UNIT 21 - Insects

- ☐ LESSON A: Observation, Discussion, & Memory Work
  - Read the lesson carefully to make sure that you have all needed supplies and that you understand the content.
  - Observation Record
- ☐ ACTIVITY A: Nature Journaling
- ☐ ACTIVITY B: Nature Journaling
- ☐ ACTIVITY C: Research and Write

PARENT NOTES:

Lesson A: Observation & Discussion

Students prepare ant farms and beetle kits to begin several units of insect observation, including the life cycle of insects.

Before the Lesson:

- Read the lesson in its entirety to make sure you understand the discussion.
- Write down any additional materials you would like to have on hand for this lesson.
- Check the weather before the lesson and decide to conduct the lesson inside or outside.

Materials Needed:

- Insect Mounts from last unit (email families to remind them!)
- Insect Identification Guide (borrow from your local library or bring one from home)
- Ant Farm Kits (homesciencetools.com)
- Beetle Kits (homesciencetools.com)

In Class:

Class Observation:

- Ask students what kinds of insects they found last unit.
- Allow students time to show off their findings.

Class Processing:

- Divide students into groups to assemble Ant Farms and Beetle Kits for the class. You might consider having some students in charge of ants and others in charge of beetles.
- Use the materials provided in the kits to explain what you are preparing and what we might be able to learn over the next few units.

Class Experiment:

- Invite students to place different objects within the ant farms to see what the ants will do, leaving one ant farm without an obstacle.
- Option 1: students could place the same object in multiple ant farms to see if the ants make the same kind of tunnels around it (i.e. does the obstacle create the same effect or do the different colonies have different solutions?)
- Option 2: students could place a different object in each farm to see what the results are (i.e. does it matter the object or is the solution of each colony the same?)

Class Discussion:

- Ask students if they have ever seen a 'baby' beetle. What did it look like?
- Ask students if they have ever opened or knocked over an ant mound. What did they find inside?
- What do they think the results of the experiment will be?
- Ask students to record these thoughts in their Nature Journals.

Classroom Extension

- Have students share their insect collections so far and encourage them to find more!
- Encourage students to learn more about "metamorphosis" over the field trip unit and to look for arachnids and insects at the field trip event.
- Have students record their observations in the boxes on the following page.

Observation Record:

BEETLE KIT OBSERVATIONS DATE: _____

ANT FARM OBSERVATIONS DATE: _____

Memory Work Activity

Review this unit's Science Q and A.

In Unit 19 we learned about the five major classes of arthropods. Last unit we learned more about one of those classes (arachnids), and this unit we learn about another of those classes (insects). The class "insects" accounts for more than half of all known animal species. In your discussion, talk about each characteristic, using your judgment about how much information to share with the students.

Exoskeleton: Already previously discussed; Remember that the function of the exoskeleton is protection.

Six jointed legs: Insects have three pairs of jointed legs.

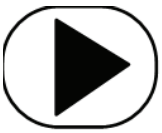
Three-part segmented body: The body of an insect is divided into three main parts: the head, thorax, and abdomen. The thorax is then broken into three smaller segments, while the abdomen in most insects consists of eleven segments.

Compound eyes: Compound eyes consist of hundreds or thousands of individual lenses (a human eye has only one lens). Each lens has a slightly different orientation (it points to a slightly different direction), which gives the insect a very wide visual field. Although compound eyes are not very good at seeing detail, they are very good at detecting motion. Compound eyes have a "bulging" look to them. Many insects also have several simple eyes.

Two antennae: The antennae of an insect are sensory organs, meaning they use them to receive sensory information. An insect can use its antennae for smelling, tasting, feeling, sensing vibrations, etc.

Look at your Lapbook and the pieces about arachnids to compare against the pieces about insects. What are the differences? For example, "This class has eight legs…" (arachnid) or "This class has a body divided into three segments" (insect), or "This class can have wings" (insect), etc.

Practice the Science Q and A now.



Video Available
in Online Suite

Activity A: Nature Journal

Go on an insect nature hunt and find, observe, and sketch any insects you find.

Activity B: Nature Journal

Draw a picture of an insect you find this unit.

Activity C: Research & Write

Instructions:

- Go to the local library and research insects. What is most interesting about them?
- Ask your librarian for help on the topic.
- Read the resources you find.
- Write a 1 paragraph summary of your findings.