Grade Level: Second
Unit: Life Science
Lesson 8 Title: Traveling Seeds

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

Learning Target: Describe how seeds move from place to place.

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

Performance Expectations:

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

For the Teacher:

Pollination, Plants, and Insects Video (8:20)
http://www.neok12.com/Pollination.htm
Picture Packet "Planting Seeds"
Picture Packet "Dandelions"

For each Student:

Teacher Tip: Seeds are purchased from Carolina Biological and may include substitutions for those listed. SEEDS ARE NOT A CONUSMBLE MATERIAL – KEEP SEEDS IN SEPARATE BAGS FOR USE NEXT YEAR.

Hand lens
Student Activity Pages “Observing Seeds - One”
and “Observing Seeds - Two”

For each group of 4 Students:
Student Lab Pack “Seeds” (Thistle, Basswood, Maple, Cocklebur, Vetch, Sedge)

Procedure:

1. Use pages 6-9 of Seeds, Bees, and Pollen to review how insects, birds, and other animals are pollinators that carry pollen from flower to flower. **Ask what happens after the flowers are pollinated?** The flowers are able to produce seeds. **Ask students if the seed has a job to do. Accept all reasonable responses.**

2. Tell students that we are going to watch a video clip showing a seed being produced after pollination. Explain to students that the actual process takes a lot longer than the time we are seeing it happen. Use the video “Pollinations, Plants, and Insects” to show the pollination of a flower. The section from 5 minutes to 5 minutes 35 seconds shows the process of the seeds being produced and released.
http://www.neok12.com/Pollination.htm

3. After the video, **ask students what they think happens to the seeds after they are released from the adult plant.** Accept all reasonable responses. Students should have learned in first grade that seeds make new plants.

4. Use the picture packet “Planting Seeds ” to show the pictures of people planting seeds and caring for plants. **Ask, “Are all seeds planted by people? Allow time for student discussion**. As students share ask them to support their ideas with evidence. **Ask students if there might be other ways that seeds get started.** Accept reasonable responses.

5. Show students the pictures in the picture packet “Dandelions.” **Ask, “Have you ever seen these fuzzy things growing? What are they?**” (Dandelion head seeds) “**What do you think happens to the seeds that the girl is blowing into the wind**?” The seeds are carried by the wind to another place. The seeds will eventually grow into new plants. **Can you think of any other ways seeds might travel and start new plants**? Begin a chart titled “How do

Seeds Travel? Then record students' ideas and evidence they have to support those ideas. Ideas might include wind, animals, cars, airplanes, animals, etc. Keep the chart for use in the next module.

6. Tell students they are going to observe a variety of seeds and then try to figure out how they might move from place to place. Distribute the student activity page "Observing Seeds" and hand lens to each student. Give each group of students the student lab pack titled "Seeds." Tell students to use the hand lens to observe each seed and work with students as needed to complete the "Observing Seeds" activity page by making and recording careful observations of their size, shape and other properties.

7. Monitor progress and encourage detailed descriptions and drawings. Probe students to support their predictions with evidence.

8. When finished, ask students to share their observations, ideas and evidence of the how each seed might travel from one place to another. Add any additional information to the class chart "How Do Seeds Travel?"

9. In their journals have students use evidence from their investigation to illustrate and explain three different ways a seed can travel.

Opportunities for evaluation in this model include:

1. Students responses on the activity page "Observing Seeds."

2. Students' journal response illustrating and explaining how three way seeds move from place to place.