

The Cycle of Bees

In all of nature there are natural cycles that exist within humans, animals, and even the environment. Within this lesson there will be a closer look into the process of the pollination and the way in which each part of the cycle is vital for success. The microcycles will be used as a form of comparison to show how different parts of a cycle are important to keep production flowing.

Grade: 2nd Grade

Lesson Length: 45 minutes

Standards

K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

MP.5: Use appropriate tools strategically.

2-LS2-2: Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

SL.2.5: Create audio recordings of stories or poems; add drawings or other visuals displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

Objectives

- Students will be able to identify and define what a cycle is with 80% accuracy.
- Students will be able to identify the different parts of the microcycle with 80% accuracy.
- Students will be able to identify the different parts of the cycle of pollination with 80% accuracy.

Materials/Technology/Equipment

- ✓ One Green Microcycle
- ✓ Drawing paper
- ✓ Crayons/pencils

Activity Structure

**Opening Discussion
minutes**

15

Students will begin the lesson by watching a demonstration guided by the teacher.

1. The teacher will ask for a volunteer to mount the microcycle and begin pedaling slowly.
2. The teacher will then ask what they see happening?
3. The teacher will then tell the student to stop pedaling and ask the rest of the class what they notice happening? What is the difference? What is not there, that was there before?
4. The teacher will then ask:
What does the bike need to move?
What does your feet push?
What do the pedals help move?
Where do you get the energy to pedal?

The teacher will then draw on the board a diagram in which a cycle is illustrated about food giving the student energy to pedal, which turns the wheel, which makes the bike produce electricity, which can power things like a microwave!

**Lesson
minutes**

15

Once the students have been introduced to the parts of the bike and the way in which they work together the students will be asked to identify other cycles within their environment:

1. The teacher will define the word cycle, go over the definition and then continue to ask for examples.
2. The teacher will then give the example of bees.
3. The teacher will then show a bee on a flower. A teacher will ask what do bees make? (Honey, can we eat honey? What is food used for in our bodies?) Is this a cycle?
4. The teacher will then go over the term pollination. Define and explain that bees help pollinate the flowers as they get what they need to make honey.

The students will then be asked to work with a partner and draw a cycle of the way bees work to pollinate flowers and make honey. They also have to label the drawings. Once the students have completed the drawings the students will be asked to explain their cycles. Discuss what is happening.

**Wrap-up
minutes**

10

Exit Ticket: The students will have to compare and contrast the cycles of both the microcycle and the pollination cycle. Some examples include:

THE GREEN MICRO CYCLE

- Honey versus food
- Pedaling versus flying
- Pollinating leading to plants, animals eat plants versus giving electricity we use to cook.

After the Lesson

Homework

Students will be asked to identify another cycle that happens within their environment.

- Draw a picture
- Label parts.

Extension Activities

- The students can expand on the idea of cycles and begin learning other life cycles and even water cycles.
- Lessons regarding energy and fossil fuels can be introduced.
- The idea of renewable resources.