

Garden Ecology: Water and Air Experiment

You need: 3 small jars with lids, clean and dry
very dry soil mix

9 bean seeds
gravel or pebbles for drainage

- **Number** your jars #1, #2, and #3. Put the **date** on each jar.
- **Put** 2 inches of gravel in jars #1 and #2. Do **not put** gravel in jar #3. **Fill** all three jars with very dry soil mix, leaving 1 1/2 inches of space at the top.
- **Put** three bean seeds on the soil in each jar, and **cover** with 1/2 inch more soil mix.
- Do **not add** water to jar #1.
- **Pour** water into jar #2 very slowly until the soil is moist all the way down and some water drains into the gravel. It will help to move the container of water carefully across the top of the jar so water is poured over the entire soil surface. You should be able to **see** water around the gravel, but it should not be deep enough to touch the soil.
- Gently **pour** water into jar #3 until the water reaches the top of the jar. Let it bubble down (or "percolate") into the soil. **Add** more water until the jar is completely **full**.



- **Put** the lids on the jars, and **close** them tightly. **Place** the jars in a dark place. The temperature should be 65° to 90° F. Keep a record of the daily temperature.
- **Observe** (look carefully at) the jars each day for two weeks, and **write** down any differences you see. _____

- What do you **think** caused the differences in the way the seeds grew or didn't grow? _____

When the beans sprout, you can **remove** the lid and **put** the jar in a sunny place for the bean plants to grow.