually blue, yellow or green. (bees cannot see red)	Symmetrical (one side of the flower is a mirror image of the other) Often tubular (long and narrow)	Sweet smell or a minty fragrance
<b>Fly</b>	Pale and dull to dark brown, purple Sometimes flecked with white see-through patches.	Funnel shaped or complex traps	Bad odor, like rotting meat, dung, sap, or blood
<b>Butterfly</b>	Bright, including red and purple.	Narrow tube with spur, wide landing platform.	Faint but fresh
<b>Moth</b> Night time pollinators	White or dull colors. Blooms are open late afternoon or night.	In clusters, wide landing platform.	Strong, sweet perfume fragrance.



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### DID YOU KNOW

Insects are very important pollinators for many plants. This relationship benefits both plants and insects; it's a win-win! Plants need pollinators, like insects, to transfer their pollen so they can reproduce. Insects get to eat nectar and pollen from flowers, which keeps them alive.

Some plants mimic animal smells to attract pollinators! Red Trillium is a beautiful flower with a smell like rotting flesh. Although humans might find this scent repulsive, flies are drawn to these brilliant red blooms. The deep red color and foul odor resemble decaying meat and attract flies who eat the pollen of the flowers. Typically, no nectar is produced in fly-pollinated flowers. This is an example of co-evolution.



Red Trillium



Bed Orchid (another example of co-evolution).

Red Trillium photo courtesy of dmott9



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### 6–8 GRADE EXPLORATION

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

Put your insect identification skills to the test, while trying your hand at citizen science! **Entomologists** (insect biologists) are looking for data on bumble bees.

- Take a slow walk around your backyard/neighborhood/park, paying close attention to the flowers around you. Bring a phone or a camera to snap a picture of a bumble bee, being careful not to get too close.
- If you see one, upload your photo to [www.bumblebeewatch.org](http://www.bumblebeewatch.org). The website will help you identify a species, and a bumble bee expert will verify your results!
- While you're at it, you can also see recent bumblebee sightings, and a map of all recorded sightings in the US!



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