

Investigating vegetative reproduction

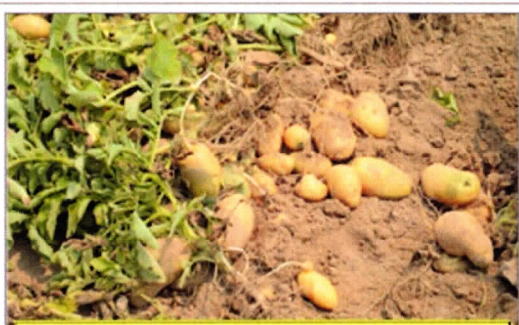
Learning Objective:

I can investigate whether a new plant will grow from a potato.

Plant reproduction:

Some plants can reproduce using **flowers**. The flower allows material from **two flowers** (possibly different plants) to come together to create another organism in the form of a seed. When the seed grows into a plant it has some of the features of both its parents. This is similar to the way animals reproduce, requiring both a **male** and a **female** parent.

Plants can also reproduce in another way. A broken-off part of a plant can grow into a new organism. The new plant is a separate individual, but is a **clone** of the parent plant-like an identical twin. This is called vegetative reproduction requiring only one parent. Farmers can use this technique to deliberately make identical tubers.



Each of these potato tubers can be made to grow into an individual clone of their parent plant.



Scientific Question:

How can you grow an individual clone of a potato?

You will need:

- A living potato (or more if you wish)
- An egg box
- A window sill to observe the potatoes
- A place to plant the potato in a few weeks

Method:

It is best to **chit** the potatoes to get them started. To do this, first find potatoes that have several **eyes** (these are black spots or marks on the outside of the potato). Place them into an egg box and leave on a window sill where you can watch what happens next. The eyes should begin to sprout **leaves** (which is unusual for a plant when usually the **roots** sprout first). You can then plant the potatoes straight into the ground or in a deep container. Once the potatoes start growing you will need to bury all the leaves in lots more soil, encouraging it to grow up and up and up some more. Remember to give them some water. Later in the spring, when the leaves start to die, the potatoes can be dug up or tipped out of the container.

Results:

Did your potatoes produce **clones**? Make sure to share them with your family, cooking them as chips, roasts or mash