

Activity: Plant Life Cycle

On SCOPE's Life Cycle episode, you saw Julia look at the life cycle of a tomato!
Here's how she did it.



What you need:

Some stuff from the nursery: seed tray, potting mix, packet of tomato seeds
Water

What to do:

1. Fill the seed tray with soil until it is almost full.
2. Using your finger, make a little hole in the soil of each compartment.
3. Place one seed in each hole and then cover the seed with a bit more soil.
4. Water your seeds.
5. Place the seed tray in a safe place where it will receive some sunlight (e.g a window sill).
6. Remember to water them every couple of days.
7. After about 2 weeks, the tomato plant shoot should start appearing!
8. When the plant gets too big for the seed tray, transfer it to a pot that is full of potting mix.
9. Make sure your plant receives sunlight and that you water it every couple of days.
10. After 4 weeks, your plant will be taller and will have grown more leaves and thicker roots.
11. After 14 weeks, your plant will start growing flowers which means it has reached maturity and will soon produce its own fruit!
12. When the tomatoes grow, don't forget to save some of the seeds to plant for next time!

What's happening?

From little things big things grow. This saying definitely rings true when it comes to plants!

Tomato seeds are small and disc-like in shape. Inside is the plant embryo that the plant grows from, and protecting that is a hard shell called a seed coat. The seed absorbs water from the soil, which causes the embryo inside the seed to swell and break out of the seed coat. This is the beginning of the germination process.

Every plant has a different germination period. Our tomato seeds will take around 10-14 days to start growing. When a seed germinates, a small root begins to grow downward into the soil and a small shoot grows upward towards the surface. Like all plants, they will need nutrients, air, water and sunshine to produce its own food and grow into a seedling and eventually into a mature plant.

(Picture of plant with leaf, stem, roots, CO₂ O₂ labelled)

Tomatoes, like all fruit, form from the ripe ovaries of the plants, which are located at the base of the flower. As the seeds develop, the ovary swells into a green unripe tomato, and the flower dries up and falls off.