

## Activity 2.3 Seeds

### Introduction

You have learned that Velcro® brand material was invented after a man observed how burrs were attached to his dog's fur. This is an example of how seeds can be dispersed, or spread, by animals. Can you think of other ways that animals might disperse seeds?

In this activity you will explore ways that animals disperse seeds. You will also learn about the form and function of seeds as well as seed germination and plant growth.

### Equipment

- iPad® tablet
- Lima bean seeds [pre-soaked 24 hrs.] (3-4 per group)
- Resealable plastic bag – sandwich size (1 per group)
- Napkin (1 per group)
- Spray bottle or dropper with water (1 per class)
- Sharpie marker (1 per class)
- Cellophane tape
- Launch Log
- *How a Seed Grows*, by Helene Jordan

### Procedure

#### Part 1 – Seeds and Plant Growth

In this part of the activity, you will learn about seeds, plant structures, and growth.

1. Log into the LMS on your tablet.
2. View the presentation entitled *Seeds*.
3. Label the parts of the seed cycle in your Launch Log.
4. Be ready to share what you learned with your classmates.

#### Part 2 – Seed Germination and Plant Growth

In this part of the activity, you will prepare a plant growth “chamber” using a resealable plastic bag and lima bean seeds. You will make daily observations as you look for changes in plant structure and predict the purpose of those new structures. Your task is to make daily observations. Include a data table and drawings in your Launch Log.

1. Day 0 – Experiment set up
  - a. Obtain a resealable plastic bag.

- b. Use the marker to label your plastic bag at the top with your names and the date.
  - c. Fold a piece of paper towel several times so that it will fit flat inside your plastic bag.
  - d. Spray the paper towel with water until it is saturated. Insert the paper towel into your plastic bag.
  - e. Place 3-4 bean seeds inside the bag on top of the paper towel on the opposite side of the bag from where your name is written.
  - f. Seal the plastic bag.
  - g. Tape your plastic bag to the window with your seeds facing outside toward the sun.
  - h. This is considered Day 0.
2. Day 1 – Observation #1
    - a. Go to the window and carefully pull down your growth chamber.
    - b. Look for signs of change from the previous day.
    - c. Complete the data table in your Launch Log.
    - d. Take a close-up image of your germinating seed with your tablet.
    - e. Make sure the napkin is still wet. If not, add a little water and reseal the bag.
  3. Day 2 – Observation #2
    - a. Repeat all that you did for Day 1 observations.
  4. Day 3 – Observation #3
    - a. Repeat all that you did for Day 1 observations.
  5. Day 4 – Observation #4
    - a. Repeat all that you did for Day 1 observations.
  6. Day 5 – Observation #5
    - a. Repeat all that you did for Day 1 observations.
  7. Day 6 – Observation #6
    - a. Repeat all that you did for Day 1 observations.

### **Part 3 – Documenting Your Work**

Create a Popplet with your images. Add labels to each image. Include the day and the information you accumulated in your data table in your Launch Log.

## Conclusion Questions

Answer the following in your Launch Log or submit your answers using the Canvas app on your tablet.

1. What are seeds?
2. Name some ways animals disperse seeds and pollinate plants.
3. How does the form or shape of the seed help with the ways it is dispersed?