

## Year 3 – Plants – How Does Your Garden Grow?

### What it looked like last year...

- Observe and describe how seeds and bulbs grow into mature plants.
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

### What it looks like next year (combined with Living Things and their Habitats).

- Recognise that living things can be grouped in a variety of ways.
- Explore and use classification keys.
- Recognise that environments can change and that this can sometimes pose dangers to living things.

### Vocabulary (definitions)

**photosynthesis** - the process by which plants make food.

**insect/wind pollination** - pollen is transferred from the anther to the stigma, often by the wind or by insects.

**seed dispersal** (by wind, animal or water) – how seeds are spread

**nutrients** - a substance that provides nourishment essential for the maintenance of life and for growth.

**anther** - the part of a flower that produces and contains pollen

**stigma** - part of a flower that gets pollen from pollinators such as bees.

**style** - a long, slender stalk that connects the stigma and the ovary

**filament** - it carries nutrients to the anther.

**ovary** – it contains the seeds waiting to be fertilized.

**sepal** – protects the flower whilst it is budding.

**carpel** – female reproductive structures of a plant.

**stamen** - male reproductive structures that produce pollen in plants.

### Sequence of Learning

1. Make close observations of a variety of leaves.
2. Set up a fair test.
3. Make close observations of a variety of roots.
4. Observe the transportation of water.
5. Identify the main stages in the life cycle of a flowering plant.
6. Dissect a flower
7. Model the process of insect pollination.
8. Observe and make seeds for seed dispersal.
9. Design, label and annotate a flowering plant.

### Cultural Capital

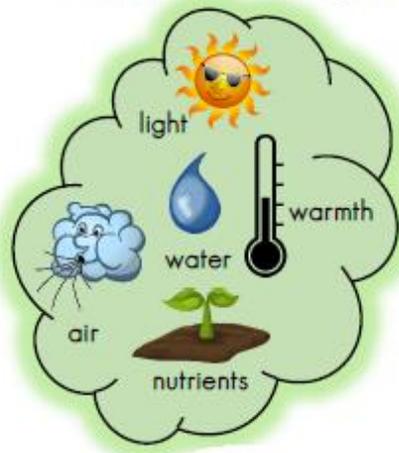
- To be able to identify and describe the functions of different parts of flowering plants.
- To be able to explore the requirements of plants for life and growth and how they vary from plant to plant.
- To be able to investigate the way water is transported within plants.
- To be able to explore the part flowers play in the life cycle of flowering plants.
- The real life knowledge that links is: exploration, grouping and classifying, observing over time, carrying out comparative and fair tests.
- The jobs it can be used in are: Biologist, Horticultural, Agricultural Farmers.

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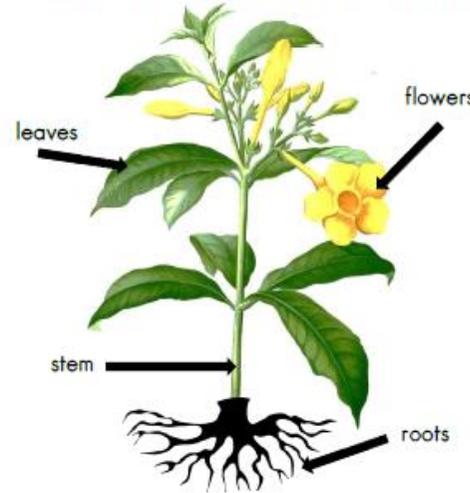
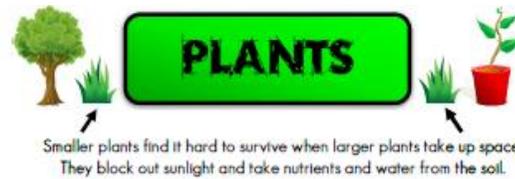
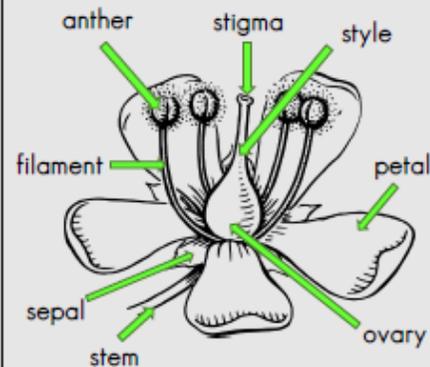
### Principles of Teaching Science.

- E**xploring – when we look at how things work in the world
- Q**uestioning – when we question what will happen
- U**nderstanding – when we use scientific language to explain
- I**nvestigating – when we can explore and are hands on
- P**redicting – when we use our previous knowledge to say what we think will happen.

What does a plant need to grow?



### PARTS OF A FLOWER



### PARTS OF A PLANT

#### FLOWERS

The flowers are often brightly coloured and smell to attract insects. Insects help with the plants reproduction through pollination.

#### LEAVES

The leaves use light from the sun, along with carbon dioxide from the air and water to make food for the plant. This process is called photosynthesis.

#### STEM / TRUNK

The stem carries water and nutrients to different parts of the plant. They keep the plant upright.

#### ROOTS

The roots of a plant take up water and nutrients from the soil. The roots also keep the plant steady and upright in the soil; they "anchor" the plant.

### PLANT REPRODUCTION

**Pollination** - Pollen is carried by insects or blown by the wind from one flower to another. This process is called pollination.  
**Fertilisation** - Pollen reaches the carpel of the new flower. Pollen then travels to the ovary where it fertilises egg cells (ovules) to make seeds. This process is called fertilisation.  
**Seed Dispersal** - The seeds are scattered by animals or the wind. This process is called dispersal. Some of the seeds will grow into new plants.

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