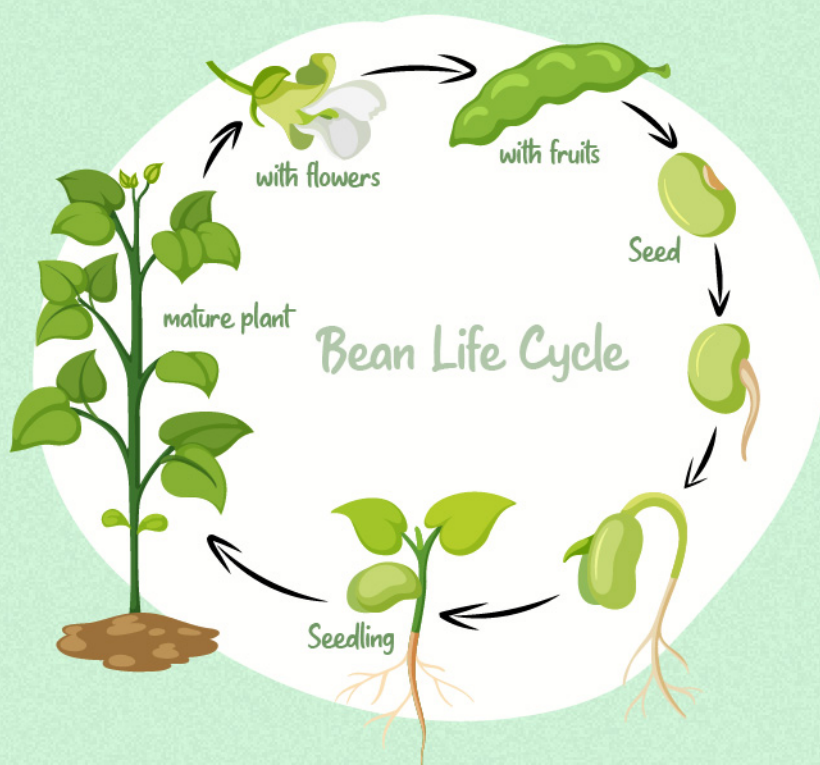




Life Cycle of a Plant



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The life cycle of a plant typically starts with the seed. Given enough water, oxygen and the right temperature, the seed will start to germinate.

Think: Which part of the plant grows first?



Once the seed germinates, the roots will grow towards the water source. Shortly after that, we will see green leaves emerging as well. We call this young plant a seedling. The seedling will photosynthesize (make its own food) when sunlight is present, converting light energy to chemical potential energy.

When the plants mature, some of them will start to flower. These flowers attract birds and insects to help them reproduce by transferring pollen from one flower to another. Once pollination happens, flowers are fertilised, and this is when we will see them develop into fruits.

The life cycle continues when seeds in the fruits are scattered onto places with the correct conditions to grow.

Think: What are the needs of a plant?

ACTIVITY

Time to grow your own plant!

Materials:

5 x mung beans

1 x empty container

Cotton wool

Water



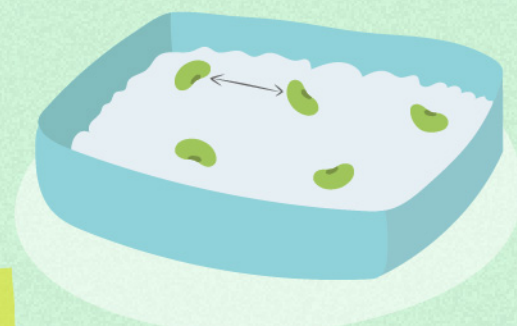
Step 1

Line the bottom half of the container with cotton wool.



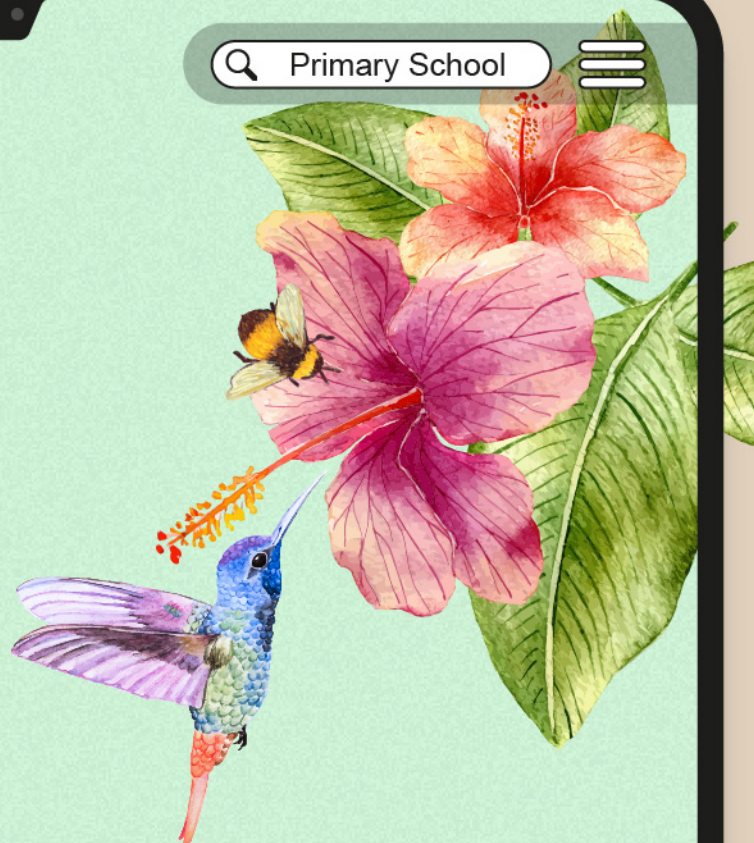
Step 2

Dampen the cotton wool with water.



Step 3

Place the beans on the cotton wool at least 1 – 2 cm apart from each other.



**Step 4**

Place the container in the open, near any window.

**Step 5**

Remember to water your plants every day!



Think: Is sunlight really important?

ACTIVITY

Let's set up another container of mung beans but this time round, let's put it in a shoe box near the same window!

PS: remember to create some holes in your shoe box so your plants can breathe. And don't worry about any stench in your shoe box, plants cannot smell!

Now...
Do the beans in the shoe box still germinate?

Think: Why are the beans still able to germinate without light?

Well, sunlight is not needed for plants during the germination stage. At that stage, plants get their food from a food reserve, called endosperm, inside the beans/seeds. As such, germination only requires the right amount of water, oxygen and temperature. But the food reserve doesn't last forever.

What happens when we continue to leave the plants in the shoe box after germination?

Record the differences observed between the two containers of mung bean plants after a few weeks.

You can even make a few more containers of mung bean plants and test out if other needs, like water and space, are really necessary!

