

# Pumpkin Learn and Play

## Seed Viewer Lesson Plan

### Key Concepts:

- Seeds grow into new plants
- Seeds are a lunchbox for the new plant (they are a source of energy for the new plant)
- Seeds need water and warm temperatures to sprout
- Roots grow first followed by the stem and leaves

**Overview:** Plant pumpkin seeds (or beans) in clear plastic cups to allow students to watch seeds sprout.

### Materials:

- Plastic cups (can be washed and reused)
- Construction paper
- Paper towels
- Pumpkin seeds or dried beans
- Water

### Instructions:

*Prep Work: Cut pieces of construction paper into rectangular strips to line the plastic cups.*

1. Help students place a piece of construction paper inside a plastic cup so that it lines the entire side of the cup.
2. Ball up a few pieces of paper towels and place them inside the construction paper liner until the cup is full.
3. Let students pick out 3 to 4 pumpkin seeds or dried soup beans (avoid using any seeds/beans that are broken or split) and place them in the cup between the side of the cup and the construction paper liner.
4. Gently water the paper towels until saturated.
5. Place the cups on a shelf or windowsill and watch them grow. First you will notice the seed coat expanding (wrinkling) as the seed absorbs water and then the root will start to grow in 2 to 3 days. Water as necessary to keep the paper towel and seeds continually moist. Seed germination can be impacted if the temperatures are too cold (if you are comfortable, most likely your seeds will be too).
6. After the roots emerge, the stem and leaves will begin to appear. You can continue to grow your plant as long as you want for observation, however generally seeds that have been sprouted this way do not transplant well out into the garden and they will not be able to grow to maturity in the cup.



### Activity Extension:

You can extend your lesson by experimenting with temperature and water availability. Try placing a couple of the seed viewers in a refrigerator and also see what happens if you do not add water. You can use this as a way to talk to students about the conditions seeds need to grow.

Additionally, you may want to pair this activity with seed planting outdoors so you can watch plants go fully from seed to seed.

### Discovery Station Ideas:

- Set up a bin of dry beans and seeds for kids to explore on their own. Add measuring cups, spoons and other containers to allow them to measure and sort them. Encourage them to compare textures, colors, sizes and shapes. You can also chart your findings.
- Make seed art. Allow students to make mosaics using seeds and beans, glue and paper.

### Related Books:

- Pumpkin Circle by George Levenson
- Jack and the Beanstalk (many versions available)
- Sunflower House by Eve Bunting
- A Seed is Sleepy by Dianna Aston



## Molly's Pumpkin Pie Recipe

1. Turn the oven to 425 degrees Fahrenheit.
2. Make a pie crust or use a ready-made crust.
3. To make the filling mix all of these ingredients in a large bowl:
  - 2 cups mashed pumpkin
  - 1 13-ounce can evaporated milk
  - 2 eggs
  - 1/2 cup brown sugar
  - 1/2 cup granulated sugar
  - 1 1/2 teaspoons cinnamon
  - 1/2 teaspoon each of ground ginger, nutmeg, allspice, and cloves
4. Put the pie tin on the oven rack and pour the pumpkin mixture into the pie crust. It gets a bit splashy, so pour carefully, and ease the rack back into place.
5. Bake at 425 degrees Fahrenheit for 15 minutes. Then, turn down the heat to 350 degrees Fahrenheit and bake for another 35 minutes or more.
6. When the filling is set, the pie is done. To test: put in a clean knife. If it comes out gloppy, bake the pie longer.

### Additional Resources:

For information on how gardening activities align with Head Start Program Performance Standards and the Early Learning Outcomes Framework, download the National Farm to School Network's excellent resource - Growing Head Start Success with Farm to Early Care and Education available at:

<http://www.farmentoschool.org/resources-main/growing-head-start-success-with-farm-to-early-care-and-education>

More gardening resources for early childhood educators are available at <https://kidsgardening.org/ece-resources/>

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# Pumpkin



Pumpkin is a fruit that people can eat. It grows from a long green vine with big leaves. Pumpkins can be many colors, like orange, yellow, white, green, or blue!