

Topic: Plants

Potato shoot experiment

<http://www.kidspot.com.au/kids-activities-and-games/Science-experiments+10/Potato-shoot-experiment+10983.htm?>

What you need:

a shooting potato (one that has little white shoots growing out of it)
a shoe box
scissors
rocks

What to do:

Cut a small coin-size hole in the short end of the shoe box.

Put a handful of potting mix in the corner of the box opposite the hole you have made.

Lay the potato in the soil.

Put the rocks in the box with the potato to create 'obstacles'.

Put the lid on the box and put it somewhere where there is plenty of light.

After 4 weeks, open the box and you'll see that the potato shoot has made its way around and over the rocks to reach the hole where the sunlight is coming in.

Why?

Plants have cells that are sensitive to light and tell the plant which way to grow.

Plants will always grow toward the light.

The shoe box had a tiny hole of light and the potato shoot twisted until it reached the light.

Topic: Plants

Plant Seeds & Watch Them Grow

<http://www.sciencekids.co.nz/experiments/seedgermination.html>

Learn about seed germination with this fun science experiment for kids. Plant some seeds and follow the growth of the seedlings as they sprout from the soil while making sure to take proper care of them with just the right amount of light, heat and water. Have fun growing plants with this cool science project for children.

What you'll need:

- Fresh seeds of your choice such as pumpkins seeds, sunflower seeds, lima beans or pinto beans.
- Good quality soil (loose, aerated, lots of peat moss), if you don't have any you can buy some potting soil at your local garden store.
- A container to hold the soil and your seeds.
- Water.
- Light and heat.

Instructions:

1. Fill the container with soil.
2. Plant the seeds inside the soil.
3. Place the container somewhere warm, sunlight is good but try to avoid too much direct sunlight, a window sill is a good spot.
4. Keep the soil moist by watering it everyday (be careful not to use too much water).
5. Record your observations as the seeds germinate and seedlings begin to sprout from the seeds.

What's happening?

Hopefully after a week of looking after them, your seedlings will be on their way. Germination is the process of a plant emerging from a seed and beginning to grow. For seedlings to grow properly from a seed they need the right conditions. Water and oxygen are required for seeds to germinate. Many seeds germinate at a temperature just above normal room temperature but others respond better to warmer temperatures, cooler temperatures or even changes in temperature. While light can be an important trigger for germination, some seeds actually need darkness to germinate, if you buy seeds it should mention the requirements for that specific type of seed in the instructions.

Continue to look after your seedlings and monitor their growth. For further experiments you could compare the growth rates of different types of seeds or the effect of different conditions on their growth.

Topic: Plants

Capillary action

<http://www.sciencekids.co.nz/experiments/escapingwater.html>

Water can certainly move in mysterious ways, get the water from one cup to make its way up hill and back down into a second empty cup with the help of paper towels and an interesting scientific process.

What you'll need:

- A glass of water
- An empty glass
- Some paper towels

Instructions:

1. Twist a couple of pieces of paper towel together until it forms something that looks a little like a piece of rope, this will be the 'wick' that will absorb and transfer the water (a bit like the wick on a candle transferring the wax to the flame).
2. Place one end of the paper towels into the glass filled with water and the other into the empty glass.
3. Watch what happens (this experiment takes a little bit of patience).

What's happening?

Your paper towel rope (or wick) starts getting wet, after a few minutes you will notice that the empty glass is starting to fill with water, it keeps filling until there is an even amount of water in each glass, how does this happen?

This process is called 'capillary action', the water uses this process to move along the tiny gaps in the fibre of the paper towels. It occurs due to the adhesive force between the water and the paper towel being stronger than the cohesive forces inside the water itself. This process can also be seen in plants where moisture travels from the roots to the rest of the plant.

Topic: Plants

Paper Petals

Give a paper flower a drink

MATERIALS

- White paper
- Colouring pens
- Scissors
- Plate
- Water

STEPS

1. Draw a flower shape onto a piece of paper.
2. Colour in the flower. Use which ever colours you like best.
3. Carefully cut around the petals of the flowers.
4. Carefully fold in the petals, one on top of the other.
5. Pour some water onto the plate, and float the flower in the middle. What happens?

DID YOU KNOW?

Thirsty flowers: In dry weather, when flowers are short of water, they usually close up their petals. After a shower of rain, the petals will open up, just like those on your paper flower.