Grade Level: Second
Unit: Life Science
Lesson 4 Title: Pollinators

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

Learning Target: Develop and describe a model that shows how plants are pollinated.

Success Criteria:

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Disciplinary Core Ideas:

LS2.A: Biodiversity and Humans

- Plants depend on light and water to grow.
- Plants depend on animals for pollination or to move their seeds.

Science and Engineering Practices:

- Asking Questions
- Constructing Explanations
- Arguing from Evidence
- Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts:

- Patterns
- Structure and Function
- Cause and Effect

Materials:

For the Teacher:
Seeds, Bees, and Pollen (Rourke Classroom)
Teacher Picture Packet "Pollinators"
The Beauty of Pollination Wings of Life Disney Video (4:17)
https://www.youtube.com/watch?v=xkq1edcbk4

Teacher Tip:
Incorporate Seed to Plant from Theme 3 in the anthology.

For the Students:
Science Journal

Procedure:

1. Begin by showing the animal pictures from the picture packet “Pollinators” and asking students to identify them. Ask students how they are all alike. (They are all animals.) Then create and display a chart like the one below. Ask students to respond to the question, “Do animals depend on plants?” Collect and record their responses. Then ask and record any evidence students’ share. Repeat with the reverse question, “Do plants depend on animals? Compare and discuss the results. Tell students that in this lesson we will find out if animals depend on plants and/or if plants depend on animals.

Do animals depend on plants?	
YES	NO
What evidence do you have?	What evidence do you have?

Do plants depend on animals?	
YES	NO
What evidence do you have?	What evidence do you have?

2. Tell students that they are going to watch a short video that shows different types of plants and animals. As the video plays tell students to think about the questions from the chart. Show the video “The Beauty of Pollination.” http://www.youtube.com/watch?v=_ckOwMqjmW4

3. After the video, ask students to describe what kind of animals they saw. (bees, insects, and butterflies) Ask what the flowers looked like, what shapes and colors they were. Accept all reasonable responses.

4. Ask students to share ideas about how the animals and the plants might have been helping each other. Accept all reasonable responses. Then ask students if the video might have changed their mind about the relationship between plants and animals. Retake the poll by asking, “Do plants and animals help each other in any way?” Record the number of yes/no/not sure responses. Compare results to the previous results.

5. Facilitate a discussion that **leads students to conclude that some animals get their food from plants and that the plants depend on the animals to take their pollen to nearby plants so that the plant can make seeds and more plants.**

6. Use CCRS to introduce and read pages 1-11 of Seed, Bees, and Pollen. After reading, ask if the book confirms what we learned from the video. **Ask students to summarize in their groups how plants, animals and insects depend on each other.** Guide students by asking questions to **conclude that animals like bees, butterflies, hummingbirds, and bats get food (nectar) from the plants. In return the animals carry pollen from flower to flower to help the plant make new seeds for more plants.**

7. Have students draw a picture in their journal illustrating the interactions between plants and animals. Have them write to explain how the insects or animals help the plants to reproduce.

Opportunities for evaluation in this model include:

1. Students' **portfolio** response illustrating and describing how plants and insects are beneficial to one another.

***Teacher Tip: Alert**
Plant chia seeds 5-6 days before the beginning of the last module in this unit. Fill a 5 oz. paper cup ¼ full of potting soil and add a pinch of chia seeds. Moisten the soil and place the cup in a well-lit area. Seeds should sprout in 3-4 days.