Family Learning

Tip Sheet

Lincolnshire COUNTY COUNCIL
Working for a better future

Growing seeds experiment

This is an experiment to see what conditions seeds need to start growing.
You will give each seed different conditions and monitor them to see what happens.

Materials:

Seeds of beans, peas or sunflower (because they are all big and germinate quickly)
4 plastic cups (clear ones are better for viewing progress, but any colour is ok)
Kitchen roll
Water
Marker pen

Instructions:

Take a sheet of kitchen roll, fold it in half and then roll it up. Put it inside one of the cups. Repeat for all 4 cups.

Put one or two seeds in each cup, ideally between the kitchen roll and the side of the cup.

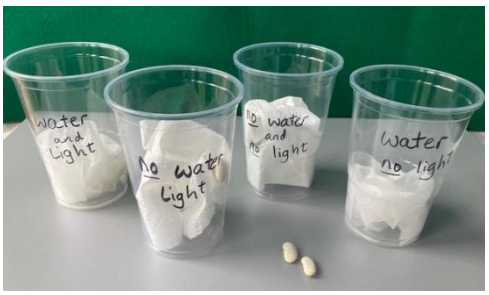
Give the first cup water and light – a windowsill is ideal

Give the second cup water but no light – put it in a cupboard or other dark place

Give the third cup light but no water

Give the first cup no water and no light

Use the marker pen to write the conditions on each cup so you don't forget which ones need water.



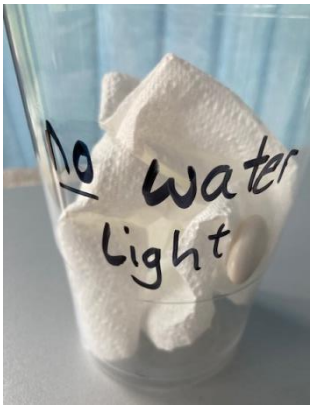
Predict what you think will happen, which seed will *germinate* (start to sprout) first, which will grow the fastest or tallest?

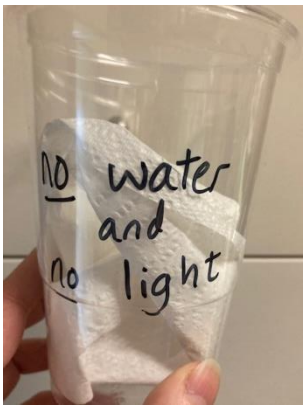
Check your seeds every couple of days (check the seed packet to see how long they usually take to germinate), make sure the two with water in stay moist.

Measure the ones that grow to see how fast they are growing. You could make a chart and write down the measurements.

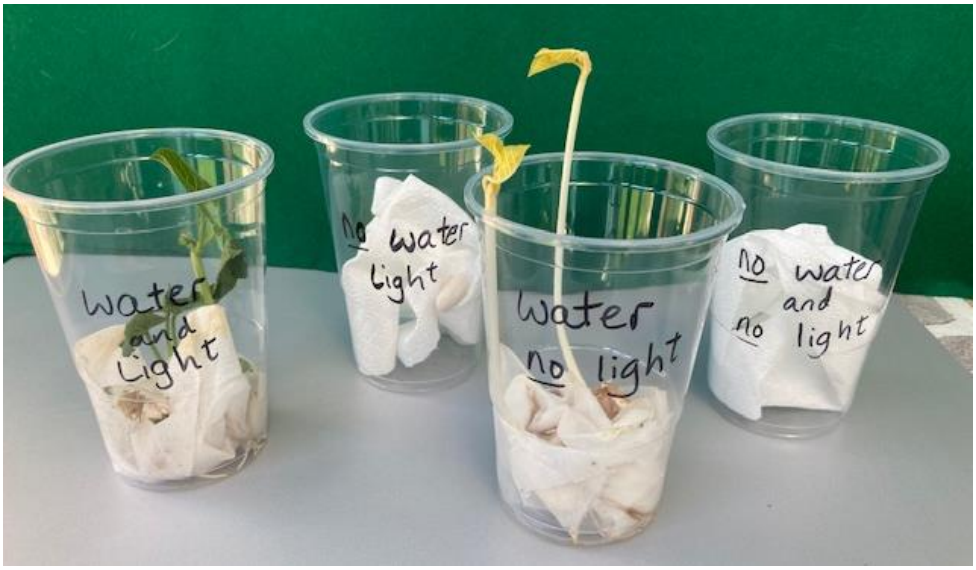
After a couple of weeks you will see that some of the seeds didn't grow. Why not? What does this tell you about the perfect conditions for planting seeds? Were your predictions correct?

After 10 days my seeds looked like this:





After 19 days they looked like this:



The seeds that had water were able to germinate both in the light and in the dark.
The seed that grew in the dark is very pale and tall. It has been searching for the light.
The seeds with no water didn't germinate.

For more information about the life cycle of plants see here:
BBC Bitesize - The Life Cycle of Plants on Vimeo

For information about why plans need sunlight (and other things) visit:
https://sciencing.com/do-sunlight-warmth-soil-grow-5933400.html

Finally when the plants are a bit bigger you can plant them in your garden or in a pot with some soil!

Happy gardening, *Helen*