Hayes Farm Travelling Garden Tool Kit for Teachers

Bugs (K-2)/ Insects (3-5) module

We also have modules that are adapted for K-2 and Grades 3-5 on:

1. Monarchs and Milkweed
2. Earthworms
3. The Three Sisters and Indigenous Gardening
4. Seeds!
5. Maple Syrup

Thanks so much for taking an interest in food, farm and nature education!
Teachers like you help to shape a child's lifelong interest in the natural world.
We look forward to seeing you and your students on the farm!

Learning Goals:

K - 2

- Introduce students to the natural world of insects and bugs in such a way as to encourage wonder and reduce discomfort or fear and how to respect and handle them.
- Teach that most insects lay eggs and eggs go through changes before reaching adulthood, unlike mammals that have fully-formed babies.
- Teach students that being outside in different kinds of weather and learning with our eyes and our hands can be enjoyable. It's okay to get a little dirty!

3 - 5

- Learn what native and non-native species are
- There are different types/ classifications of what we call "insects" based on their body type and how they live
- The lifecycle of insects

Materials:

1. You will find a set of models of insect lifecycles in your kit that you can use in tandem with this presentation.
2. There is a PowerPoint for each learning level. The K-2 presentation is a simplified version of the presentation for grades 3-5. It leaves out more advanced anatomy and details.
3. You can find additional information in the Resources section.

Recommendation for Presenting:

This module is quite long. We have given information on many types of insects because classes visit the farm at different times throughout the season. You may want to reach out to our Program Coordinator to see which insects your class will be most likely to see on their visit. Weather conditions can also affect what will be easy to find, for instance in a very dry year, we will be unlikely to see slugs and snails easily so you may want to skip that section if you are pressed for time.

Activities:

1. Explore the lifecycle models

Students can handle the models, ask questions and make observations. They can put the models in the correct lifecycle order.



2. Continued learning and building skills on inquiry and sharing information

If the weather is poor and indoor work is preferred, students may want to learn more about the lifecycle of an insect that is not one of the models. They might want to look at some library books or online resources. There is an opportunity for grade 3- 5 students to work in groups to draw out stages of the lifecycle and make posters to teach other students about their insect.

3. Outdoor insect investigation

If you are doing this module at a time of year when you are likely to have insects outside you can take the class out to make a list of what they see.

If you have something to mark out space that would be helpful - like a rope, hula hoop, piece of string, etc. Working in an area of about a meter would be a good start and it keeps students in one place.

Make a circle and see what types of insects students find inside of their circle and how many of each. You may have some students count and other students make drawings of what they see. Counting the legs and wings will help grades 3-5 students determine if they are "true" insects.

If time allows and there are different types of areas, ex. short grass, long grass, shady, full sun, dirt areas, they may shift their "circle of observation" to see which kinds of insects like in different conditions.

Resources:

Additional Learning:

The **Soil Food Web** would be great learning for students who are interested in composting. The Soil Food Web is similar to a regular food web, but it starts with photosynthesis and plant growth on through how different organisms break up plants and turn it back into soil. This information can be adapted to different age/ learning levels. Ex. macroarthopods (larger soil insects that can be seen without a microscope) may be referred to as "shredders" for younger students. See video description below.

Video supplements:

All About Insects for Children: Bees, Butterflies, Ladybugs, Ants and Flies for Kids
(5:44) Video that is a series quality video clips with adult narration. The terminology will be too advanced for K-2, but they may enjoy just looking at the images of insects up close.
This video provides a good overview of physiology, climatic needs, hibernation, lifecycle, etc. Some of this information is covered in the Power Point, but not all, so this is a good additional learning resource.
Free School Channel on You Tube - https://www.youtube.com/watch?v=rKQfJFAHW8Q

Natural Pest Control Methods for the Garden - Keep Bugs From Ruining Your Harvest Without Pesticides
(11:00) Video for teachers to get background information on chemical-free pest control methods on the farm.
Forever Food Forest Channel on You Tube - https://www.youtube.com/watch?v=Sap0CeIeBu0

The Soil Food Web Garden Class for grade 5
(22:45) A farmer/ gardener speaks directly to students in an outdoor classroom with chalkboard images to aid discussion. The farmer is very skilled in disseminating information at a good level for grades 3- 5.
Green Our Planet Channel on You Tube - https://www.youtube.com/watch?v=5Ym6Qll6aMk