



SOIL VS. COTTON

MATERIALS:

- COTTON BALLS
- POTTING SOIL
- LIMA BEAN SEEDS
- WATER
- THREE CLEAR PLASTIC CUPS
- NOTEBOOK



PROCEDURE:

1. Fill one plastic cup halfway with soil. Place a few seeds on top of the soil leaving a little space between them. Then fill the rest of the cup with soil, so you can bury the seeds.
2. Fill the other plastic cup halfway with cotton balls. Randomly place one or more seeds between the cotton balls. Fill the rest of the cup with cotton balls, again burying the seeds.
3. Fill the third plastic cup with water.
4. Carefully pour a small amount of water over the cup containing the soil. Make sure the soil is not soupy, but moist to the touch (sticks to your fingers).
5. Carefully pour a small amount of water over the cup containing the cotton balls. Start with a VERY SMALL amount of water, and add more water a little at a time. The cotton balls should just be moistened, not soaking.
6. Place the cups on a shelf or window ledge (make sure the ledge is not too cold). Plants do better if they are able to get some sun.
7. Water plants as needed when the soil/cotton balls are dry to the touch.
8. Watch every day and write down what happens.






WHAT THIS MEANS:

Like any living thing in a developing stage, the seeds' cells divide, creating a tiny stub that will be the beginning of the root. This little finger, called a "radicle," is the first thing to push out of the seed and anchor itself in the soil. In order for the tiny roots (and the plant) to grow, it needs water and nutrients. While the cotton can hold water to help germinate the seeds, it does not contain the kind of nutrients found in soil which the seeds need to thrive and grow.

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