

INQUIRY/LABS FOR PLANTS AND THEIR NEEDS

For each of the mini labs below, have students predict what they think will happen and use an inquiry planner graphic organizer or a science journal to document what will happen and what did happen.

1. **To show how leaves get water:**

Use a white carnation or a stock of celery. Put water into a clear container and add some food coloring to the water.

2. **To show what plants need and to show the germination process:**

Bean seeds work well for this. Use clear containers, plant a seed in soil and provide light and water. Plant a seed in soil and provide light only. Plant a seed in soil and provide water only.

3. **How plants make food (photosynthesis)**

You will need lots of cotton, a flat dish, a water spray bottle and mustard seeds. Layer the cotton at least an inch thick on the plate and spray it with the water bottle. Sprinkle the mustard seeds on the cotton. Spray again with water. Keep in a sunny place near the window, spray the seeds lightly each day and night if needed. The seeds need to be kept damp. (You can do this and leave the seed in a dark place to compare what happens when they don't get the light needed). (There will be lots of sprouts by 30 days).

4. **Sprouting seeds**

You will need dried kidney beans and a clear jar (plastic zip lock bags also work well) . Line the jar with damp paper towels and pour an inch of water into the jar. Put the a few kidney beans between the paper towels and the jar to enable you to see the beans sprout. If you keep them damp, they will germinate and grow. (You can also do this with enough beans for each student and once the seedling is large enough, each child can plant their bean in a small planter and soil and measure its growth over time and then bring them home.)

5. **Growing without soil**

You will need a few carrots, a saucer and water. Cut the top off the carrots where the dotted line is shown. Put the carrot top in the saucer with water in it. Make sure it stays wet over the next few days. The top of the carrot will grow.

