Knowledge Organiser Science Summer 2

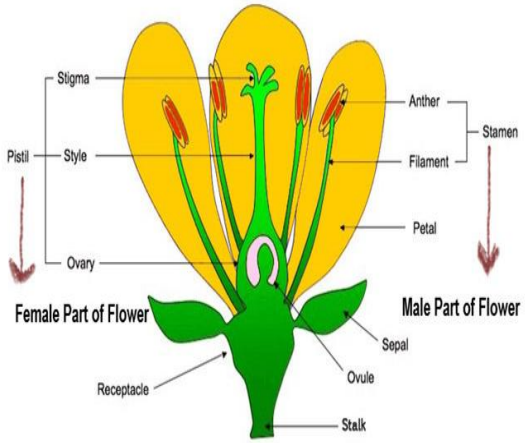
Prior Learning

- Plants need **water, light, nutrients and space** to grow
- The main parts of a flowering plant are: roots, stems, leaves and flowers.
- Some plants grow from **seeds** and **bulbs**.
- Living things reproduce to make offspring
- Plants spread seeds away from the parent plant. This helps reduce competition for resources. This is called **seed dispersal**

Key Skills Taught

- Compare **sexual** and **asexual reproduction**.
- Use scientific vocabulary correctly.
- Observe, record and explain scientific processes.
- Ask questions and use evidence to support idea

Year 5 and 6 Plant life-cycles



Key Knowledge Taught: *by the end of the unit pupils are expected to know that / be able to:.*

- **Plants reproduce sexually and asexually**
  - **Sexual reproduction** uses pollen and ovules to make **seeds**.
  - **Asexual reproduction** uses parts of one parent plant (e.g., bulbs, tubers, runners, cuttings) to make **identical clones**.
- **Flowers are the reproductive organs of many plants.**

Flowers attract pollinators and allow reproduction to happen.

- **Pollination and fertilisation lead to seed formation.**

Pollination: pollen moves to the stigma (by insects, wind, etc.).
Fertilisation: pollen joins with an ovule.
The ovule becomes a **seed,** and the ovary often becomes a **fruit**.

- **Asexual reproduction makes identical plants**

New plants are **clones** of the parent.

- **Different environments lead to different life cycles**

Plants in rainforests, deserts, oceans, and temperate climates have **adapted** their life cycles to survive local conditions.
Temperature, rainfall, pollinators, and competition all affect how and when plants reproduce.

Vocabulary

Word	Meaning
Reproduction	Making new living things.
Sexual reproduction	Reproduction using male and female cells.
Asexual reproduction	Reproduction using one parent without fertilisation.
Pollination	Transfer of pollen to the stigma.
Fertilisation	Male and female cells joining.
Pollen	Powder made by the male part of a flower.
Stamen	Male part of a flower.
Carpel	Female part of a flower.
Clone	An identical copy.
Runner	Stem growing along the ground to make a new plant.
Bulb	Underground food store that grows a new plant.
Tuber	Swollen underground stem storing food.

Extra Information: This can be added to by teacher, parent or child