

Incredible Insects

Pre-/Post-Site Materials



Forest Preserve District
OF WILL COUNTY

Bringing People and Nature Together

Table of Contents

Field Trip at Plum Creek Nature Center



Recommended Readings & Websites.....2

Forest Preserve District of Will County

Insect Body Parts Activity.....3

Forest Preserve District of Will County

Insect Metamorphosis Life Cycle.....5

Forest Preserve District of Will County

Bug Collecting.....7

Sophie Maletsky, sophie-world.com

Did You Know?

When temperatures drop in the winter, everything but the interior of the woolly bear caterpillar's cells will freeze to help it survive cold weather. During a spell of warm weather, however, they can thaw and easily "wake up."

**WINTER
WOOLLY
BEAR
SIGHTING**



Correlated State Standards

Identified ELA and Science Standards are detailed below specific to this education program.

Source: Forest Preserve District of Will County, the Council of Chief State School Officers (Common Core), and the National Research Council (Next Generation Science Standards)

ELA Standards

Subject Codes	Grade 2	Grade 3	Grade 4
Reading for Information (RI)	RI.2.7	RI.3.4, RI.3.7	RI.4.4, RI.4.7
Speaking and Listening (SL)	SL.2.1, SL.2.2, SL.2.3, SL.2.4, SL.2.6	SL.3.1, SL.3.2, SL.3.3, SL.3.4, SL.3.6	SL.4.1, SL.4.2, SL.4.4
Language (L)	L.2.1, L.2.3, L.2.6	L.3.1, L.3.3, L.3.6	L.4.1, L.4.3, L.4.6

NGSS Standards

Disciplinary Idea	Grade 2	Grade 3	Grade 4
Life Science 1, Molecules to Organisms		3.LS1.1	4.LS1.1
Life Science 2, Ecosystems	2.LS2.2		
Life Science 4, Biological Evolution		3.LS4.2	



References

Recommended Readings

- Burnie, David. "Smithsonian: Bug Hunter." DK Children. 2005. –Amazon.com book description, "Presents general information about different insects and includes more than 30 activities to help study insects, such as building nets to capture butterflies and building moth traps."
- Leahy, Christopher; Peterson, Roger Tory; and White, Richard E. "Peterson First Guide to Insects of North America." Houghton Mifflin Harcourt; 2nd edition. 1998. –Amazon.com book description, "A simplified version of the full-sized field guides makes it easy and fun to get started in the field. Peterson First Guides are the first books the beginning naturalist needs. Condensed versions of the famous Peterson Field Guides, the First Guides focus on the animals, plants, and other natural things you are most likely to see. They make it fun to get into the field and easy to progress to the full-fledged Peterson Guides."
- Mound, Laurence. "Insect." DK Children. 2007. –Amazon.com book description, "Explores the anatomy, behavior, and ecological role of the world's most populous class of animals."

Recommended Websites

Let's Talk About Insects

<http://urbanext.illinois.edu/insects>

A Code Of Conduct For Collecting Insects And Other Invertebrates

<http://www.amentsoc.org/publications/online/collecting-code.html>



Insect Body Parts Activity

Objective:

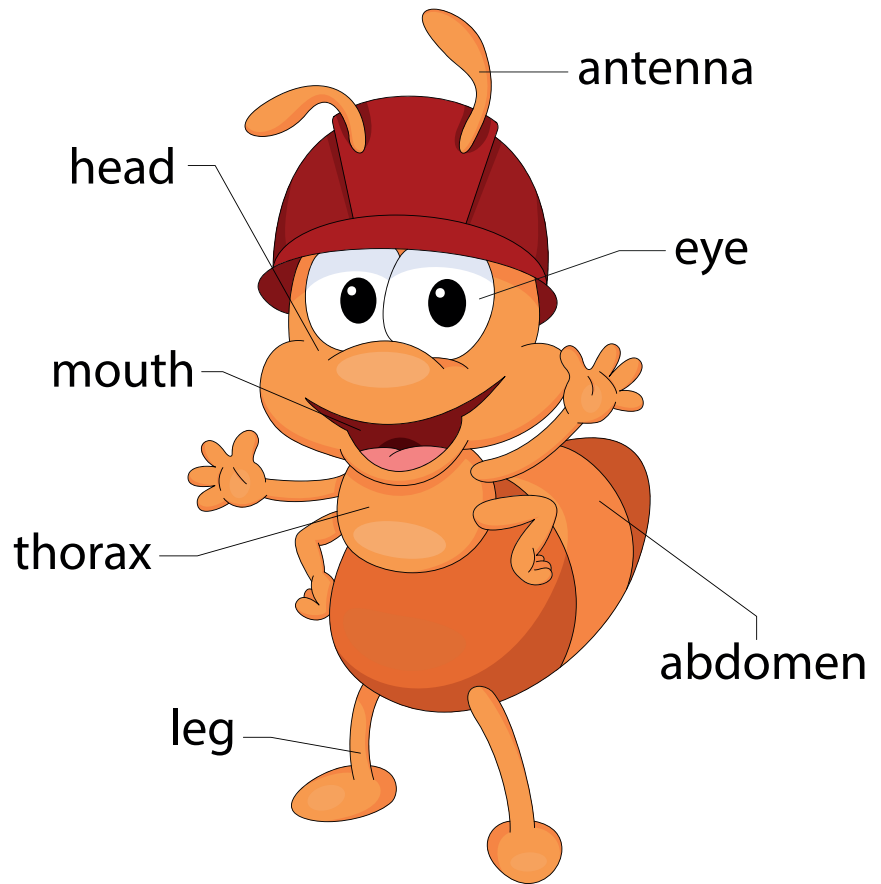
Did you know there are 900,000 known species of insects? In this activity, students will learn about insect anatomy.

