

## Growing Beans in a Bag

The purpose of this experiment is for kids to learn and observe the germination process and the life cycle of a plant. Usually, you cannot see the roots sprout when the seed is under soil, but since there is no soil in this experiment, you can see the whole process from germination to mature, adult plants!

What you will need:

- Plastic zip top bag
- One paper towel
- Bean seeds (you can use any dried bean from your pantry but the fresher the better)
- *Optional: Popsicle sticks to frame your bag for hanging on the wall or in a window*

### How to Grow Beans in a Bag:



Fold the paper towel so that it fits nicely inside the plastic bag. Wet it with some water (you do not want the paper towel to be dripping wet but it should be decently damp). Insert the wet paper towel into the plastic bag and place the bean seeds right on top of the paper towel.

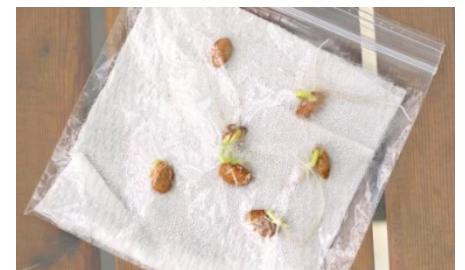


Seal the bag shut and set it in a warm, sunny spot for observation over the next couple of weeks (you can tape it to the window, if you want, but it is not necessary).



Check your bag each day to see the progress. At first, you will notice a lot of condensation inside the bag, as if you created your own little greenhouse for the bean plants!

In 3-5 days, you should see one or two of the beans have cracked their seed coats and little shoots will be poking out (these are called the radicle). This is the beginning of the root system for the plant.



After a few more days, you should see the roots grow hairs and spread out across the paper towel. Watch how the seeds change and grow each day (if the paper towel starts to dry out, add a little more water).

When the seedlings start to develop leaves, plant them in soil and place them in a sunny spot (you can use a paper cup, a flowerpot, a jar or plant them directly into the garden!). Keep your seedlings moist, make sure they get lots of sunlight and watch as they grow into full-grown bean plants!

