

## The Sprout Machine

**Grade:** K

**Season:** Any

**Objective:** This activity will allow this often hidden process of germination to be witnessed, day-by-day. In the end the children discover the nutritious snack of edible sprouts

**Time:** 5-10 minutes per day, over a period of a week.

**Materials:**

- Sprouting Seeds (mung bean seeds are easy to see)  
\*\*\* It is important to use organic seeds designated for sprouting – these can be found at health food stores
- Glass Quart Jar
- Construction paper (a dark blue or black works best)
- Water

**Introduction:**

When conditions are right, a seed in the ground will suddenly come to life and you see the tender green shoots emerging from the soil. But how did this happen? What changes took place between the time the seed lay dormant to the time a green shoot is seen above ground?

When soil reaches the right temperature, and there is enough, but not too much moisture, the seed will start to germinate. The seed absorbs water and its seed coat softens. The root emerges first and grows in a downward direction, toward the center of the earth, searching for water and nutrients. Next comes a green shoot that pushes upwards, sometimes a few inches through the soil until it bursts through the surface. By this time the food that was stored within the seed is almost used up, so the tiny shoot opens up its first leaves to harness the sun's energy to produce its own food (photosynthesis).

**Activity:**

1. Students have seen the inside of the seed and now you can explain to them that over the next week they will be viewing real seeds as they soften and sprout into tiny plants.
2. Pass out a seed to each child and let them draw a picture of it. They can even tape it to their paper so that they can see the original size later.
3. Place about 1/3 of a cup of the seeds in a big bowl of water to soak overnight. (This will be done ahead of time)

4. The next day, drain and rinse the seeds and place them all in the clean glass quart jar. Add a little bit of water, enough to moisten the seeds.

5. Cover the jar with a square of cheesecloth and a rubber band. Place the jar in a warm spot, out of the sun.

7. The seeds need to be rinsed every day. Be sure to drain them thoroughly and add a little water to moisten the seeds.

8. The seeds should take 4-7 days to sprout. The children can make observations and drawings daily, charting the progress of the seeds germination.

9. Once the seeds have sprouted, but before they have their first true leaves, they are ready to be eaten.

\* The students may take home their jar with seeds and continue the experiment at home. They will be given a note explaining how to care for their sprouting seeds.

**Wrap-up/Assessment:**

Students share their observations, and draw the changes they see.

**Extensions:**

Planting experiment