

## Bee-utiful Relationships



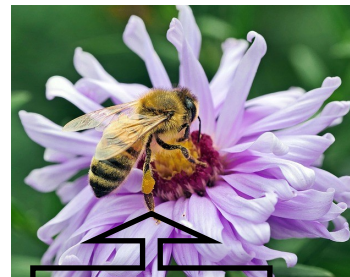
There are about 20,000 different kinds of bees in the world. Bees are four-winged, flower-feeding insects. They have big hind feet, branched or feathered body hairs, and generally a stinger. Honeybees and bumblebees are the most common.

Bees talk with each other about where to find food by dancing. The sounds from the movement of the bees are picked up by the tiny hairs on the bee's head. Bees also use the sun for directions.



Bees are good insects because they produce honey and pollinate crops. **Nectar** is a sweet watery substance found in flowers that the bees gather. After they process the nectar, they spit it back up into the honeycomb cells. Then they fan it with their wings to remove extra water. The final result is honey. A good hive can make and store up to two pounds of honey a day. Thirty-five pounds of honey provides enough energy for a small colony to survive the winter.

When bees visit flowers to collect nectar, some of the pollen sticks to them when they fly off. This pollen then drops onto another flower resulting in cross pollination. **Cross Pollination** is where the rebuilding information for two plants gets mixed together to make one new plant. The relationship between the plant and the bee is a win-win situation because it is good for both the bee and the plant. This type of situation is called a symbiotic relationship.



POLLEN

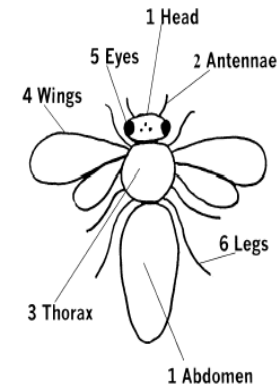
### TRY THIS FUN GAME FROM NAITCO

#### Beebuzz

This is a game in which you take turns with your friends to throw a die and draw a bee on a piece of paper. Any number can play. To play, you need only these instructions, a piece of paper, a pencil, and a six-sided die. The winner is the one who first completes the drawing of the bee.

To play, throw the die in turn. Each person gets one throw per turn. Depending on the number rolled, you may get to draw a part of the bee. The list next to the picture of the bee tells you what to draw based on the number rolled. To start the drawing, you must roll a "3" because whoever rolls this number gets to draw the thorax. All the other parts of a bee come off the thorax.

If you roll a number for a part that is already drawn, then you do not draw anything. You must wait until your turn comes around again to throw the die. Maybe you will be luckier next time.



- The first "3" rolled gets to start the bee by drawing the thorax.
- The first "1" draws either the head or the abdomen.
- The second "1" draws whichever is missing, the head or abdomen.
- For a "2" draw the two antennae, but only if you have drawn the head. If there is no head yet, pass the die to the next player.
- For a "4" draw the four wings.
- For a "5" draw the 2 big eyes on the side of the head and the 3 little eyes on top of the head (only if you have drawn the head).
- For a "6" draw the 6 legs.



## Career Corner



**Bee Husbandry** - Bee Husbandry involves the care and health of all types of honeybees. This can include stationary keepers who own permanent hives on farms or mobile keepers who travel from location to location transporting bees used in pollinating crops.

### How Beekeepers Benefit Agriculture:

- Bees are used in pollinating crops
- Blueberries and Almonds rely heavily on bees

### Beekeepers Chefs Study:

- Natural Sciences
- Biology



SCAN ME



## Farm Facts



- Bees must visit 2,000,000 flowers to make 1 pound of honey.
- In the United States alone, it is estimated that honeybees accomplish 1/4 of the pollination needed for all fruit produced for human consumption - an estimated \$10 billion worth of work each year!
- 25% of Pennsylvania honeybee colonies are moved south in the fall so that they can pollinate the citrus orchards.
- Pennsylvania produces 600 tons of honey each year

## Time to Read

Enjoy reading these books about bees!



- \* A 'Bee -Friendly' Guide to Help Save the Honey Bees; Inspired by Winnie the Pooh and Friends
- \* Bea's Bees ; by Katherine Pryor
- \* How do Apples Grow; by Betsy Maestro
- \* The Bee Tree; by Patricia Polacco
- \* The Beeman; by Laurie Krebs
- \* The Honeybee Man; by Lela Nargi
- \* The Honeybee and the Robber; by Eric Carle
- \* The Life and Times of the Honeybee; by Charles Micucci

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