



Rolls-Royce

Cub Scout Scientist Badge

Growing a bean



Growing a bean

Leader's notes

Grow a pea or a bean. When the root and shoot are visible investigate what happens when the seed is turned upside down and left to continue growing

You will need:

- A clean, empty clear pot or cup
- Kitchen paper
- 2 x beans (or peas)
- Water.

What to do:

1. Roll two or three layers of kitchen paper around the inside of the cup
2. Wedge the beans (or peas) between the kitchen paper and the cup about half way down
3. Put about 2-3 cm of water into the cup
4. Leave the beans (or peas) somewhere light – a windowsill is ideal – and check regularly to make sure the kitchen paper is moist. Add a little more water if it starts to dry out
5. When the beans (or peas) have started to grow shoots, turn one of the beans upside down. Leave to grow and check every day or so to see what happens.

How does it work?

Plants are affected by a number of factors, including light, gravity and food. When they start to grow, the roots grow downwards and the shoots grow upwards. When you turn one bean upside down, the bean senses that it is now growing in the wrong direction. The roots and shoots change direction, so they are growing the right way again.

Further ideas:

-  Try growing an extra bean or pea in another cup. After the roots and shoots begin to grow, wrap some dark paper around the jar to stop any light getting in (or put the cup into a dark cupboard). Leave for a few more days and then check to see what has happened.

Growing a bean or pea. When the root and shoot are visible investigate what happens when the seed is turned upside down and left to continue growing

Name			
Cub Pack			
<p>Write what you have done in the spaces below.</p> <p>I collected these things:</p> <p><i>A cup</i> <i>A bean</i> <i>Some paper</i></p> <p>This is what we did:</p> <p><i>We put the paper in the cup. We then put the bean between the cup and paper. Then we watered it.</i></p>	<p>Draw a picture of your planted bean.</p>		
<p>Useful words:</p> <p>bean plant water paper cup</p>			
<p>Extras:</p> <p>Look at the beans that were planted before tonight and answer these questions:</p> <p>What happens if a bean doesn't get enough water?</p> <p><i>It won't grow</i></p> <p>Which beans grow the best? Ones that are in the dark or light?</p> <p><i>Light. The beans in the dark will die</i></p> <p>What happens when a bean that has started to grow is turned upside down?</p> <p><i>It starts to grow the right way again</i></p>			

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Draw a picture of each of the different beans in the boxes below and label them with how they have been grown.
