

Activity: "Bee" Sensible

Grade Level: Grade 1

Major Emphasis: Data Collection Through Our Senses

Major Curriculum Area: Science and Language Arts

Related Curriculum Areas:

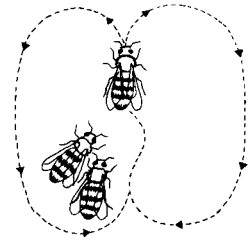
Refer to Outdoor Education Curriculum Matrix K-2

Career Education

Physical Education

Music

Art



Program Indicator:

The student will interpret and explain information generated by exploring science.

Student Outcomes: The student will: (DL2&3)

1. use their senses to gather information.
2. use their senses to differentiate the three types of bees.
3. use their senses as a means of communication.
4. use their senses to develop a better understanding of their environment.

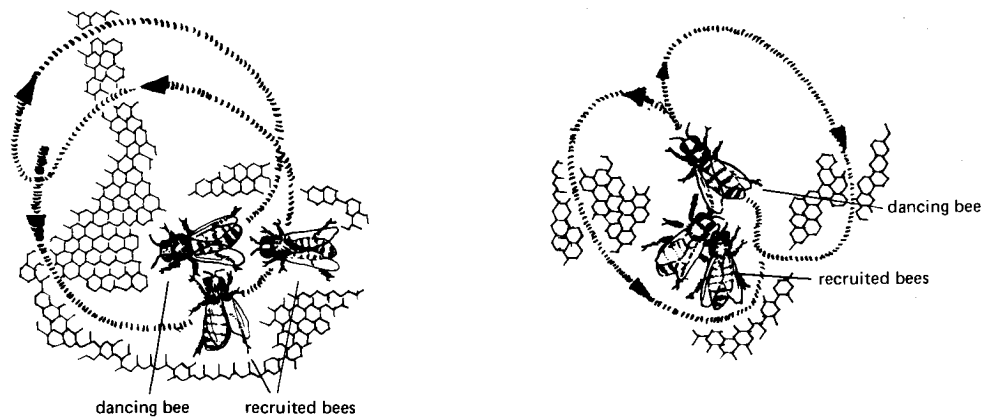


Figure 1: Circle and Figure 8 Honeybee Dances

Readiness:

1. Complete the K-W of a K-W-L chart, recording their ideas about bees.
2. Complete the first grade Unified Science Unit, "Senses."

3. Introduce vocabulary:

senses
flower

nectar
pollen baskets

worker bee
pollen

Materials:

carpet squares
observation hive
bee hand puppet

Honeybee Study Prints

beekeeper suit
beekeeper veil
beekeeper gloves
smoker

hive
honey extractor
set of artificial flowers/stands
nectar/pollen word cards

Procedures:

Activity A: Honeybees and the Flowers (DL2)

1. Review the class K-W-L Chart with the students on bees.

Bees		
I Know	I Want to Know	I Learned

2. View Study Print 2 with the students and discuss pollen and its location on the honeybee.
3. Discuss how the bee uses its "straw" tongue to get the nectar from the flower.
4. Discuss the roles of the bees: worker, drone and queen.
 - a. Using Study Print 1, be sure to point out the size of its eyes.
 - b. While observing Study Print 5, share with the students that each queen gives the hive a special, distinct smell.
 - c. Pass around the plastic mounted bees.
5. Complete the K-W-L chart by recording the "What I Learned" student responses.

Activity B: Nectar Dance (DL1&2)

1. Review students' knowledge of honeybees, including their food source and food gathering techniques.
2. Share with the students how people can communicate non-verbally. Discuss the following questions:
 - a. What does a policeman do when he wants you to stop a car?
 - b. What does the hand signal mean at camp?
 - c. What signals do your teachers use?

3. Nectar Dance Activity
 - a. Place artificial flowers on their stands. Arrange the flowers in a grassy area so that the flowers are grouped by color with some colors being close and some farther away.
 - b. Obtain the word cards with the words **pollen** and **nectar** on them. Place *several of each word into each can* matching the color of the word to the color of the flower.
 - c. Demonstrate nectar dances to develop *near and far* concepts. Students can follow the teacher in making a circle and figure 8.
 - d. Choose a student from the group. While the rest of the group is observing, instruct the student to go to any flower and bring back some pollen or nectar (word cards). The student proceeds to any **one** flower he wants, selects a word card and returns to the group. He must then communicate to the rest of the bees in the hive through one of the nectar dances whether the nectar or pollen was close or far away.
 - e. Select another student and repeat instructions. Rest of group has eyes closed or backs turned. Follow the same procedure. The student returns and does the appropriate nectar dance. Have group read the word cards.
 - f. The students guess the location. Through the color of the word on the card and dance, the group should be able to determine the location of the nectar/pollen.
 - g. Select another student. With the group not observing, the student visits **several** flowers and selects a word card out of only one. The student returns to the group and communicates whether it was near or far through the appropriate nectar dance. Using the color clue of the word card and the dance, the instructor allows several other students to go find the same source of nectar/pollen.
4. Discuss: What was your goal? What did you do to reach your goal? What problems did you encounter?

Activity C: The Beekeeper (DL2)

1. Display Study Print 12. Why is he wearing a veil? Put on the protective gear of the beekeeper.
2. Demonstrate how the beekeeper uses the smoker. Why does he use this?
3. Demonstrate how the beekeeper extracts the honey from the hive.
4. What senses did you use to discover the beekeeper's equipment?

Summary: (DL2&4)

1. Using the K-W-L chart, have the students write a letter of persuasion to the principal requesting that the honeybee becomes the school mascot. They will use at least three (3) facts to support their idea.
2. With a sock, make a bee puppet and act out the dance of the honeybee.

Follow-Up: (DL2,3&4)

1. Using a main idea organizer, have the students add up the facts about "The Way Living Things Use Their

Senses to Find Food."

2. Construct a bee hive using a brown paper bag and egg cartons. Have the students create honeybees and then act out the dances.

Extension Activity: (DL2,3,4&5)

Create a make-believe animal. Design a means of non-verbal communication that it would use to find its food. Share with classmates (do cooperatively).

Teacher Resources:

Books:

- < *NatureScope: Incredible Insects, National Wildlife Federation.
- < *Beekeeping: Questions and Answers, 638 BEE.
- < *The Bee Tree, Polacco.

Supplementary Materials:

- < *Honeybee Guidebook, Outdoor Education Program.
- < *Honeybee Coloring Book.
- < *Honeybee Study Prints, SVE.