



Community Science

Pollinators – Grade 3

Lesson 8: Bumble Bee Progressive Skit

Duration: 25 minutes **Location:** Outdoor

Overview

In this lesson students will participate in a skit that teaches them about the lifecycle of a bumblebee colony.

Learning Objectives

By the end of the session, participants will be able to:

- Paraphrase the life cycle of a bumble bee, and
- Draw the pictorial representation of each stage discussed in the skit.

Curriculum links

Grade: 3

Subject and Unit: Science, Animal Life Cycles

- Identify the food needs of at least one animal from each of the following groups: mammals, birds, fish, reptiles, amphibians, insects; and describe changes in how each animal obtains food through different stages of its life.
- Predict the next stages in the growth and development of at least one animal from each of the following groups: mammals, birds, fish, reptiles, amphibians, insects, etc.
- Observe and describe the growth and development of at least one living animal, as the animal develops from early to more advanced stages. The animal(s) should be from one or more of the following groups: mammals, birds, fish, reptiles, amphibians, insects
- Demonstrate awareness that parental care is characteristic of some animals and not of others and identify examples of different forms of parental care.



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Equipment required

- Script
- Que Cards (optional)
- Worksheet (optional)

Lesson plan

| Time | Activity | Equipment Needed |
|---------|--|---|
| 2 mins | <p>Introduction</p> <p>A bumble bee's life cycle is fascinating. This Progressive skit follows the life of a bumble bee queen as she wakes up in spring and starts her own colony.</p> <p>Have the script and que cards (optional). This activity is ideal in an open space where youth can line up easily shoulder to shoulder in a line.</p> <p>Have the 'skit' area open and students facing you (standing or sitting). Explain you will be exploring the life of a bee through a fun, interactive story skit! Explain that as you read the story, you will need volunteers to act out each part!</p> | <ul style="list-style-type: none">• Script• Que cards (optional) |
| 20 mins | Skit | <ul style="list-style-type: none">• Script• Que cards (optional) |



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Read out the progressive skit. *(Optional, every time a volunteer comes up, place the appropriate cue card in front of them as a visual cue for their role, action and sound.)*

1. It's the beginning of spring. The snow is melting and the first blossoms of the year are emerging. Our queen bumble bee has been hibernating underground since the end of last summer. **She begins to wake up.**
 - a. Ask for a volunteer to be the queen bee. The volunteer comes to the front and faces the class. The volunteer performs the following action and sound effect: **<Stretch, Yawn>.**
 - b. The rest of the class echoes with the same action and sound: **<Stretch, Yawn>.**

2. Our queen bumble bee is very hungry and needs energy for her important work. **She flies looking for spring's first blossoms so she can fill up on nectar.**
 - a. Ask for a volunteer to be the next part of the story. The volunteer stands beside the first volunteer and performs the following action and sound effect: **<Hand to mouth, num-num>**
 - b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound: **<Stretch, Yawn; Hand to mouth, num-num>**

3. Our queen now has the energy she needs to **find a place to build her nest.** Bumble bees like to nest underground, in bird boxes, or under sheds.



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a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line in front of the class and performs the following action and sound effect:

<Hand shading eyes, looking back and forth; hmm>.

b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound:

<Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth; hmm>.

4. Our queen prepares her nest for her offspring. **She builds a mound of pollen on which to lay her eggs. She makes a wax pot and fills it with nectar so she'll have enough food to eat while she's sitting on her eggs.**

a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line and performs the following action and sound effect:

<hands shaping a mound, build, build>

b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound:

<Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth; hmm; hands shaping a mound, build build>.

