

Surprising Seeds Pre-Trip Activities

To prepare your students for the investigations they will do on site, we recommend doing these activities prior to your visit.

Seed Sorting

Purpose:

To familiarize students with sorting and classifying seeds by external characteristics

Materials:

- A seed assortment of various sizes and textures (Note: A bag of 11 bean soup mix will work, and seeds from the outdoors)

Steps:

1. Share with the students that to prepare for the field trip they will begin to explore seeds.
2. Give each pair or small group of students ten to fifteen assorted seeds.
3. Ask each group to discuss how their seeds are alike and different. Then ask each group to sort the seeds based on how the seeds look on the outside. If needed, give some examples: large/small, dark/light, round/oval, etc.
4. As a class, discuss the different properties the students used to sort the seeds. Make a chart with the descriptions and categories the students used. For example: texture, size, shape, etc.
5. Ask: *Because seeds look different on the outside, will they look different on the inside? Why or why not?* Let the students know they will answer this question on their field trip to the Botanic Garden.

Creating a “Know-Wonder-Learned” Seed Chart

Purpose:

To assess students present knowledge of seeds.

Materials:

- Poster board or Craft Paper
- Markers

Steps:

1. Make three columns on a piece of poster board or craft paper. Label the columns “Know”, “Wonder” and “Learned”.
2. Have the students tell you what they know about seeds. List their responses under the “Know” column.
3. Ask students what they would like to know about seeds. Write these questions in the “Wonder” column. Be sure to bring these questions with you on your field trip!
4. **POST TRIP:** When you return from your field trip, ask the students what they learned about seeds while at the Chicago Botanic Garden. Write these responses in the “Learned” column.

Literature Connections

From Seed to Plant by G. Gibbons, *Flowers, Fruits, and Seeds* by S. Morgan, *How a Seed Grows* by H. Jordan

Surprising Seeds Post-Trip Activities

These activities will build upon the learning experiences from the field trip. We recommend doing these activities after your visit.

Sprouting Seeds

Purpose:

To introduce students to the concept of seed germination.

Materials:

- Raw Lima Beans
- Soaked Lima Beans (soak for 24 hours)
- Sandwich-size Ziploc Bag
- Paper Towels
- Water

Source: Grow Lab: Activities for Growing Minds. *National Gardening Association*. 2002.

Note: This activity takes place over multiple days. Be sure to thoroughly wash hands before handling seeds to avoid mold growth!

Steps:

1. Give each pair of students one soaked lima bean and one raw lima bean. Have a discussion about the similarities and differences between the two beans. Discuss what happened to the beans while soaking.
2. Have the students work to pull off the seed coat of the soaked lima bean and split the bean in half. Ask: *Do any parts of the seed look like a familiar plant part? Do you think the seed is alive? Why or why not?*
3. Have the students wet a paper towel and squeeze any excess water out. The paper towel should be damp, not soaked. The students should fold their paper towel to lay flat inside the Ziploc bag.
4. Place the lima bean halves on top of the paper towel (with the embryo facing out) and seal the bag shut for one week. Have the students predict and record how they think the seeds will look in 7 days.
5. Have the students examine the seeds daily and record/draw any changes they observe throughout the germination process.
6. After seven days, discuss findings. Ask: *How did different parts of the seed change throughout the week? What happened first? Next? Did everyone's seeds change at the same time and in the same order?*

Seeds of Knowledge

Purpose:

To assess what students know about seeds

Materials:

- Paper
- Pencil/Markers/
Crayons

Steps:

1. Share with the students that they will get to share what they have learned about seeds.
2. Have each student make a seed shape using paper.
3. On the seed shape have the student write or draw what he/she learned about seeds.
4. Collect the seeds and make a class book or bulletin board.

Literature Connections

From Seed to Plant by G. Gibbons, *Flowers, Fruits, and Seeds* by S. Morgan, *How a Seed Grows* by H. Jordan