



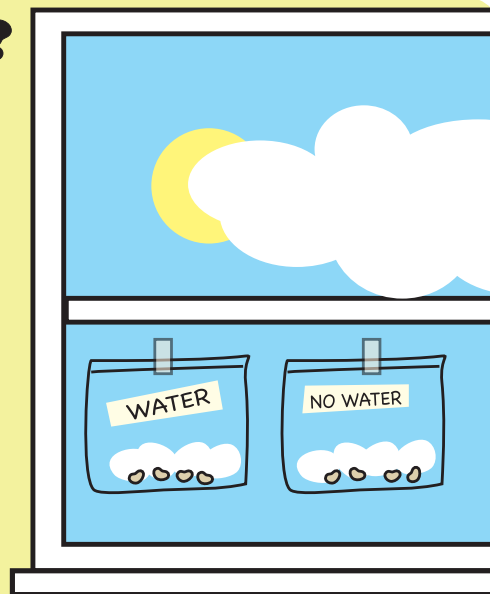
### Can a plant grow without water?

**You will need:**

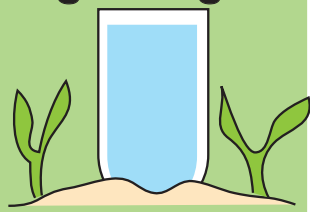
dried pinto beans from the grocery store  
8 cotton balls  
water  
two resealable bags  
marker  
sunny window  
tape



1. Notice how the beans are different from refried beans you've eaten.
2. Dampen 4 cotton balls with water. Leave 4 cotton balls dry.
3. Put 4 beans in a bag with the damp cotton balls, and 4 in another bag with the dry cotton balls.
4. Label one bag "water" and one bag "no water." Seal the bags shut.
6. Tape the bags on to a sunny window.
7. Check the bags once a day. What changes do you observe?



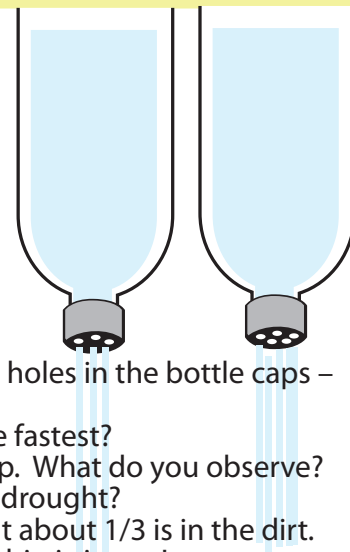
### How do you save water and still keep your vegetables growing?



**You will need:**

two plastic 2-liter bottle with caps  
adult to help you  
sharp knife  
hammer & nail  
measuring cup  
water  
your garden

1. Ask the adult to cut off the bottom of the bottles using the sharp knife.
2. Next, have him or her use the hammer and nail to punch holes in the bottle caps – one with 3 holes and one with 5.
3. Which bottle do you think will allow the water to drip the fastest?
4. Add one cup of water to each bottle and watch them drip. What do you observe?
5. Which bottle would be best for watering plants during a drought?
6. Bury the bottle in your garden with the cap down, so that about 1/3 is in the dirt.
7. Pour water into the bottle. You now have your very own drip irrigator!



### What plants do well during a drought?

Beans, squash, peas and tomatoes all do well with less water. Plants with small leaves do better than plants with big leaves. Living things need water to grow, so, in your activity, the beans with dry cotton balls don't sprout as well. The slower drip irrigator works best so that plants don't get too much water. It's better than a hose because water dripping underground doesn't evaporate on a hot, sunny day.

GrowingGreat's mission is to empower children to adopt healthy eating behaviors through science-based garden and classroom experiences. Does your school have a GrowingGreat garden or nutrition program? Email [info@growinggreat.org](mailto:info@growinggreat.org) for more information.

