



Honeybees

Objective:

Students will be able to identify the three body parts of a honeybee, understand the importance of bees in the environment and express a general knowledge of the lifecycle and characteristics of bees.

Performance Objectives:

SS K – Strand 4 – Concept 2: PO2; PO3

Concept 3: PO3

NGSS: K-LS1-1; K-ESS2-2; K-ESS3-1

CCSS: K.W. 3; K.W. 8

Background Information:

Have you ever heard the buzzing of a bee? Well, bees have been buzzing around the earth for many, many, many years. Bees are found in most parts of the world and are responsible for much of the food we eat. Bees are very important to all of us because they help farmers grow our food and they **pollinate** all of the beautiful flowers we see growing outside.

Some of the foods bees pollinate are apples, cherries, plums, tomatoes and much more. Honeybees, like the ones at **Butterfly Wonderland**, are called pollinators because they spend their life gathering pollen and taking it from one flower to another flower. Pollination is what flowers and other plants need to help them create seeds for new flowers and plants to grow.

Though bees are very small in size, compared to a person, bees have a big job to do in the environment in which we live. Along with being pollinators, honeybees have another “tasty” job. They make honey! Honey is very sweet and can be found in

Grades: Pre-K - K

Key Vocabulary:

- **Pollinate**
- **Nectar**
- **Hive**
- **Thorax**
- **Abdomen**
- **Relatives**

Materials:

Print: Hive Picture

Print: Bee Picture

See craft idea for additional materials list

Related Literature:

Little Bee

Edward Gibbs

In the Tree, Honey Bee

Lori Mortensen

many of the foods we eat. The busy bees have to spend most of the day finding flowers and plants to drink up **nectar** and bring it back to the **hive** to make honey. Nectar is the liquid found inside of the flowers. Since honeybees have a good sense of taste, they can find the sweet nectar of plants and carry it home to the hive in their honey stomach. Scientists estimate that bees must visit over 2 million flowers to make 1 pound of honey. That is a lot of work for the honey bees.

Bees are very interesting insects. Bees, like other insects, have six legs and three parts to their body. The three parts are the head, **thorax** and **abdomen**. Bees also have four wings, and female bees have a stinger. The wings on a bee are thin but move very fast creating the buzzing sound and allowing the bees to fly. Bees can fly about 15 miles per hour and may travel to around 50 to 100 flowers per collection trip.

All of the bees in one hive are **relatives**. The hive has a queen bee, the worker bees and the drones. All of the bees have duties and chores to do in the hive. The queen bee is in charge of laying eggs to keep the hive growing. The worker bees gather food, make honey, tend to the eggs, build the honeycomb and guard the hive. The drones mate with the queen to produce the eggs that make more bees for the hive.

Once the queen bee lays her eggs, the eggs go through four stages of life. The egg is the first stage. In about three days, the egg becomes a larva. The larva will be fed by the worker bees until it is ready to spin a small cocoon over its body. While in the cocoon, the larva becomes a pupa. This means that the changes are being made for the next stage of life, the adult bee. Adult bees take their place in the hive depending upon what member of the hive they have become. A hive of honey bees can have from 20,000 up to 100,000 members. That's a lot of bees!

Sources: Nova: Tales from the Hive (1998); Utah Bee Keepers Association; University of Arkansas division of Agriculture

Procedures and Pre-Activities:

1. Introduce the lesson on Honeybees with a poem or song about bees. (See examples; Five Busy Honeybees)
2. State the objective of the lesson to the students so they have a clear understanding of the expectations.
3. Ask open-ended questions related to bees. (Example: Where are bees found? Have you ever watched a bee collect pollen? Have you eaten honey?)
4. Read a book about bees to the students. (See suggested list.)
5. Discuss the story and the relationship of bees to people and the environment.
6. Present the background information on honeybees.
7. Optional craft: Paper Plate honey bee.

Five Busy Honeybees

Five busy honeybees were resting in the sun.
The first one said, "Let us have some fun."
The second one said, "Where shall it be?"
The third one said, "In the honey tree."
The fourth one said, "Let's make some honey sweet."
The fifth one said, "With pollen on our feet."
The five little busy bees sang their buzzing tune,
They worked in the beehive all that afternoon.
BZZZZZZ! BZZZZZZ! BZZZZZZ!

Paper Plate Honeybee Craft

Materials:

Paper plates and poster board

Waxed paper

Scissors

Tape and stapler (glue sticks)

Small triangle of black paper

Yellow paint and black paint or black markers (strips of yellow and black construction paper can be used and glued onto plates with glue sticks)

1. Paint the plate yellow and let it dry (or cover the plate with glued on 1 ½ inch strips of yellow paper alternating with black paper to create stripes of color)
2. Once yellow paint has dried, paint black or use black markers to create black stripes on the plate.
3. Put a face on the plate using markers. (optional: use wiggly eyes or construction paper for eyes)
4. Cut two wings out of waxed paper. Attach the wings with tape.
5. Cut a triangle out of black paper and tape it to the back of the bee for a stinger.
6. Use a strip of poster board under the plate to create a handle for the child's hand to slide under. Attach the handle with staples or tape. This allows students to use the bee as a hand puppet.

Reflection and Assessment:

After visiting **Butterfly Wonderland**, ask students about their observations related to the honeybees. Discuss the bees and their habitat at **Butterfly Wonderland** as compared to bees in the wild. Review the three parts of the bee and the life cycle. Using the bee picture, ask students to color the bee and describe the parts of the bee (head, thorax and abdomen).

The picture of the hive can be used for students to color and draw their own bees in and around the hive. This can be a spatial and counting activity. In addition, students may be asked to practice the letter “B” on either of the coloring pictures.

Assessment: Participation in the lesson, ability to respond to questions and complete the activities.



