

PEMBRIDGE CE PRIMARY SCHOOL LEARNING JOURNEY ITINERARY

Pembridge is a school where we encourage everyone to be inspired through faith in God and to live by Christian values so that our teaching and learning is of the highest quality, our whole community flourishes and we reflect all that is worthy of praise.

**SUBJECT: Science
(biology)**

YEAR: A

TERM: S1

YEAR GROUPS: 1/2

KEY QUESTION: Are all plants the same?

PREVIOUS KNOWLEDGE We would expect most children to already be able to:

Reception:

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Lower KS2:

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- 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.
- 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
- recognise that environments can change and that this can sometimes pose dangers to living things.

Upper KS2:

- describe the life process of reproduction in some plants and animals.
- describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
- give reasons for classifying plants and animals based on specific characteristics.
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

End of Unit Objectives

*Some children will not yet have met what is expected and show they are **emerging** because they can:*

- Observe closely the school grounds and discover where plants and trees grow and the names of some. **KQ1**
- Observe closely each part of a plant and name some of them. **KQ2**
- Observe closely 2 different plants. Notice what is the same and what is different. **KQ3**
- Observe a tree in the school grounds. Note down leaf type, buds, take bark rubbings etc. in order to keep a record of how it changes throughout time. **KQ4**
- Compare 2 different trees within the grounds from our observations. Know if they are deciduous or evergreen and understand what this means. **KQ5**

*Most children will show that they have reached the **expected** level because they can:*

- Carry out a survey and identify and classify trees and plants using identification kits. Use observation to create questions about plants and trees that they want to investigate / research. **KQ1**
- Learn the names of the main parts of a flowering plant. [*leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem*]. Consider the purpose of each part of the plant. **KQ2**
- Observe closely and compare and contrast different plants. Classify. Discuss what is the same and what is different and draw conclusions. **KQ3**
- Observe a tree in the school grounds. Note down leaf type, buds, take bark rubbings etc. in order to keep a record of how it changes throughout time. Make predictions of how it might change throughout the year. **KQ4**
- Compare 2 different trees within the grounds from our observations. Know if they are deciduous or evergreen and understand what this means. Compare and contrast the trunk, blossom, fruit, roots, trunk, branches, stem of the 2 trees. **KQ5**

*Some children will have gone beyond the expected level and show that they are **exceeding** because they can:*

- Ask simple questions and think of how the answer can be found out through an appropriate method: e.g
- 1. Survey – count the number of things
- 2. Do a test - find out what happens to something when we change something about it
- 3. Classifying – put things into groups
- 4. Investigation over time – watch or measure something over time
- 5. Secondary source – use a book or internet **KQ1**
- Confidently explain the purpose of each part of the plant and consider what might happen to the plant if 1 part did not exist / was damaged. **KQ2**
- Compare and contrast different plants.
- Confidently discuss differences and consider where they might grow best and why. **KQ3**
- Consider why it might be useful to record patterns and keep records of how trees change over time. **KQ4**
- Use a secondary source to research the tree and create a fact file to see if our record patterns match previously research / recorded findings. **KQ5**

ASSESSMENT OPPORTUNITIES – What are children aiming for?

Children will be able to demonstrate their learning through:

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants, including trees.
- (Observe the growth of flowers and vegetables, that they have planted. Become familiar with common names of flowers, examples of deciduous and evergreen trees and plants structures (leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).
- Comparing and contrasting familiar plants (observing closely, magnifying glasses); describing how they were able to identify and group them, draw diagrams showing the parts of different plants inc. trees.
- Keep records of how plants have changed over time. Leaves falling off trees, buds opening. Compare and contrast what they have found out about different plants.

ENRICHMENT OPPORTUNITIES – What can we give children along the journey to help them remember more? <i>We will endeavour to include:</i> • Investigations using scientific equipment. • Practical experiences – observing, making, recording. • Time to share and compare their close observations with those of their peers and draw overarching conclusions.	CROSS-CURRICULAR LINKS – What links can we make to help children make sense of what we want them to know and be able to do? <i>This itinerary fits with our other learning through:</i> • Art & Design – Drawing / painting flowers, petals and leaves of plants. • Maths – Measuring a plant’s growth and the circumferences of trees. • English – Writing up observations / keeping a record of a plant / tree over time.
LEARNING BEHAVIOURS <i>Children will be expected to:</i>	
Tries new things	plant seeds and watch how they grow.
Works hard	use scientific vocabulary to explain their findings.
Concentrates	listen attentively in group sessions and make predictions and conclusions.
Self-motivates	work in a group to share knowledge and use each other’s strengths to help one another.
Imagines	create their own way of presenting their research to their peers.
Improves	improve their understanding of a particular plant / tree within the school grounds.
Understands others	gain a greater understanding of the way an environment creates a suitable place for plants to grow.
Doesn’t give up	continue to work hard to understand how plants and trees can be grouped and organised in to categories.