

✓ VOCABULARY

Sexual reproduction – reproducing using male and female parts from two different plants

Asexual reproduction – reproducing without another parent plant

Offspring – the young of an animal or plant

Process – a series of natural changes

Life cycle – a series of changes that a plant or animal goes through from birth to death

Germination – the process of a seed beginning to grow a root and shoot

Flowering – growing into an adult plant and producing flowers

Pollination – the process of pollen being taken from one plant to another

Fertilisation – the process of a seed being developed

Seed dispersal – the movement of seeds away from the parent plant

Hybrid – a plant or animal produced from two different types of plant

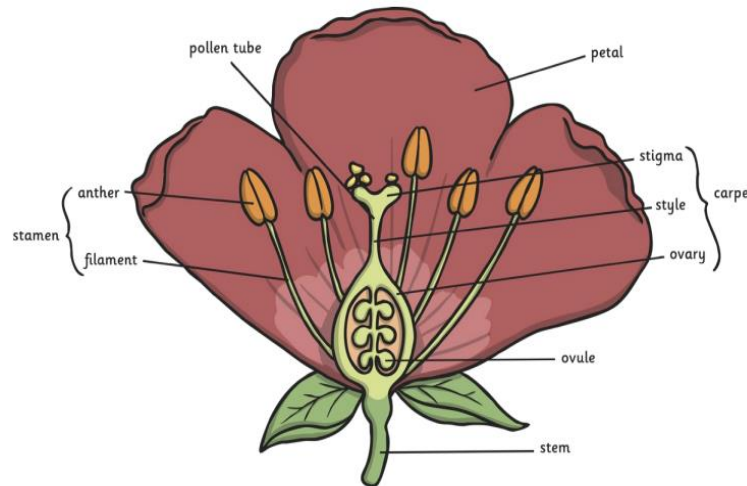
By the end of this unit, you will be able to describe the life process of reproduction in some plants. You will recognise that plants produce offspring of the same kind but normally offspring vary and are not usually identical to parents. You will understand the difference between sexual and asexual reproduction.

Important information



living things are made so they don't become extinct. Some living things contain both the male and female sex cells. Most plants contain both the male sex cell (pollen) and the female sex cell (ovules), but most plants can't fertilise themselves. Wind and insects help to transfer the pollen to a different plant (**pollination**). The pollen from the stamen of one plant is transferred to the stigma of another. The pollen then travels down a tube through the style and fuses with an ovule where a seed is formed (**fertilisation**).

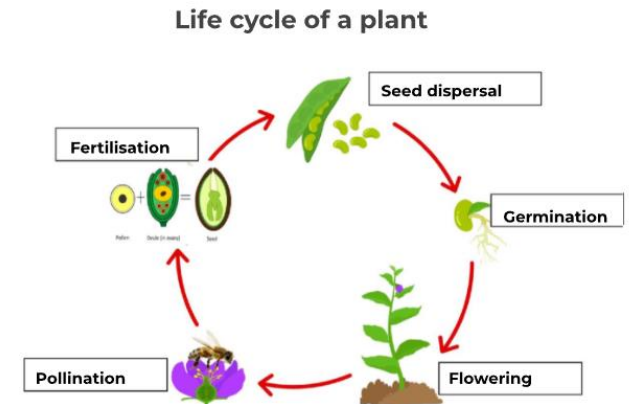
Two plants are required to reproduce in this way, but the offspring is not identical to either parent plant.



genetics of plants to improve existing plants or crops as well as create new varieties of plants and crops.

This unit will build upon prior learning of the functions of parts of plants and the life cycle of plants from LKS2. It will also link with other topics of evolution and inheritance and living things and their habitats.

Reproduction is the process by which new



Some plants, such as strawberry plants, potatoes, spider plants and daffodils, reproduce **asexually** to produce a plant. The plants produce tubers or bulbs underground which will grow and develop into new plants the next year. Other plants produce runners or side branches with new plantlets on. The roots of each plantlet grow down to the soil. The offspring is genetically identical to the parent plant. They are clones.

A **plant geneticist** studies and researches the

Science – Plants
Year Five and Six

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	Lesson Question	What you will learn	Learning Review
1	How do you clone a vegetable?	Career link. Learn about the role of a plant geneticist. Plant Geneticist - NUSTEM Letter from Plant Geneticist asking you to find ways to clone vegetables to help third world countries with thin, poor soil to grow vegetables in other ways. You will understand how to grow some new plants from different parts of parent plants – e.g. veg root, stem, seeds, cuttings, tubers, bulbs Observe over time – is it possible to grow an identical plant?	
2	Do all plants reproduce using the same pollination process?	You will review the life cycle and basic function of plant parts. You will understand the process involved in the life cycle of a plant and be able to explain the process of pollination including sexual and asexual reproduction. This will extend previous learning in LKS2 on the functions of parts of a plant and life cycle.	
3	What are the advantages and disadvantages of sexual and asexual reproduction in plants?	Explorify lesson starter to promote discussion and review seed dispersal as part of a plant's life cycle. Super seeds - Explorify Match images of seeds, saplings and parent plants. Can you identify related plants? Compare offspring from sexual and asexual plants. How do they differ? Sort advantages and disadvantages of sexual and asexual reproduction statements into a Carroll diagram.	
4	Are the life cycles of plants in different biomes in Africa similar or different?	Research and compare the life cycle of different plants in different biomes e.g. in Africa – savannah, grasslands, rainforest, desert etc Ask questions and suggest reasons for any similarities and differences in their life cycles. Relate to adaptation.	
5	What are hybrid plants?	Link to first lesson on the job of a plant geneticist. Research and explain what hybrid plants are. Real life context – contact and ask questions about plant reproduction and hybrid plants Contacts such as Esker Farm Daffodils/local crop farm etc.	
6	Was it possible to grow an identical plant to the parent plant from different plant parts?	Revisit plant cutting experiment over the weeks and record observations. What has grown? A whole new plant? Part of a plant? Is it the same or different to the parent plant? Summarise learning over time – How do you clone a vegetable?	