

Key Ideas

Plants can reproduce sexually or asexually. Some plants can reproduce both sexually and asexually.

Plants that reproduce sexually have male and female parts. To reproduce the pollen of the male part (“the stamen”) has to fuse with the female part (“the carpel”).

Some plants reproduce asexually when a single organism or cell makes a copy of itself. The genes of the original and its copy will be the same, except for rare mutations. They are clones. Gardeners propagate some plants to reproduce them.

Birds, amphibians, insects and mammal reproduce sexually by mixing genetic material from the male and female to create young.

Metamorphosis is part of the reproductive cycle for insects and amphibians.

Key Questions

How can plants reproduce?

Does sexual or asexual reproduction produce clones?

Draw the male and female reproductive parts of a flower.

Do all flowers that reproduce sexually have both male and female parts?

Explain one method how a plant may be propagated.

Compare and contrast the reproduction of birds and amphibians.

Key words

Explanation

Asexual

Asexual reproduction is the form of reproduction when a single organism or cell makes a copy of itself

Bulbs

The name given to the underground bud or stem of a seed plant at resting stage.

Carpel

The female reproductive part of a flower. It has three parts: the stigma, style and ovary. The stigma is the sticky knob at the top of the carpel. It is attached to the long, tube-like structure called the style. The style leads to the ovary that contains the female egg cells called ovules.

Fertilisation

Fertilisation occurs when two sex cells fuse together for the animal or plant to create a new life or seeds.

Pollen

Pollen is the powdery substance some plants produce that causes plants to form seeds.

Propagate

The process of creating new plants from a variety of sources: seeds, cuttings, bulbs and other plant parts.

Reproduce

The process by which a living organism creates a likeness of itself. This process may be asexual or sexual.

Seeds

The fertilized ripened ovule of a flowering plant containing an embryo and capable of germination to produce a new plant.

Sexual

Reproduction in which genetic material from two individuals of opposite sexes mix to create offspring. It involves the fusion of male and female sex cells (also known as gametes) in a process called fertilisation. Both plants and animals can sexually reproduce, eg, human reproduction and pollination in plants.

Stamen

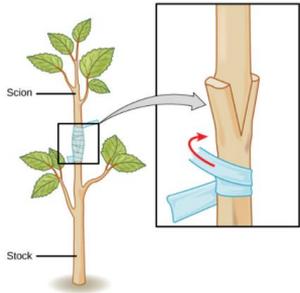
The male reproductive part of a flower. It is made up of two parts: the anther and filament. The anther produces pollen (male reproductive cells). The filament holds the anther up.



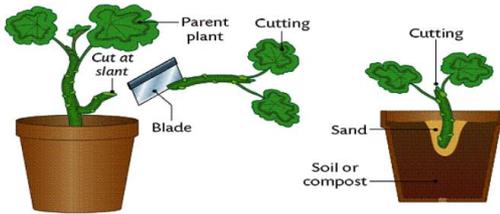
Key Figure: George Washington Carver

His date of birth is unknown as he was born a slave. Once slavery was abolished, he got an education and became an important agricultural scientist. He developed crop rotation, which boosts soil fertility and increases both production and sustainability of farms.

Types of plant asexual reproduction.



Cuttings and grafting

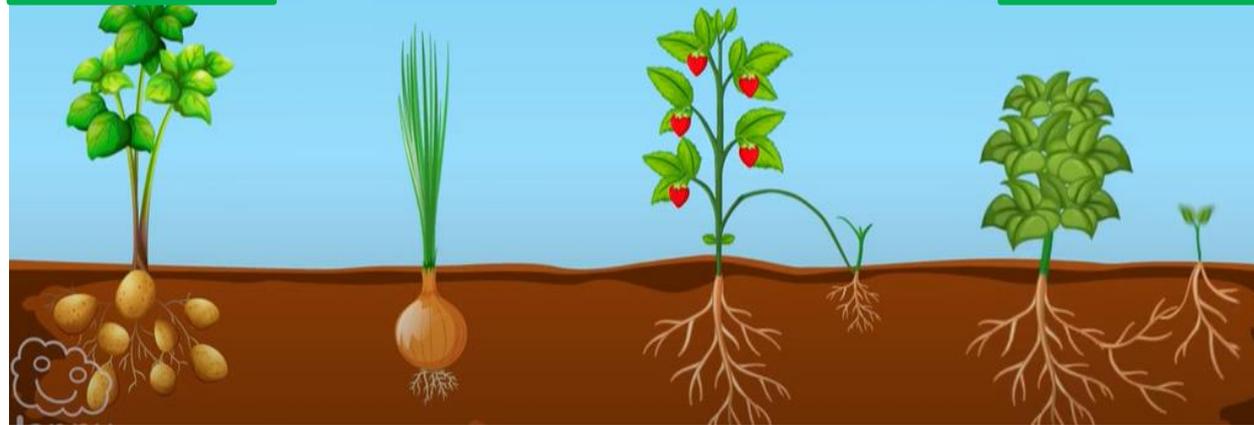


Tubers underground food stores which give the energy for new plants to grow.

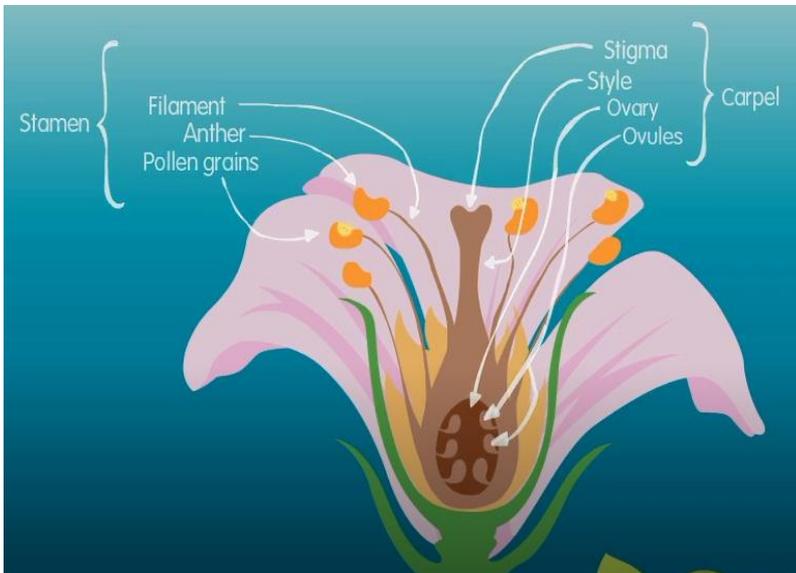
Bulbs split asexually.

Runners are sent out by the plant.

Rhizomes – roots and shoots are sent out by the plant.



Reproductive parts of a flower.



Linked skills:

Tables:

A table is a set of facts and figures arranged in columns and rows and is a very useful way of organizing numerical information or data.