



## Variation of Traits Activity for Kids

### Plant Growth Conditions DIY

 Duration: **30-60 min**    Difficulty: **Medium**    Cost: **\$0 to \$5**

Investigate how different environments influence the traits of bean plants!

### Material List

- 3** Bean seeds
- 3** Small cups or glass dishes
- 1** Bag of potting soil
- 1** Pile of dry dirt
- 3** Cotton balls
- 1** Plate
- 1** Spray bottle with water

### Instructions

- 1** Pull apart the cotton balls a little so they are fluffy, and put them on a plate.
- 3** Wrap one bean seed in each cotton ball and spray them generously with water.
- 5** Place all three into one of the glass containers.
- 6** Give it a few sprays every other day.
- 7** In about a week, you should see the seeds sprouting.
- 8** Plant the first bean sprout in a container using potting soil and give it a few sprays of water.
- 10** Plant the second sprout in the same way but use dry dirt and do not water it.
- 11** Plant the third sprout in potting soil but add lots of water to represent a flooded area.
- 12** Leave all three beans to grow for several weeks and observe the results.

### How It Works

In Zoe's experiment, the bean that was planted under optimal conditions—rich soil, regular water, and sunlight—grew the best. The optimal conditions led to a plant with healthy traits. The plant grown in drought-like conditions didn't grow much. Its small size was influenced by the dry environmental conditions. The plant grown in flood-like conditions was also small, and its leaves turned yellow. These traits were influenced by the very wet environment. Many traits are inherited from parents, but some (like the ones we observed in this demonstration) are influenced by the environment.

