

## **Bees: Social or Solitary Insects?**

### **Big World of Insects, Spiders & Bugs Series**

**Subject Areas:** Science, Life Science, Biology

**Synopsis:** In this program, we can compare and contrast social bees with solitary bees. Bumblebees are shown gathering nectar and pollen, and their characteristics are contrasted with those of honeybees. The different roles and duties of the bees in a social group are discussed and shown. The red mason bee provides a contrasting example of life as a solitary insect. The female is shown as she prepares a suitable nest for her egg and then provides for the larva with food and defensive camouflage.

**Learning Objectives:**

- Objective 1)** Students will be able to describe the similarities and differences between social and solitary bees.
- Objective 2)** Students will be able to describe the importance of camouflage.
- Objective 3)** Students will be able to discuss the various roles that bees have in a social group.
- Objective 4)** Students will be able to list the various tasks that female worker bees perform.

**Vocabulary:** Define and discuss the following key terms:

Bumblebee, pollen, ungainly, honeybee, aggressive, resourceful, discreet, male drone, colony, docile, hive, haphazard, nectar, chaotic, pupating, extricate, mason, mason bee, exterior, chlorophyll, camouflage, provisions

**Pre-Viewing Questions and Discussion:**

- 1) What do you know about bees? Where do they live? Do you think all bees live in groups?
- 2) What do bees do? Why are bees important to humans?
- 3) What are some characteristics of insects? List as many as you can and share your answers with the class.

**Post-Viewing Questions and Discussion:**

- 1) Describe the life of a bumblebee. What makes this bee a social insect?
- 2) How do bumblebees differ from honeybees? What are some specific characteristics of bumblebees?
- 3) Where might an ideal nesting location be for a bumblebee? Why?
- 4) In social groups of bees, there are three types. List them.
- 5) List and describe the various tasks of the female worker bees.

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- 6) Describe the outside and the inside of the bumblebees' nest. How does this nest differ from the nest of honeybees? How does this nest differ from that of the red mason bee?
- 7) Where do the bumblebees carry their cargo of pollen? Draw a picture to represent this.
- 8) What are the bumblebees' honeycombs used for?
- 9) Describe how the red mason bee disguises her nest.
- 10) In this program, the red mason bee uses a snail shell for her nest. Can you think of any other objects that might serve the same purpose?
- 11) Why is it important for the red mason bee to disguise her nest?
- 12) What does the red mason bee collect for the larva to eat?

### **Additional Activities:**

- 1) List the similarities and the differences between the red mason bee and the bumblebee.
- 2) Draw a picture of each kind of bee and label the head, thorax, abdomen, six legs, antenna and wings.
- 3) Pretend that you are a female worker bumblebee or a female red mason bee. Write a story that describes a typical day. Include descriptions of the various tasks that you have to do and how you feel about them. Also discuss how you feel about either living alone or as part of a colony.
- 4) Research either bumblebees or red mason bees. Find out where these insects live. Explain the importance of these insects to humans and their environments. Also include with your report a picture that shows how either bee fits into a food web. Remember to include the sun and flowers in your food web, as well as animals that might use the bees as food.

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