St Robert's Catholic Primary School

Science Knowledge Organiser- Autumn 2

Y5/6 (B): Living things: Life cycles and reproduction

What should I already know?	What will I know at the end of the Unit?
• Plants are living things that grow and change. • Roots, stems, leaves and flowers have different jobs. • Seeds can germinate and grow into mature plants. • Flowers are involved in making seeds; seeds can be dispersed.	• Plants can reproduce sexually or asexually. • Asexual reproduction produces an identical copy from one parent plant. • Runners, tubers, budding and bulbs are natural methods; cuttings, layering and divisions can be used by people. • Pollination transfers pollen from an anther to a stigma. • Fertilisation occurs when male material from pollen combines with a female ovule. • A fertilised ovule becomes a seed, which can disperse and grow.

Key Vocabulary

- sexual reproduction 
- pollination 
- asexual reproduction 
- fertilisation 
- anther 
- stigma 
- pollen 
- ovule 
- ovary 
- seed dispersal 

Methods of asexual reproduction

runner · tuber · budding · bulb · cutting · layering · division

Flower structure

stamen · filament · pistil · style · petal · sepal

Links to Careers

Botanist – studies plants and how they reproduce.

Horticulturist – grows and propagates plants.

Plant conservation scientist – helps protect plant species.



Growing a new plant from a runner

Links to Catholic Social Teaching



Science

Life cycles and reproduction

YEAR 5

Asexual reproduction

- The parent plant creates an **exact copy** of itself without involving another plant.
- Natural methods include **runners, tubers, budding** and **bulbs**.
- Forced methods (by humans) include **cuttings, layering** and **divisions**.



runner



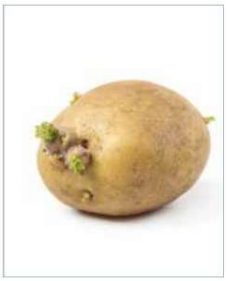
bulbs



budding



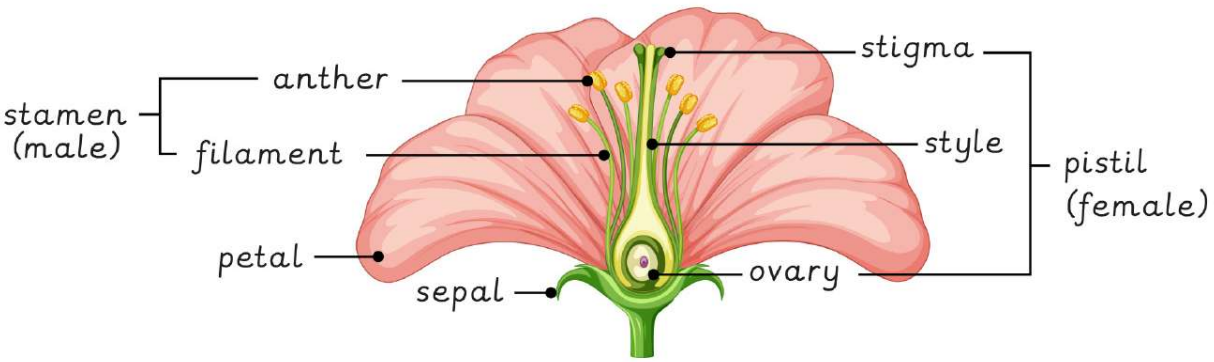
cutting



tuber

Sexual reproduction

- Pollen is transferred from the male **anther** of one flower to the female **stigma** of a flower on another plant.
- Pollen can be transferred by **insects, wind** or **other animals**.
- **Fertilisation** happens when the male pollen reaches the **ovary** and combines with the female ovules.
- The fertilised ovule then develops into a **seed**, which can be dispersed by wind, air or animals.
- Seeds can then grow into new plants, starting the plant life cycle again.



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