5. Our queen **lays her fertilized eggs on the mound and covers them with wax. She sits on her eggs to keep them warm and drinks nectar to keep up her energy.**



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- a. Ask for a volunteer to be the part of the story. The volunteer takes the next place in-line and performs the following action and sound effect:
<sit, slurp>.
 - b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound:
<Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth; hmm; hands shaping a mound, build build; sit, slurp>.
6. The **eggs hatch and small grubs or larvae emerge. The larvae pupate, or form cocoons, then adult bees emerge.** This process takes 4-5 weeks.
- a. Ask for a volunteer to be an egg. The volunteer takes the next place in-line and performs the following action and sound effect:
<curl into a ball, then stretch tall, then spread wings; I'm free, I'm free>
 - b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound:
<Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth; hmm hands shaping a mound, build build; sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free >.
7. Each of these new hatched adult bees are female worker bees. Their first job is to go out and **collect pollen and nectar for the queen and larvae in their growing colony.**
- a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line and performs the following action and sound effect:
<fly, buzz>



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| | <p>b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound: <Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth, hmm; hands shaping a mound, build build; sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free; fly, buzz >.</p> <p>8. These female worker bees will feed and care for the queen bee and larvae until the larvae become a pupa and then transform into adult bees themselves.</p> <p>a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line and performs the following action and sound effect: <rocking and feeding a baby arm motion, eat up></p> <p>b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound: <Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth, hmm; hands shaping a mound, build build; sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free; fly, buzz; rocking and feeding a baby arm motion, eat up >.</p> <p>9. As spring progresses into summer more and more worker bees are produced. A bumble bee colony can produce as many 500 bees (this is far smaller than a honeybee colony which can produce up to 80,000 bees).</p> | |
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| | <p>a. Repeat actions and sound effects of steps 5-7. <sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free; fly, buzz; rocking and feeding a baby arm motion, eat up></p> <p>b. Repeat again.</p> <p>10. Toward the end of the summer, the colony produces male bumble bees from unfertilized eggs. The males emerge from the colony and never return. They have only one job: to mate with the new queens.</p> <p>a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line and performs the following action and sound effect: <spreads wings and waves, see you later></p> <p>b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound: <Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth, hmm; hands shaping a mound, build build; sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free; fly, buzz; rocking and feeding a baby arm motion, eat up; spreads wings and waves, see you later >.</p> <p>11. At the same time that male bumble bees leave the nest, new queen bumble bees are produced. She must mate with a male bumble bee so she can start her own colony next spring.</p> <p>a. Ask for a volunteer to be the next part of the story. The volunteer takes the next place in-line and performs the following action and sound</p> | |
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| | <p>effect: <shake hands, buzz></p> <p>b. The rest of the class performs the action and sound from each of the previous volunteers followed by this new action and sound: <Stretch, Yawn; Hand to mouth, num-num; Hand shading eyes looking back and forth, hmm; hands shaping a mound, build build; sit, slurp; curl into a ball, then stretch tall, then spread wings; I'm free, I'm free ; fly, buzz; rocking and feeding a baby arm motion, eat up; spreads wings and waves, see you later; shake hands, buzz>.</p> <p>12. At the end of summer, or in early autumn, the entire colony dies off, except for the new queens. <All of the other volunteers have a silent, but dramatic death. Sitting where they are> Now that they are fertilized, they must find a cozy spot to hibernate until spring: <Stretch and sleep, good night>.</p> <p>13. The new queen hibernates and whole cycle begins again with the new queen.</p> | |
| 3 mins | Debrief | |
| | <ul style="list-style-type: none">• What does the queen need when she emerges in the spring? (<i>Flowers for pollen and nectar</i>)• What do the bees need for food and shelter throughout the year?• What do the new queens need at the end of the season? (<i>a place to nest</i>) | |



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| | <ul style="list-style-type: none">• What can we do to help? (<i>Leave leaf piles, brush piles; plant native flowers; leave public spaces more natural</i>) | |
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Extension

1. Have participants create an art image, using the medium of your choice, to re-create a scene in the Bumble Bee Progressive Skit. Place these on a bulletin board in order to tell a visual story of the life of a Bumble Bee.
2. Have students complete the attached worksheet.