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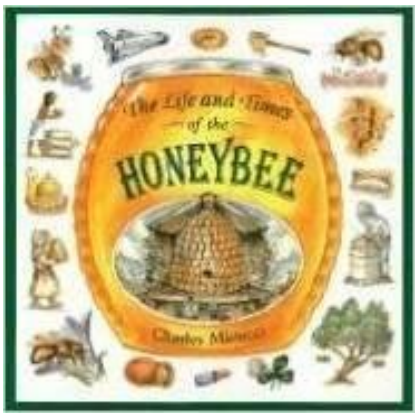
July 2014 Book of the Month
The Life and Times of the Honeybee
By: Charles Micucci

Why do beekeepers use smoke machines when collecting honey? Can a bee really sting only once? Why do bees "dance"? In concise, detailed text and abundant illustrations that range from the humorous to the scientific, Charles Micucci offers a wide-ranging and spirited introduction to the life cycle, social organization, and history of one of the world's most useful insects. He includes information on how bees make honey, what a beekeeper does, and products that contain beeswax--everything from lipstick to waxes for buffing surfboards. Micucci's rare gift for making science enjoyable and accessible is again revealed in this remarkably witty, rich salute to the honeybee.



Vocabulary/Background Information
Colony – Honeybees are social insects that live in colonies (a large group). Honeybee colonies consist of a single queen, approximately one hundred male drones and thousands of worker bees. Each colony also consists of developing eggs, larvae and pupae.
Beekeeper - (Also known as a friend of bees) A beekeeper is a Person who keeps honeybees. Some beekeepers raise queens and bees to sell to other farmers.
Pollination – The transfer of pollen from one blossom to another. The honeybee's greatest contribution is a service, not a product. Pollination! Honeybees pollinate more crops than any other insect.
Worker Bees – The smallest of the bees and all female. They perform the 'chores' such as making honey, cleaning the hive, feel larvae and build the wax comb. They are the only bees that visit the flowers.
Drones – The male bees that mate with the queen.
Queen Bee – The largest of the bees. Each colony only has one queen. Her most important function is to lay eggs.

- **Before bringing in live bees and taste testing, please be aware of allergies.**

The Bee Dance
Bees dance as a form of communication with other bees within the colony. By feeling the 'dancing bees' with their antennae, they can learn how far away the flowers are, the type of flowers the worker bees visited and the location. The most common 'dances' are the round dance and the tail-wagging dance. After reading and discussing the types of dances, have students work in groups to 'dance' to the other students to see if they can find a hidden flower (hide in advance) (See page 18-19 for dances and distances).

Life Cycle of the Honeybee
Teach students the 4 stages of the honeybee lifecycle. All bees develop in the same four stages, but each type of bee takes a different amount of time to develop. Have students create a time line depicting the different types of bees and let other students determine the type of bee. (Ex. The queen takes 16 days to develop and a drone takes 24 days). Students can also draw pictures along the time line to match the stages of development.

Students can also create each of the 4 stages using creative resources for each stage. For example, students can use a small dot of white paint or Elmer's glue for the egg, a grain of rice for the larva, a small macaroni noodle for the pupa and foam 'bee' for the final stage. Encourage students to be creative. Have students write about each stage beside the picture.

Honeybees are insects!
Like all insects, honeybees have three main body parts - the head, thorax and abdomen. Have students draw a honeybee and label each body part.

A Year of Honeybees
After reading and researching honeybees, use pages 22-23 in the book as a guide to create a yearlong calendar. On each month of the calendar, have students highlight and illustrate an important fact about honeybees that depicts that month. (Students can be paired with a partner and assigned a 'month' to create).

Bubble Wrap Bees
Cut a piece of bubble wrap into the shape of a honeycomb or beehive. Cover it with yellowish brown paint and turn it over on the paper. Then have students use fingerprints and yellow or brown paint to make fingerprint bees around the bubble wrap print. When it dries, use black paint or markers to decorate the bees.

Wax Paper Bees
Have students design and cut out or decorate honeybees. Students should write facts about bees on the back. Cut wax paper out in the shape of wings and attach to the bees. Attach yarn to the bees and hang around the room after students have shared facts with their classmates.

Buzzing with Math Facts
Using the information and facts on pages 9 and 19, have students create math problems for other students to solve. Example – During its first day, a larva eats so much that its weight increases five and a half times. If the same thing happened to a classmate who weighed 60 pounds on Monday, how much would he weigh on Tuesday? (330 pounds).

Products of Bees
Have students research items that are a product of bees or beeswax. Students can create an advertisement highlighting the product and how bees helped to make the product useful. (Goods vs. Services).

Honey is Delicious
Bring in several products that contain honey and conduct a taste test. Create a graph to determine which items were most liked. Be sure to include raw honey as well as honey flavored goods. Ex. Liquid honey, comb honey, chunk honey, crystallized honey, honeycomb cereal, Honey Nut Cheerios, etc.

A Bee's Best Friend
Invite an experienced beekeeper to visit the classroom. He or she should be able to bring in a beekeeper's suit, hives and live bees.

For more information and research, students can visit:

National Geographic Kids
http://kids.nationalgeographic.com/animals/honeybee.html

Reading Rainbow – The Lifecycle of Honeybees
https://www.youtube.com/watch?v=XfhM7g78HV4