



Create your own seed museum and investigate how different seeds germinate.

# SEED MUSEUM

## What you need:

Transparent plastic cup  
Paper towels  
Seeds (lima beans, radish, zucchini, sunflower, chives, zinnia, corn, lettuce, marigold)  
Marker

## What to do:



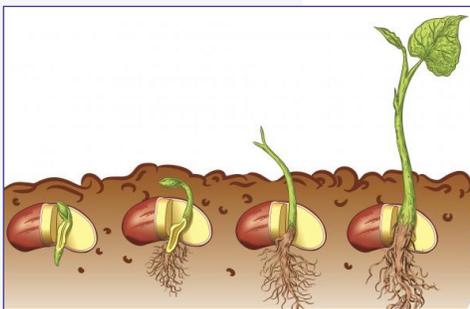
1. Line your plastic cup with 2 sheets of paper towel, first folded in half and then in thirds.
2. Scrunch another sheet of paper towel and place it gently in the centre of the cup.
3. Place the seeds in groups between the paper towel and the side of the plastic cup.
4. Label the groups of seeds by writing their names on the outside of the cup with a permanent marker. (Images 1 and 2)
5. Pour water into the centre of the cup to wet the scrunched up paper towel. The water will wick through the surrounding paper towels and keep the seeds moist.
6. Check your museum each day to look for signs of germination. Remember to add water as needed to keep the paper towels damp.

### Observations:

1. Which seeds germinated?
2. Did all the seeds of a particular type germinate? For older students, what percent germinated?
3. Did all seeds take the same amount of time to germinate?

### Extension:

Using the same seed type, create two seed museums and place one in a dark location and one in a sunny location. Compare rate and percent germination to see the effect of light on germination of that particular seed type. You can also explore the effect of temperature by placing one museum in a warm location and the other in a cooler location. Remember to change only one variable at a time.



### What is seed germination?

Seed germination is a complex and fascinating process! Seeds contain an immature plant called an embryo. Under the right conditions, the embryo will grow into an adult plant. In order to germinate, the seed must absorb water. This process is called imbibition and it happens with enough force to crack the seed coat open so that a primary root (radicle) can emerge. Its job is to extract key nutrients and minerals. The seed also contains embryonic leaves called cotyledons, which emerge to produce the growing plant's first leaves. Seeds come with a temporary source of food called endosperm made up of starch and packed around the embryo.