

**Activity: Buzz Words**

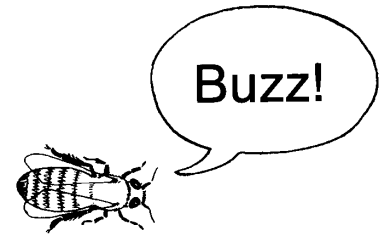
**Grade Level:** Grade 3

**Major Emphasis:** Writing and Communication Skills

**Major Curriculum Area:** Language Arts

**Related Curriculum Areas:**

Refer to Outdoor Education Curriculum Matrix 3-5  
Human Relations



**Program Indicator:**

The student will write and speak to inform.

**Student Outcomes:** The student will:

1. identify the types of honey bees and the role of each in the community. **(DL2)**
2. indicate how body structures are related to the function of each bee. **(DL2&3)**
3. use a pre-writing strategy to develop a paragraph. **(DL2&3)**
4. retell, in the proper sequence, the story of how honey bees produce honey. **(DL2)**

**Readiness:**

1. Introduce vocabulary:  
colony                  pollen basket                  beneficial                  stinger  
queen                  honeycomb                  pollen                  wax comb  
worker                  hive                  nectar  
drone                  communication                  fanning
2. Discuss the importance of individual roles within a community (i.e., local government, school, family).
3. Discuss the organization of the bee community.

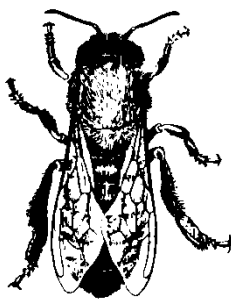
**Materials:**

|                    |   |
|--------------------|---|
| bee study prints   | wax comb sections                       |
| bee plastomounts   | “Daily Life in a Hive” learning station |
| demonstration hive | “The Bee Story” learning station        |
| honey bee chart    |   |

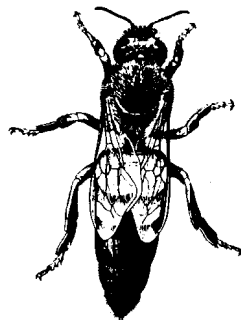
**Procedures: (DL2&3)**

1. Expose a small section of the observation hive and close it up again. *Students should be observing from a seated position on carpet squares.*

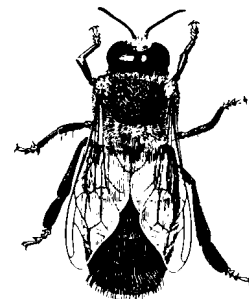
2. Explain that they will be observing the hive in more detail in a few minutes, but first you would like them to learn about how a community of bees is organized.
3. Use Study Print 1 to introduce the hive as a place where a bee lives. Pass around some wax comb so that each student can see the cells. Have students feel and smell the wax.
4. Introduce the three types of honey bees. Use Study Prints 5 and 6 to describe the role of the queen bee.
5. Use Study Print 10 to discuss the structures and role of the drone.
6. Use Study Prints 2, 3, 4 and 7 to introduce jobs performed by the worker bees (i.e. fanning, caring for larva, food sharing and food gathering).
7. Pass around the plastomounts of the queen, drone and worker bees and have students observe the differences in size and structure.
8. Use the large chart on the honey bee to point out the structural differences between the worker, drone and queen. Discuss the absence or presence of body structures that relate to their job functions (i.e. presence of stinger and pollen basket). (Refer to Figure 1.)



**Worker**



**Queen**



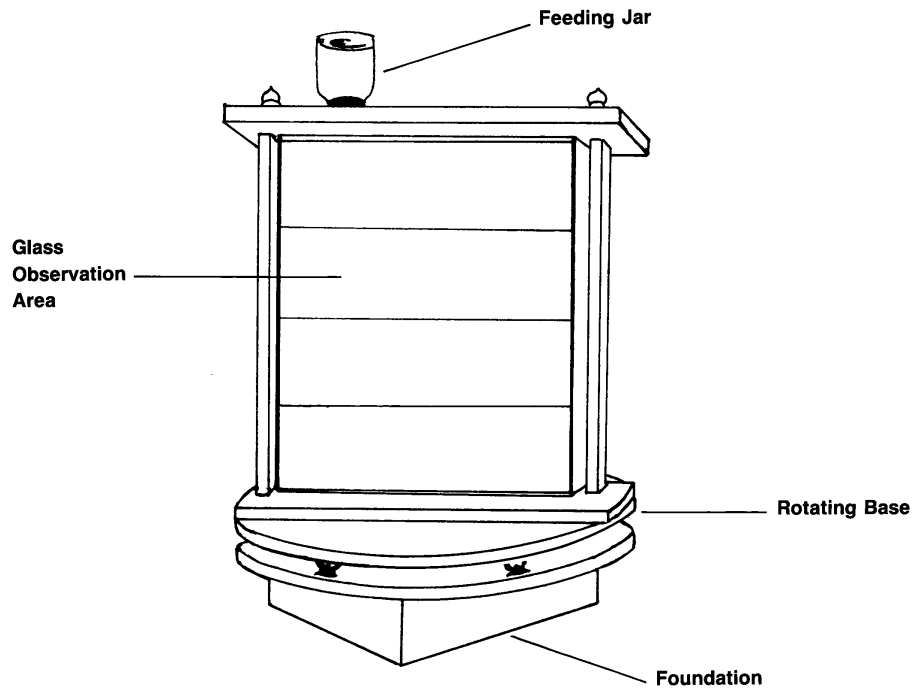
**Drone**

**Figure 1: Types of Honey Bees**

9. Use the “Daily Life in a Hive” learning station to preview behaviors that will be seen in a live hive. Have students identify the following honey bee structures and behaviors:
 

