



WHAT IS A SEED?

Objectives:

- | |
|--|
| <ul style="list-style-type: none">• Students will learn a basic definition for a seed (a home for a baby plant). |
| <ul style="list-style-type: none">• Students will observe seeds to witness how baby plants sprout under the right conditions: with moisture and the right temperature. |

Materials:

- Dehydrated Lima Bean Seeds and edible sunflower seeds for all students
- Small paper plates for each student
- Crayons
- *A Seed is a Home for a Baby Plant Worksheet*

Procedure:

You need to bring moistened and dry seeds for each student in the class. Begin to moisten edible sunflower seeds three days before giving the lesson. To do so, place them between thoroughly dampened paper towels to create an environment for the seeds to sprout. Moisten the paper towels daily. On the night before giving the lesson, soak lima bean seeds in a glass container of tepid water so the seeds will sprout.

Guided Inquiry: What do seeds need to begin to grow or sprout (germinate)?



Step 1: Place samples of dry and soaked Lima and sunflower seeds on a paper plate. Gather the students around you to show them the seeds. Begin a discussion. Ask them, “What is a seed? What do you know about seeds?” Allow the children time to share their ideas.

Then, show the students a dry Lima seed to illustrate the hard, intact skin. Show them how difficult it is to split the dry seed open. Then, take a moist Lima Bean seed. Remove the skin and split the seed open to illustrate how moisture softened the skin and made it easy to split in two. Show the baby plant growing inside. Point to the two leaves hidden within. Tell them that the seed sprouted because the seeds sat in water throughout the night. Then, explain that in the garden, rain provides the moisture for

seeds to sprout. All seeds need moisture and the right temperature to sprout.

Show the students a hard sunflower seed. Point out how hard it is. Show that you cannot open it. Then, show the sprouted sunflower seed and tell the students that the seeds sat in moist paper towels for three days before they sprouted.

Tell the students that all seeds have protective coatings. Some, like the Lima, have a soft skin; others like the sunflower have a hard shell. Whether the protective covering is soft or hard, moisture combined with the right temperature, will induce sprouting.



Step 2: Ask the children to return to their seats. Place samples of dry and soaked Lima and sunflower seeds on paper plates to distribute to each of the students. Prior to distribution, instruct them to keep the seeds on the table and not to put them into their mouths. (Observe them carefully as young children love to put things, food or not, into their mouths!). Ask them to look at the dry and sprouted samples of both kinds of seeds. Have them open a moist Lima seed to find the new growth inside and to look carefully at the sprouted sunflower seed. Remind them that the seeds sprouted under the right conditions: **with moisture and the right temperature**. Explain that a bean is a seed!



Step 3: Ask individual students to describe the similarities and differences between the dry and soaked Lima and sunflower seeds. Reintroduce a discussion about the previous questions, “What is a seed?” and “What do you know about seeds?”



Step 4: Hand out copies of *A Seed is a Home for a Baby Plant Worksheet*. Ask the students to draw a sprouted seed. Mount their finished projects to hang them around the classroom.

Extension 1: Have the students plant a Lima and/or sunflower seed in seed starter containers such as Styrofoam cups filled with potting mix, or Jiffy seed starter pellets. This way each child can watch the plant sprout and grow true leaves. Then, if the season is right, they can plant their seedling in their garden at home. You can also plant six of the sunflower seeds in an EarthBox Ready to Grow Kit if the weather is right!

Extension 2: Sunflower Masks

Procedure: Follow the five steps to make a mask as a sample
And then have the children do the same:

- Cut the centers out of paper plates
- Use yellow paper to make paper petal shapes
- Glue a jumbo craft stick handle to the bottom of each mask
- Ask the students to put on their masks
- Ask them to make a face that shows that the sunflower is happy, sad, angry, confused etc.

Go to the following sites to find other fun things to do

Resources:

http://www.sunflowernsa.com/uploads/coloringbook_1_4.pdf

http://www.sunflowernsa.com/uploads/coloringbook_5_8.pdf

WHAT IS A SEED?

A Seed is a Home for a Baby Plant Worksheet