

Parent Outline: K-2

September: Honeybees

Welcome/Introduction: Staff Introductions [Go over guidelines for respect and behavior]
Overview of the Nature Center-used to be a dairy barn, now it's a nature preserve
Today's Topic-Honeybees Question: What is a day in the life of a honeybee like?

Ice Breaker/Game: Name Game, The Pretzel

Background/Exploration: **Basic Insect Parts:** Head, thorax, abdomen, 6 legs, 2 antennae, hard shell, wings.
Spiders are not insects, they have eight legs.
What makes a bee? Sucking and chewing mouthparts (tubelike tongue), stingers, yellow and brown/black stripes on abdomen, hairs on body and legs.
Bees eat flowers (nectar, pollen). There are thousands of types of bees.

Honeybees-live in a large group called a colony, together in nest called a "hive".
They are social bees. A colony or hive can have up to 50,000 bees!
Bees have 5 eyes-3 simple, 2 large compound.
The simple eyes see how strong the light is, the compound eyes help the bee see movement. Bees see (ultraviolet) colors in a different way than we do.

Bee life cycle-**egg—larva (grub)—pupa—adult**. The change from pupa to adult is called **metamorphosis**.

Activity: **Live bee hive:** Look at the live indoor hive and see what the bees are up to. Take turns looking. Find: larvae, honey cells, wax cells, workers, pollen baskets, queen.

Honey-Process of collecting nectar and making honey. Bees also eat pollen.
Beeswax-Bees shed wax in flakes on their bodies. Bees collect the flakes and use it to make the cell walls in the hive, or comb. The comb is very strong, with 6-sided cells.

Game: **Worker Bee Game** [with a taste of honey]-follows a worker bee's life
Mention duties of the queen, and drones.

Trail Talk: **Trail Rules & QUIET SIGN**
What we will do/What to look for-bees on flowers in prairie, bee hives
Predictions-What animals, plants will we find? What will it be like?

Prepare to go Outside: Use restroom.
Apply: Sunscreen, Bug Repellent (if necessary) Bring: Water bottles, hats

OUTDOOR EXPLORATION: Observe insects and bees in prairie. What flowers are they visiting?
Hike through sugar bush to NC hives. Talk about beekeeper volunteers.

Game: **Do the bee dances**
Activity: **Insect Bingo** on walk back to barn.

Return: **BEEKEEPER Laurie:** Show the parts of a hive, safety clothing, explain tasks.

SEND OFF: Goodbye!
Next Month's topic- Mushrooms

TAKE HOME: bee coloring sheet, hive pic, trading cards, Bit 'O Honey

Vocabulary

Head, thorax, abdomen, proboscis, compound, larvae, pupa, hive, colony, nectar, pollen, cell, beekeeper, honeycomb

For Fun or Further Learning

www.nationalgeographic.com/kids/ neat site for all kinds of animal and nature information and photos

www.pbs.org/wgbh/nova/bees

www.honey.com/kids/index.html

Carle, Eric. 1981. *The Honeybee and the Robber*. The Putnam & Grosset Group, NY.

Gibbons, Gail. 1997. *The Honey Makers*. Morrow Junior Books, NY.

Glover, David. 1998. *Looking at Insects*. Rigby, Crystal Lake, IL.

Has lots of recipes using honey.

IAN-606 Iowa Insects and Other Invertebrates

<http://www.extension.iastate.edu/pubs/wi.htm> ISU Press website-can download pdf booklets

Iowa Wildlife. 1998. Iowa Association of Naturalists Booklet Series. ISU Press, Ames, IA. (IAN-601--606)

Kalman, Bobbie. 2004. *The Life Cycle of a Honeybee*. Crabtree Publishing Company, NY.

www.crabtreebooks.com

National Honey Board. 1994. *Sweetened with Honey, The Natural Way*. Publications, International, Ltd.

Pringle, Lawrence. *The Golden Book of Insects and Spiders*. 1990. Western Publishing Co., Inc., Racine, WI.

Reigot, Betty P. 1995. *Questions and Answers About Bees*. Scholastic, Inc., NY.

Wallace, Karen. 1999. *Busy Buzzy Bee*. DK Publishing, Inc., NY.