Materials:

- Board to write on in front of the class
- Magazines
- Glue
- Scissors

Instructions:

1. Discuss with students the three main body parts of an insect: head, thorax and abdomen. Talk about the eyes, mouth and antennae that are on the head of the insect. Discuss the wings and legs that go on the thorax of the insect. Draw a picture of an insect on the board (you can also use the photo provided) and label the body parts.
2. Search for pictures of insects in magazines or newspapers.
3. Students should cut out the pictures of insects and glue them onto a piece of paper. Have students label the parts of an insect by drawing an arrow to the parts and writing the corresponding words.
4. Another option for younger students is as the teacher goes through the parts of the drawn insect on the board, the students can point to the parts on their own insect.



Want Some More Fun?

What makes an insect an insect? Find out with this fun interactive magazine from the National Wildlife Federation.
https://rangerrick.org/ranger_rick_jr/insect-zoo/

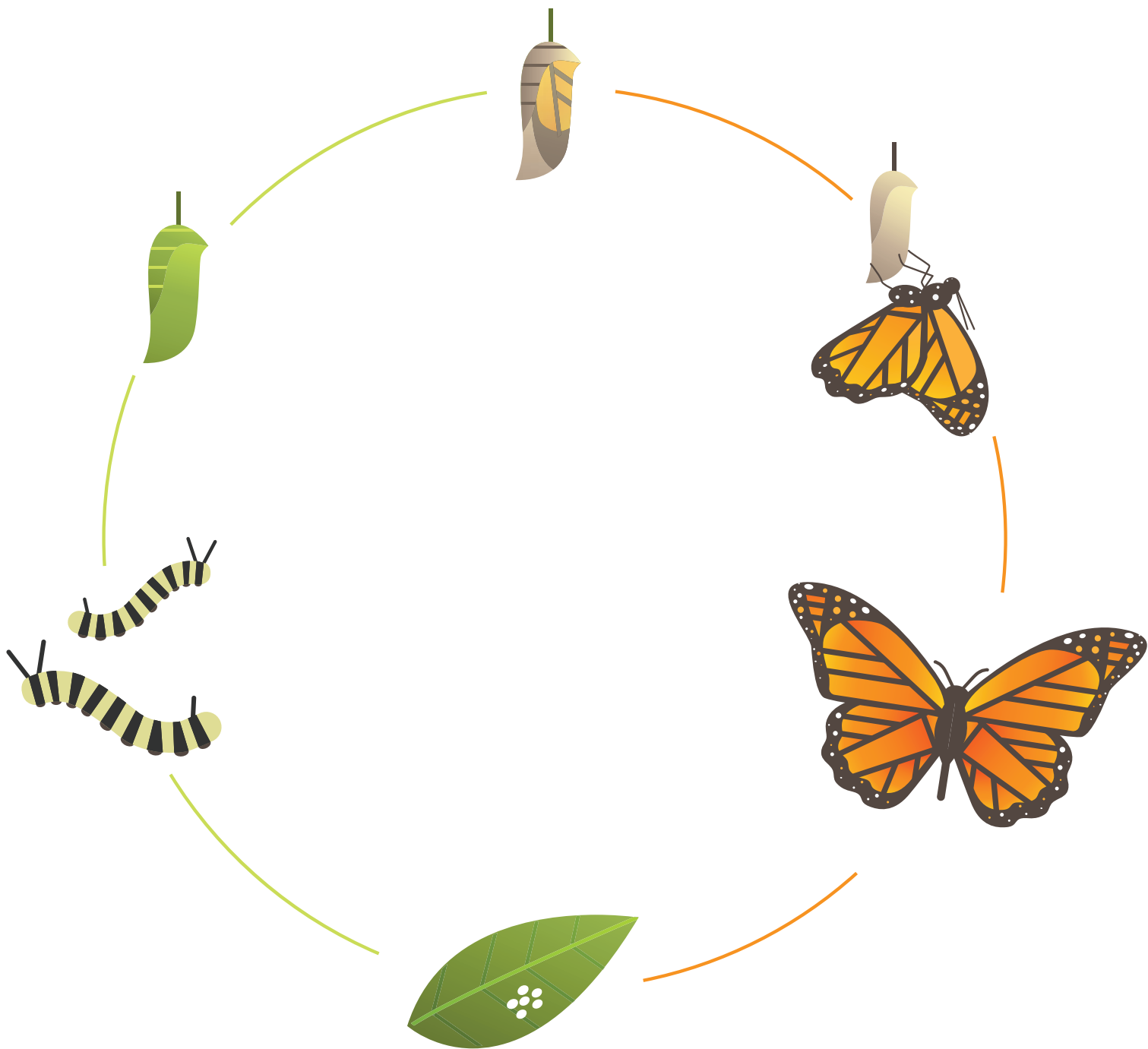


Insect Body Parts Activity

Can you identify the insect body parts? Using the words below, write in the name of the correct body part next to the corresponding lines.

Abdomen Antenna Eye Head Leg Mouth Thorax





METAMORPHOSIS

Butterfly life cycle stages

Insect Metamorphosis Life Cycle

Objective:

Some insects go through complete metamorphosis. This is a life cycle where as an insect grows it changes its body shape. The insect starts as an egg, then a larva, then a pupa and then an adult. The metamorphosis of a butterfly (life cycle) can be modeled using this fun craft.

Materials:

- One bag of bow tie pasta and one bag of pasta shells
- One bag of rice
- Pipe cleaners (two colors)
- Paper plates
- Glue
- Markers

Instructions:

1. Pass out the following to each student: One paper plate, one grain of rice, one bow tie pasta noodle, one pasta shell and two pipe cleaners (each a different color and cut in half).
2. Next the students should draw two perpendicular lines across the plate, dividing the plate into four sections. Have students then draw a leaf in each section.
3. For the first section, have your students glue the grain of rice on the leaf. This represents the egg stage.
4. For the second section, students will twist the two pipe cleaners around each other to form a caterpillar. Have your students glue the caterpillar on the second leaf to represent the larva stage.
5. The third section is the pupa stage. Students should glue the pasta shell on the third leaf to represent the chrysalis.
6. For the last section, students will make a beautiful adult butterfly. Students should color the bow tie pasta noodle then glue it to the last leaf to represent the adult stage.
