Ashtree Primary School and Nursery Medium Term Plan for Science

Year 3 Summer Term - Plants Unit

Prior Knowledge – Y2

1. know that flowering plants produce seeds which grow into new plants
2. describe what happens to a seed as it grows and develops
3. know that some plants have bulbs from which they grow
4. describe what happens to bulbs during the plant cycle as they grow
5. know that a seed and bulb both contain everything a plant needs to grow
6. suggest how to find out about what plants need in order to grow well
7. describe differences between plants grown in the light and in the dark
8. recognise that plants are living and need water, light and warmth to grow

Prior Skills – Y2 - **observes closely** (including changes over time), **using equipment, can ask questions and recognises that they can be answered in different ways,** with some guidance, identifies things to measure or observe that are relevant to the question, uses simple observable features to compare up to 3 objects, materials, or living things, talks with more confidence about what they have found out and how they found it out

Key Vocabulary Plant, Flower, Roots, Stem, Leaves, Petal, Travel, Transport, Minerals, Nutrients, Fertiliser, Absorb, Energy, Healthy, Growth, Petals, Stamen, Stigma, Ovary, Reproduction, Pollination, Seeds

Key Knowledge

Step 1 – (Y1 Prior Knowledge/ PK L8)**To know water travels through the roots up the stem. To know the stem supports a plant and transports nutrients to the plant. -** link to George Washington Carver (see Curriculum Enhancements) **(Travel, Transport, Minerals, Nutrients, Absorb)**

Step 2 – (PK L8)**To know that healthy leaves are linked to nutrition. To know that healthy leaves are linked to healthy plant growth (Travel, Transport, Minerals, Nutrients, Absorb)**

Step 3 - **To know why plants need flowers.**

Step 4 – (PK L4) **To understand that plants reproduce. To know the parts of a flower –** petals, stamen, stigma, ovary,

Step 5 - To identify the different stages of pollination – **Pollen left on stigma by insect - Pollen travels down style to ovary - Pollen joins ovule (fertilisation) - Fertilised ovule becomes a seed.** To know how the parts of a flower are a part of pollination.

Step 6 - To know what seed dispersal is. – wind, water, animal, and it's importance for reproduction.

Key Skills

Step 1 - **sets up simple practical enquiries, comparative and fair tests with support**

Step 2 - **sets up simple practical enquiries, comparative and fair tests with support**

Step 3 - **asks relevant questions and uses, with support, different types of scientific enquiries to answer them**

Step 4 - **with support, records and presents findings using drawings, labelled diagrams, keys,** tally charts, Carroll diagrams, Venn diagrams**, bar charts and tables**

Step 5 - **with support, identifies differences, similarities or changes related to simple scientific ideas and processes**

Step 6 - **with support, identifies differences, similarities or changes related to simple scientific ideas and processes**

Curriculum Enhancements

Look at the work of George Washington Carver and how he used crop rotation to ensure the best growth for plants.

Possible Misconceptions

Plants absorb food from the soil.

Roots suck up water

Stems suck up water

Seeds need light to germinate

Suggested Activities

- S1 To understand that fertiliser contains minerals.
- S1 To understand that a change to fertiliser affects plant growth.
- S1 Food colouring in water with white flowers or celery
- S2 Flower restaurant – role play with class, all children have a different part to play – delivery drivers (nutrients & water), give 'parcels' to porters (stem), who take it to the kitchen (leaves) who make food. The 'restaurant' is the flower and 'waiters' are trying to attract customers 'insects'.
- S5 To know why insects are important for pollination.
- S6 To identify how seeds are different according to how they are dispersed.
- Sharing is caring - Explorify
- Pink and white - Explorify
- Water colours - Explorify
- Friends of flowers - Explorify

Curriculum links

DT – plants as food
Geography – our local area
Science – Living things and their habitats

This will lead to . . .

In year 4 – Living Things and their Habitats, the children will learn,

- **To recognise that living things can be grouped in a variety of ways**
- **explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment**
- identify that some animals feed on other animals and some on plants
- **construct and interpret a variety of food chains, identifying producers, predators and prey**
- **recognise that environments can change and that this can sometimes pose dangers to living things.**