

Investigating vegetative reproduction

Outstanding Science Year 5 - Living things and their habitats - OS5A007

National Curriculum Statutory Requirements

5A2 - describe the life process of reproduction in some plants and animals; UKS2W1 - planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary

Learning Objective



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

Me:   

Teacher:   

Plant reproduction

Some plants can reproduce using **flowers**. The flower allows material from **two flowers** (possibly on 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 of its parents. This is called **sexual reproduction**, and 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** and is a type of **asexual reproduction**, requiring only **one parent**. Farmers can use this technique to deliberately make identical plants, such as potato clones which produce nearly identical tubers.



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

Scientific question

Which parts of a plant will grow into a new individual?

You will need:

- A living plant, such as a potato or tomato plant
- Secateurs
- Several containers of soil

Method

Using secateurs, carefully cut the plant into several pieces. Depending on the plant and the time of year, it may consist of the following: **leaves**, **stem**, **roots**, **tubers**, and **flowers**. Place each of the plant parts into a container of soil. Observe whether each of the plant parts grows into a new individual.

Fair testing

What are you going to change in your investigation?

What are you going to keep the same in your investigation?

Results

Which plant parts grew into a new individual?