

# The Knowledge

Supporting the National Curriculum



Knowing More Remembering More Learning More

## Plants

ARDLEIGH GREEN JUNIOR SCHOOL

Year 3 Science

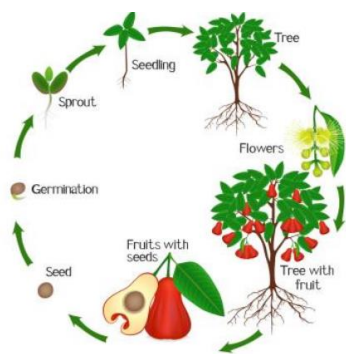
## Key facts

To **grow**, plants need:

- water
- nutrients from the soil
- light
- air
- room to grow



The life cycle of a plant:



### Pollination

**Pollination** needs to happen to make **seeds**.

**Pollination** is when pollen from the **anther** is transferred to the **stigma**. This can happen in different ways. Wind can **blow pollen** from one plant to another. **Pollinators** such as **bees** and **butterflies** visit flowers to drink **nectar**. When they are there, pollen sticks to them, and they then **transfer** that pollen to the next flower.

Once the **pollen** is transferred to the **stigma**, it travels down the **style** to the **ovary**, where the seed grows.



### Seed Dispersal

The seeds that have grown need to be **dispersed** to grow into **new plants**. This can happen in different ways:

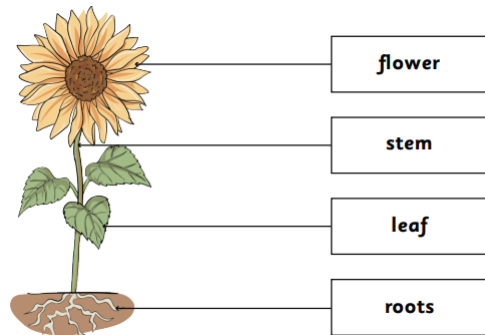
**Explosion** – some plants **explode**, making the seeds **scatter**.

**Water** – some plants that grow near water have seeds that **float**. Water will **carry** the seed until it is washed up.

**Animals** – some animals **eat** the fruit containing the seeds. When the animal **excretes** the waste, they also get rid of the seeds.

**Wind** – some seeds are light enough to be **blown away** and carried by the wind

## Parts of a Plant



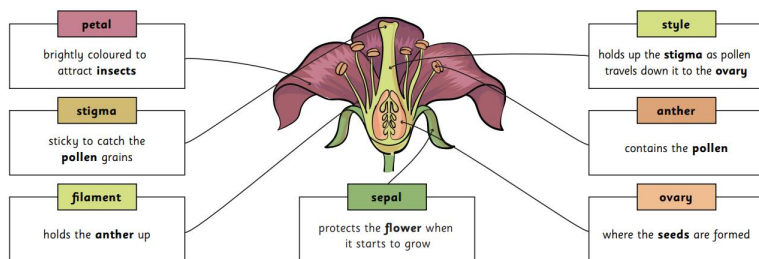
The **roots** have different jobs:

- They take up **water** and **nutrients** from the soil.
- They keep the plant **steady**.
- They keep the plant **upright**. They “**anchor**” the plant

The job of the **stem** is to **transport water** and **nutrients** from the soil to the **leaves, flowers** or **fruit** through tiny, thin tubes called the xylem.

The **leaf** catches **sunlight** so the plant can make its own **food**.

The **flower** is brightly **coloured** to **attract** insects. It’s main job is to create new seeds.



## Key Vocabulary

**plant** – a **living** organism

**tree** – a **woody** plant

**flower** – the **seed bearing** part of a plant that is usually surrounded by **brightly coloured petals**

**roots** – the part of the plant that attaches into the ground for **support** and nutrient collection

**stem** – the main **stalk** of a plant

**leaf** – part of a plant that is typically flat and hangs to the stem

**seed** – a small part of a plant that can **grow** another plant

**bulb** – a fleshy base of a plant that can **grow** another plant

**nutrients** – something that provides **nourishment** to a living thing

**pollination** – the **transfer** of **pollen** to allow **fertilisation**

**formation** – to **create**

**dispersal** – to **distribute** or spread over a wide area

## Test Yourself

- What do plants need in order to grow?
- What are the functions of the different parts of a flowering plant?
- Why are petals so brightly coloured?
- What is pollination?
- How is water transported in plants?
- What part do flowers play in the life cycle of flowering plants?
- How do plants reproduce?
- How are seeds dispersed?
- What factors affect plant growth?