|                         |                         |                  |
|-------------------------|-------------------------|------------------|
| queen                   | storage area for nectar | fanning          |
| worker                  | egg laying              | dancing          |
| drone                   | wax building            | feeding larvae   |
| wax comb                | carrying pollen         | feeding on honey |
| storage area for pollen | attending to the queen  |                  |
10. Examine the rotating observation hive with the students and have them locate the queen and workers. Observe the behavior of the queen including egg laying. Locate storage areas for honey and pollen and the bee nursery. When observing the workers, try to identify these behaviors: fanning, wax building, feeding of larvae, carrying pollen, attending to the queen, cleaning the hive, sharing food and bee dancing. (Refer to Figure 2.)

11. Point out the tube through which bees enter and exit. Observe whether they are carrying pollen into the hive.

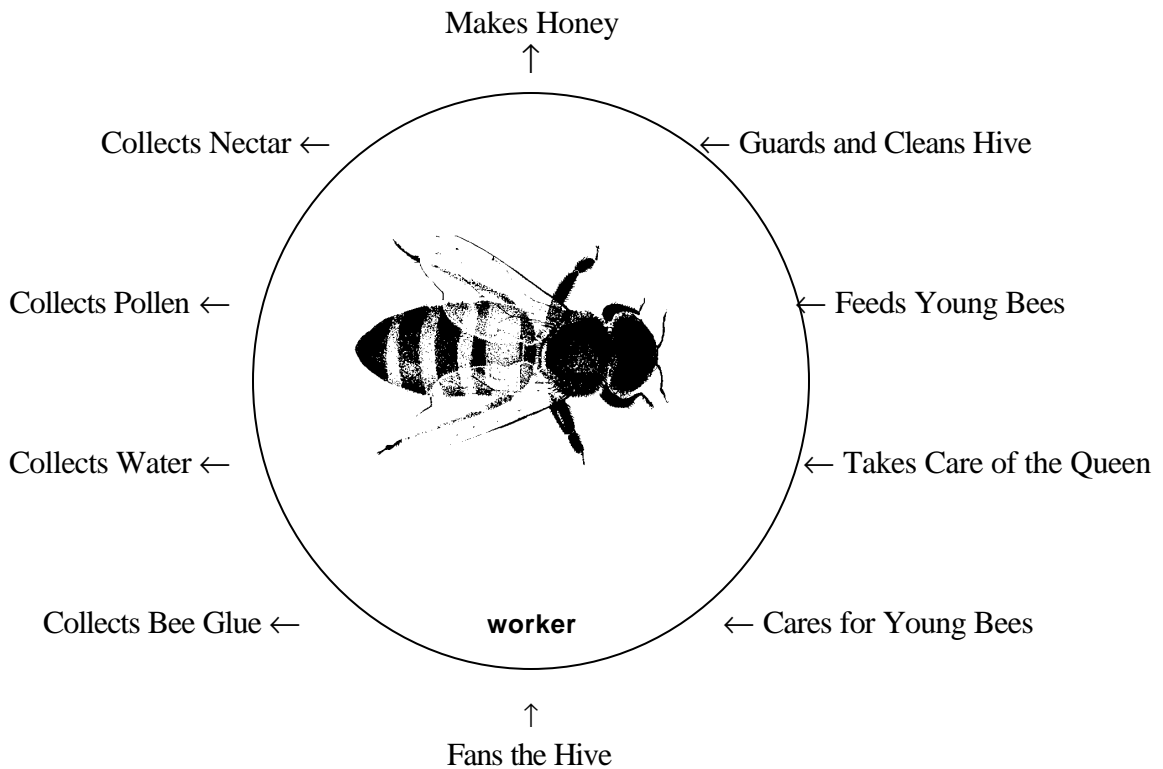


**Figure 2: Honey Bee Observation Hive**

12. Read “The Bees and Me” story to inform the students how honey is made. *The story is located in the file folder.*
- Show the eight honey making sequence cards to the students and ask them to describe what is happening in each card. Explain the picture if they do not understand.
  - Leave the cards, out of order, on the floor for them to see.
  - Tell the students, after the story is read, that they will have to use the cards to sequence the steps of making honey.
  - Read the story again.
  - Distribute the honey bee sequencing cards. Have students sequence the cards to tell the story of how honey bees can produce honey.

