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| **Year 3: Parts of Plants (Plants) UPDATED November 2023** | |
| **Links made with other subjects** | Instruction writing: how to plant a seed / grow a plant |
| **The BIG Question** | What are the different parts of a plant? |
| **The BIG Outcome** | Short explanation answering the big question, using the key knowledge below. This should also include a diagram. |
| **Science objectives**  (link to NC) | - identify and describe the functions of different parts of flowering plants: roots, stem/ trunk, leaves and flowers  - investigate the way in which water is transported within plants  - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. |
| **Prior knowledge**  What prior knowledge is needed for children to be successful in this unit? | *Children already know:*  EYFS – Understanding the world: Children know about similarities and differences in relation to places, objects, materials and living things. They can talk about the features of their own immediate environment and how environments might vary from one another. They can make observations of animals and plants and explain why some things occur. They can talk about changes.  Yr 1 - **Plants (Plants)**  Yr 2- **Growing Plants (plants)**  Yr 3 - **What plants need (Plants)** |
| **Future learning**  Consider the conceptual knowledge within a subject that pupils need for future learning not just the recall of facts but the importance of concepts | This unit gives prior knowledge to:  Yr 5 - **Life Cycles** **(Animals including Humans)** |
| **Science strands** | Related Enquiry Questions   |  | | --- | | **Classifying** | | Not relevant | | **Observing over time** | | -Observe celery (with roots and leaves) in coloured water. -Observe white carnations (freshly cut) in coloured water.  -Gather seeds and photographic evidence of blossoms/flowers and berries on a particular trail throughout the year. | | **Pattern Seeking** | | Not relevant | | **Comparative testing** | | Not relevant | | **Researching** | | -Research the functions of the parts of flowering plants.  -Research different methods of seed dispersal.  -Research different methods of pollination. | |
| **Vocabulary/ Glossary** | Stems/trunks, leaves, flowers/ blossom, roots, nutrients, Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal). |
| **Knowledge**  (see italics for knowledge to remember) | *The knowledge that children will learn and remember:*   1. Many plants, but not all, have roots, stems/trunks, leaves and flowers/blossom. 2. The roots absorb water and nutrients from the soil and anchor the plant in place. 3. The stem transports water and nutrients/minerals around the plant and holds the leaves and flowers up in the air to enhance photosynthesis, pollination and seed dispersal. 4. The leaves use sunlight and water to produce the plant’s food. 5. Some plants produce flowers which enable the plant to reproduce. 6. Pollen, which is produced by the male part of the flower, is transferred to the female part of other flowers (pollination). 7. This forms seeds, sometimes contained in berries or fruits which are then dispersed in different ways – wind, animal and water dispersal. |
| **SEND expectations** | 1. Many plants, but not all, have roots, stems/trunks, leaves and flowers/blossom. 2. The roots absorb water and nutrients from the soil and anchor the plant in place. 3. The stem transports water and nutrients/minerals around the plant and holds the leaves and flowers up in the air to enhance photosynthesis, pollination and seed dispersal. 4. The leaves use sunlight and water to produce the plant’s food. 5. Some plants produce flowers which eventually form seeds. 6. Seeds are dispersed in different ways – wind, animal and water dispersal. |
| **Common misconceptions** | Some children may think:  - plants eat food  - food comes from the soil via the roots  - flowers are merely decorative rather than a vital part of the life cycle in reproduction  - plants only need sunlight to keep them warm  - roots suck in water which is then sucked up the stem |