7. Explain to your class about how some insects go through a complete metamorphosis. Complete metamorphosis is when an insect goes through the four separate stages of growth.



Watch It on YouTube

Here's step-by-step instructions for a similar butterfly metamorphosis craft.

<https://www.youtube.com/watch?v=QCh8e7z8d3g>



Bug Collecting

Objective:

Some children really have a thing for bugs! If you have an open field, large park, or even a great backyard, bug collecting can provide hours of fun. If you are short on bugs, don't worry. Variations are provided below.

Materials:

- Jars or plastic containers (one per person)

Set up:

1. Offer a general lesson about the different types of bugs and how bugs should be treated.
2. Mention that bees are not the best bugs to bother, but that worms, snails, roly-polies and flies are pretty safe.
3. Remind children that bug collecting is not about hurting, but rather exploring bugs – kindly!
4. Pass out jars or plastic containers for children to collect their creatures.

Instructions:

1. Assist the children in punching a few holes in the top of their containers.
2. Let the kids loose in the activity area to collect whatever buggy creatures they can find.

Variations:

- If you feel that your activity area is low on bugs, you can always purchase worms, crickets, and such from your local pet store.
- Make the “bug collecting” completely different – and edible – by having kids look for gummy bugs and worms that can be eaten later.
- Offer a “Show and Tell” session after the bug collecting. The children will love showing off how many different kinds of bugs they have collected.
- Be sure that all of the bugs are carefully released at the end of the activity.



Want Some More Fun?

Fill a table with books about bugs. Children can look up various creatures in the books to learn about and identify them. The more hands-on experience students have with bugs and insects, the more information they will retain. By placing a variety of insect books around the classroom, students can continue to look up and explore information about the bugs they collected.



Because praying mantises are insects, they have three distinct body parts: a head, a thorax and an abdomen. Mantises are named for their physical appearance. They have long front legs, which give the impression that they are bent in prayer. However, because they are also known for their excellent hunting skills, there is often confusion as to whether their name is “praying” mantis or “preying” mantis.



Forest Preserve District

OF WILL COUNTY

Bringing People and Nature Together

ReconnectWithNature.org