



INTO INSECTS

Teacher's Pre-Trip Information

The purpose of the following pre-trip information is to help the teacher prepare and motivate their class for their field trip to the forest preserve and to familiarize the students with vocabulary used during the program.

THEME: Insects have unique characteristics and we can find them just about anywhere

GRADE LEVEL: Grades K – 5

OBJECTIVES

- Students will collect and observe insects (weather-dependent)
- Students will be able to name the three body parts of insects (head, thorax, abdomen), and name at least three other characteristics of insects
- Students will be able to explain the differences between arachnids and insects
- Students will be able to describe metamorphosis

LEARNING PLAN

Topics: insect morphology, physiology, habitat, food preferences, and life cycle (metamorphosis)

Student activities: comparing insect eyesight to human eyesight, investigating galls, observing pictures and models, using field guides, and hiking to look for and collect insects

Learning Area	Goal #	Standard	Level and Benchmark
Science	11	A	1a, 1f
	12	A	1a-b, 2a
	12	B	1a-b, 2a-b
Language Arts	4	A	1a-c, 2b-c
	4	B	1b, 2b
Physical Education	21	A	1a-c, 2a-b
	21	B	1, 2

VOCABULARY

- **Respect** – to honor, to show concern for
- **Preserve** – to keep safe, to save or protect
- **Habitat** – the arrangement of food, water, shelter and space suitable to an animal's need
- **Head** – the fore part of the insect's body; it has the eyes, antennae, and mouth

- **Antennae** – long, thin movable sensory organs on an insect’s head used to smell, feel and sometimes hear
- **Compound eyes** – eyes made up of many tiny units; each unit has a separate lens
- **Thorax** – the middle part of an insect’s body. The wings and legs are attached to it.
- **Abdomen** – the hind part of an insect’s body
- **Metamorphosis** – a change from one form to another, often from larva to pupa to adult insect
- **Gall** – an abnormal swelling on a plant, often caused by a gall-forming insect
- **Chrysalis** – pupa case of many butterflies
- **Cocoon** – pupa case of many moths, made from silk
- **Cold blooded** – not able to internally control body temperature - the temperature of the body changes with the surrounding temperature

Supplemental Activities:

The following activities are suggestions for use in the classroom before and/or after the school program. Not all are appropriate for all age groups. Feel free to adapt them for your students’ abilities.

Writing activities:

- **A Bug's Life** (<http://sciencespot.net/Pages/adinsless.html>)
Challenge your students to develop a presentation for their classmates related to life in "Bug Land", a land where the people have been magically transformed into insects. Have students utilize Internet resources to investigate their insect (foods, habitats, adaptations, etc.) and work as a team to create a 5-10 minute presentation.
- Have students interview their parents or other people about their experiences with annoying insects, such as mosquitoes and bees. Some interview questions might include, "What have these insects done to bother you?" and "How often does this insect bother you each year?" Then have students discuss with the person they are interviewing the reasons these insects bite or sting and some of the good things insects do (particularly bees). Are they able to convince people that insects have some benefits? Have them write a paper on the interview. Have them include the questions they asked, the interviewee responses and how they thought the interview went. (<http://www.nationalgeographic.com/xpeditions/lessons/03/gk2/insects.html>)

Math Activities:

- Have a small group of children ask their classmates the names of their favorite creepy crawly creatures. Then have another small group make a bar graph on poster board of their classmates' responses. Other children may want to decorate the graph with drawings of the creatures represented. (http://www.eduplace.com/rdg/gen_act/insect/creepy_c.html)

Fine Arts:

- Ask students to draw pictures of some of the "creepy-crawlies" they have seen. Have them share their pictures with the class and discuss what they like and dislike about these creatures. (<http://www.nationalgeographic.com/xpeditions/lessons/03/gk2/insects.html>)

Research Activities:

- Have a name of an insect written on small pieces of paper and put into a "hat" or basket for students to draw one each. The one they choose will be the one they study and make their poster about. The list is: ants, aphids, bedbugs, beetles, bees, boxelder bugs, butterflies and moths (this could be in the same category or separate), cicadas, cockroaches, crickets and grasshoppers, dragonflies, earwigs, fleas, head lice, katydids, mosquitoes, praying mantis, silkworms, termites,

stick insects, wasps, and water striders. The students are encouraged to bring in a specimen, if possible, of the more common ones. The students' poster will give information about their bug: description, information about habitat and environment, any subcategories of their choice, personal artwork of their bug, at least two illustrations printed from the internet sources, and a list of their internet resources.

(<http://www.lessonplanspage.com/ScienceCIInsectResearchPosterProject5.htm>)

Suggested Readings:

- **Diary of a Spider**

By Doreen Cronin

Through his humorous diary entries, readers learn about typical events in the life of a young spider.

- **Diary of a Worm**

By Doreen Cronin

A baseball-capped crawler gives readers an episodic glimpse into the vicissitudes of his life in these hilarious diary entries.

- **How to Hide a Butterfly and Other Insects**

By Ruth Heller

Rhyming text describes how various insects camouflage themselves to protect against predators.

- **The Very Quiet Cricket**

By Eric Carle*

A cricket is born who cannot talk! A bigger cricket welcomes him to the world, then a locust, a cicada, and many other insects, but each time the tiny cricket rubs his wings together in vain: no sound emerges. In the end, however, he meets another quiet cricket, and manages to find his "voice."

Additional Resources:

DNR Education Website: <http://dnr.state.il.us/lands/education/index.htm>

- Educational supplements (CD-ROMs for students and teachers, educational trunks, posters, books, etc.)
- ENTICE workshop schedule
- Project WET, Project WILD, and Project Learning Tree
- Contests and grants

Audubon Illinois Wildlife Series Display Boards*

- Butterflies and Moths
- Amazing Bats
- Illinois Owls

See www.champaigncountyaudubon.org for a list of resources for loan housed at the Education Center at the Homer Lake Forest Preserve.

**Available for loan from the Education Center at Homer Lake Forest Preserve. We have many more items in addition to those listed – please call 896-2455 for more information.*