1. Building the Hive
  2. Bees into the Hive
  3. Queen, Worker, Drone
  4. Bee on Flowers
  5. Bees on Comb
  6. Smoking the Hive
  7. Removing the Wax Off the Comb
  8. Jars of Honey
- Proper Sequence of the Bee Story Cards

13. On the laminated “Worker Bee Web Chart,” have students brainstorm the jobs of a worker bee. (Refer to Figure 3 for sample answers.)



**Figure 3: Webbing as a Pre-Writing Strategy**

14. On chart paper, summarize the organization (Queen, Worker, Drone) of a honey bee community using ideas generated by students. Refer to Figure 4.

| Queen  | Worker   | Drone  |
|--|--|--|
| <ul style="list-style-type: none"> <li>- lays all eggs</li> <li>- gives off special scent</li> </ul> | <ul style="list-style-type: none"> <li>- collects nectar, water, pollen &amp; bee glue</li> <li>- makes honey</li> <li>- feeds young</li> <li>- guards and cleans hive</li> <li>- takes care of queen</li> <li>- all female</li> </ul> | <ul style="list-style-type: none"> <li>- mates with queen</li> <li>- all male</li> </ul> |

**Figure 4: Organizational Roles**

15. If time allows, examine a natural hive. Discuss how it differs from a man-made hive.

**Summary:** To end this activity, ask the following questions.

1. What are the three types of honey bees? State the function of each.
2. Are honey bees harmful or helpful? Why?
3. Using the sequencing cards, can you retell the story of how honey is made?
4. Which type of honey bee has a stinger? Why?
5. Which honey bee makes the wax? Why?
6. Which honey bee gives off a special chemical scent? Why?

**Follow-Up:**

1. Have students use their webbing to develop an informative paragraph. (Refer to Supplement B.) **(DL2&3)**
2. Use organizer from procedure 14 to develop an informative paragraph on the organization of a honey bee community. (Refer to Supplement B.) **(DL2&3)**
3. Using Supplement A, cut out and sequence the pictures to tell the story of honey. Write one or two sentences below each picture as a caption. (Refer to Supplement B.) **(DL2)**
4. Develop a puppet skit illustrating the various jobs worker bees perform. **(DL5)**

**Extension Activities:**

1. Make a list of jobs which people must do cooperatively.
2. Start an ant farm in your classroom. Have students observe and compare it to a bee colony.
3. Compare and contrast a bee community with the school community or neighborhood.
4. Refer to NatureScope: Incredible Insects, pp. 47-48, for an activity on making a honey and peanut butter snack.
5. Refer to NatureScope: Incredible Insects, p. 53, for a survey and discussion on how people feel about eating insects. **MC**

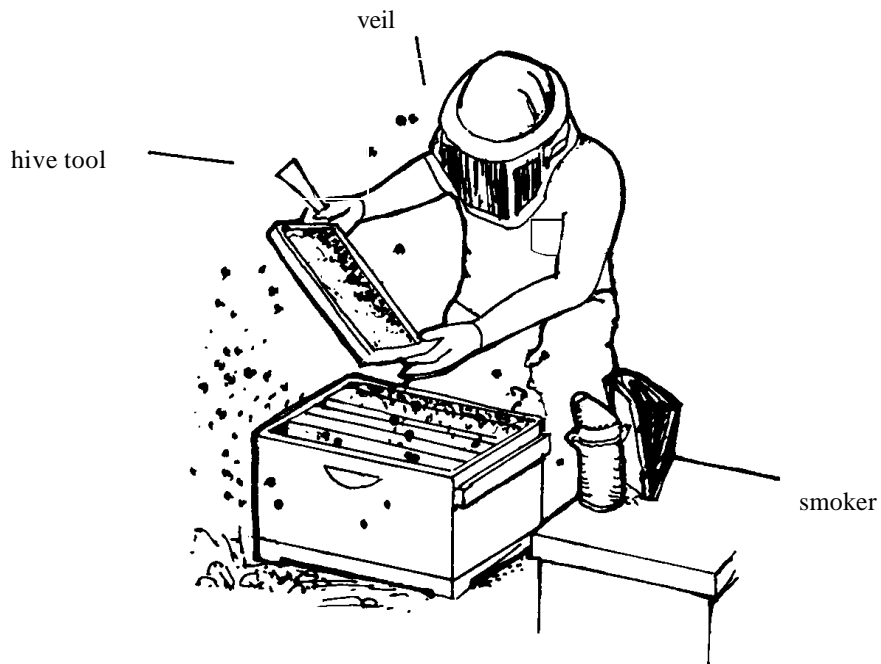
## Teacher Resources:

### Books:

- \*NatureScope: Incredible Insects, National Wildlife Federation, p. 53.
- \*NatureScope: Incredible Insects (Discovery Pac), National Wildlife Federation, pp. 23,36-37.
- \*The Honeybee, Raintree, 595.79 OTA.
- \*Honeybees, Lecht, Jane, National Geographic Society, 595.7 LEC.
- \*The Life Cycle of the Honeybee, Raintree, 595.7 HOG.

### Supplementary Materials:

- \*Honeybee Guidebook, Outdoor Education Program.
- \*Honeybee Study Prints, SVE.



“The Bees and Me” Story Cards

