

Do The Honeybee Dance!



LEVEL: Grades K-3

SUBJECTS: Science, Language Arts, Math

AZ ACADEMIC STANDARDS : SC00-S1C1, SC00-S1C3, LS-R2, LS-R5, LS-F1, LS-F2, 1AV-R2, 1AV-F-1, 1AV-F2, 1AV-F4

MATERIALS

one to two bags of treats (candy, cookies, honey sticks, raisins, etc.), several bags with odd items (paperclips, stapler, rubber bands, markers, etc.), yarn, two large poster papers, pen

VOCABULARY

hive, worker bee, forager bee, nectar, flower, receptors, feelers, Circle Dance, Wag-Tail Dance

RELATED LESSONS

How Busy are Bees?
Buzzing Bee's Wardrobe
To Bee or Not to Bee
Those Busy Buzz'n
Worker Bees

SUPPORTING INFORMATION

When a worker bee is three weeks old it changes jobs and becomes a forager bee. Forager bees are the bees that zip from flower to flower searching for the sweet juices, called nectar, for honey making. A forager honeybee can visit up to 10,000 flowers a day. All the nectar she collects in her entire lifetime can make only about one teaspoon of honey. When a forager bee returns to the hive, she tells the other bees about her important

discoveries. Honeybees communicate by using special movements called dances to tell other bees where to find a new location of flowers full of nectar or a place to build a new hive. The bee will dance on the honeycomb, while the other bees feel the dancing bee and learn where to find the food. By smelling the dancing bee and getting a taste of her load of nectar, the other bees can tell what type of flower she has visited. Different dances are used when the food is close by or far away from the hive. Bees have receptors on their feelers and legs which they use to feel the dance. There are several bee dances, but the most common are the circle dance and the wag-tail dance.

Circle Dance
The forager honeybee circles in one direction, turns around, and circles back the other way. This dance tells the other forager bees to look for new flowers anywhere within 300 feet of their hive. The worker bees must fly out in many directions looking for the flowers.

Wag-Tail Dance
This dance tells other forager bees that the flowers are further than 300 feet away. The bee dances a half circle in one direction, turns, and runs straight while wagging her abdomen. Then she dances a half circle in the other direction. These two half circles form a figure eight. The direction she dances while

BRIEF DESCRIPTION

Students learn two popular dances honeybees perform to communicate with other honeybees.

OBJECTIVES

The students will:
-understand how and why honeybees communicate within their society.
-practice the circle dance and the wag-tail dance.
-locate special treat bag according to honeybee communication.

ESTIMATED TEACHING TIME

1 class period (45 minutes)

SUPPORTING INFORMATION (cont'd)

wagging her tail tells where the flowers are in relation to the sun. If the food is in the same direction as the sun, the bee runs straight up the comb. If the food is to the left or right of the sun, the bee changes the dance direction by the correct amount to the left or right of the sun, the bee changes the dance direction by the correct amount to the left or right of the upright line. The distance between the hive and the food is communicated by the speed of the dance and the buzzing sound made by the dancing bee. The faster the bee dances, the closer the food. The bees know exactly where to fly because the wag-tail dance shows both the distance and location of the flowers.

GETTING STARTED

Prepare ten brown paper lunch bags with various objects such as paper clips, pens, staplers, etc. Fill one bag with special treats for the students to keep or eat. Cut a large length of yarn to make a huge circle around several desks. Label an area in the middle of the room as the honeycomb. Tape a sun to the wall north of the top of the comb. Place a pen in an area away from students.

PROCEDURESSession 1

1. Tell the class that you are going to select one person to retrieve your special pen without using words to explain where it is located. Select student and complete task using gestures, body language, hand signals, and facial expressions.
2. Explain how bees communicate where food is located. Draw two diagrams with directions for both dances. Allow students to

practice the dances. Student volunteers may challenge the class to guess their dance.

Session 2

3. After practicing dances, turn the activity into a game in which students work in a group to locate special treats in bags.

Classroom set-up: Place ten bags, one which contains the special treat, on different tables/desks. (Make sure you remember which table has the special treat.) Outline desks with a yarn border to represent the 300 feet mark from the hive.

Students are divided into small groups (2-4 depending on the class size).

The teacher demonstrates one of the dances to a particular group of students. That group watches the dance then goes to the bag that represents the location from the dance. Teacher may need to repeat the dance.

Once the group has found the correct bag, special treat bag, the teacher will mix the bags up again for the next group to try.

4. When all the groups have found the correct bag, follow-up with a class discussion about the ease or difficulty of communicating through dance.

EVALUATION OPTIONS

Students should be observed participating in the activity and classroom discussion.

EXTENSIONS AND VARIATIONS

Students in second and third grade may communicate where the bag is by completing the dance for small groups. (instead of the teacher demonstrating)

RESOURCES

Insects: Mailbox Grades 1 - 3, Published by The Education center, Inc., NC, 2000.

National Honey Board. 390 Lashley Street, Longmont, CO 80501-6045;

www.honey.com

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

The Honey Files: A Bee's Life, A Teaching Guide, Produced by the National Honey Board

CREDITS

Insects: Mailbox Grades 1 - 3, Published by The Education Center, Inc., NC, 2000.

The Honey Files: A Bee's Life, A Teaching Guide, Produced by the National Honey Board, 2001.

EDUCATORS' NOTES**CURRICULUM DESIGN**

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