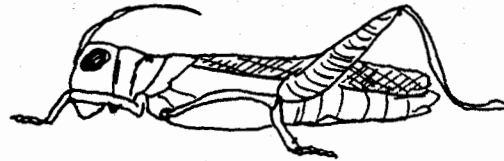


Earth, Planet of the Insects

Description

Students observe insects in the garden, categorize insects as being harmful or helpful, and write an insect story.



Objective

To explore the many ways that insects affect all life on earth.

Teacher Background

Insects exist in enormous numbers. The average insect population per square mile is estimated to be equal to the total world population of people. Less than one percent of the nearly one million insect species are pests to humans, our domestic animals, and useful plants. Of the 100,000 insect species in the United States, only about 600 are considered to be serious pests. Damage done by insect pests is easy to appraise; the value of beneficial insects is harder to estimate. Bees, wasps, flies, butterflies, and other insects pollinate flowers that provide us with fruits and vegetables. Honey, wax, and silk are important insect products. Some insects are vital links in the food chains of fish, birds, and other animals. Other insects are parasites or predators of damaging pests.

Materials

Blackline masters of Beneficial Insects and Common Pests, pp. 407-408
Life Lab journals



There are more insects than any other creature on earth. They have been around for at least 400 million years, whereas people have been on earth for only about 100 thousand years. And we are still discovering new kinds of insects! What are some things we already know about insects? (List responses on the chalkboard.) What are some things you would like to find out about insects? (List responses.)



1. Go into the garden. Have students sit in pairs quietly for several minutes in different spots in the garden and observe. Ask, What kinds of insects do you see? What are they doing? Are they eating? Are they being eaten? Have students go around and look under rocks or logs. Ask, What insects do you see there? What are they doing?
2. Back in the classroom, ask students to help make a list of the ways in which insects are harmful or helpful to us. Write responses on the chalkboard. The following list gives some examples.

Insect Activities That Harm Us

- Eat our crops (caterpillars, beetles)
- Eat wood (termites)
- Eat clothes (clothes moths)
- Sting or suck blood (wasps, mosquitoes)
- Transmit diseases (mosquitos, fleas)

Insect Activities That Help Us

- Many are pollinators (bees, butterflies)
- Bees produce honey
- Silkworms make silk
- Some are predators and parasites of insects that harm us
- Many are food sources for animals (birds, frogs)

3. Now ask students to pretend that, starting tomorrow, there will be no more insects. Ask them to write about what life would be like without insects. How would things change? Possible answers include:

- There wouldn't be so many fruits and vegetables. Bees, for example, are needed to pollinate apples, cherries, cucumbers, and many others. Without pollinators, there would be few of these fruits.
- Many animals would die. Animals such as frogs, birds, and anteaters depend on insects for food.
- There would be no honey or silk.
- There would be no butterfly wings, cricket calls, lights from fireflies.
- There would be no mosquito bites!

And much more—insects are really very important to life on earth!



Name three things you observed about insects in our garden. What are some ways insects are important to you? Are humans important to insects? What might a harmful garden insect be doing? What might a beneficial garden insect be doing?



Have students use the blackline masters to identify insects they observe in the garden. What makes them harmful or beneficial to us? What are they doing in the garden? Have them consider how harmful insects might be controlled without harming the beneficial ones.

