

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 (physics & biology)

YEAR: A

TERM: A1

YEAR GROUPS: 1/2

KEY QUESTION: What difference does the weather make to me?

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

- Use simple equipment to help them make observations.
- Perform a simple test.
- Respond to natural phenomena e.g. splashing in puddles, playing in the snow, looking at shadows.
- Understanding the world: The World 30-50months - Comments and asks questions about aspects of the natural world. - Can talk about some of the things they have observed such as plants, animals, natural and found objects. - Developing an understanding of growth, decay and changes over time. - Shows care and concern for living things and the environment. 40-60months - Looks closely at similarities, differences, patterns and change. Early Learning Goal; Children know about similarities and differences in relation to living things. They make observations of animals and plants and explain why some things occur, and talk about changes.

Next steps - Class 3

- recognise that they need light in order to see things and that dark is the absence of light
- notice that light is reflected from surfaces
- recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- recognise that shadows are formed when the light from a light source is blocked by an opaque object
- find patterns in the way that the size of shadows change.

Next steps - Class 4

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

End of Unit Objectives

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

- With support, look at weather photos, symbols and names. Observe the weather outside and record observation. **KQ1**
- With support, observe photos from different seasons, drawing out similarities and differences. Learn the names and order of the 4 seasons. **KQ2**
- With support, make observations about how a deciduous tree looks throughout the year. **KQ3**
- With support, watch a video about how the amount of daylight hours change throughout the year. Look at a chart and draw conclusions about which month and season has the most hours of daylight. **KQ4**
- Watch a video of how a rain gauge works. With support, consider how rain affects their lives. With support, make a rainfall gauge and make a prediction about the amount of rainfall it will collect over a given period of time. **KQ5**

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

- Match symbol to weather name and description. Observe weather and record observation with a supporting sentence. (weather, temperature). **KQ1**
- Identify the features of each season. Match descriptions with the corresponding season. Recognise typical types of weather for a given season. **KQ2**
- Understand the changes of a deciduous tree throughout the year by writing/pairing a description with a picture. Link the months of the year with each season. **KQ3**
- Using a table showing daylight hours throughout the year, conclude which month has the most hours of daylight and which has the least. Transfer these findings in to a chart/graph and write sentences to explain findings. **KQ4**
- Consider how rain affects their lives. Make a rainfall gauge and understand how to record the rainfall over a period of time. Make a prediction about the amount of rainfall it will collect over a given period of time using scientific vocabulary: weather, rainfall, season, precipitation and data. **KQ5**

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

- Look at a weather forecast for a given week. Make suggestions about what types of activities would be best to do on each day. e.g. fly a kite on Monday (windy). Go to the beach Tuesday (sunny). Show confident reasoning for their choices. **KQ1**
- Consider the pros and cons of having seasons and how people's lives are affected by them. **KQ2**
- Confidently explain how a deciduous tree changes and how the weather affects the tree. e.g. the longer days of sunlight in summer give the leaves more sunlight to absorb which gives the tree energy. **KQ3**
- Think about how daylight affects their lives; e.g. not being able to play outside after school in winter because it was dark and consider what it would be like living in a country with less daylight hours. **KQ4**
- Confidently explain how rain affects their lives and the lives of others across the world. Suggest how to record the rainfall over a period of time and question whether this method will give the most clear / efficient / accurate results. **KQ5**

ASSESSMENT OPPORTUNITIES – What are children aiming for?

Children will be able to demonstrate their learning through:

National Curriculum:

- observing changes across the four seasons
- observing and describing weather associated with the seasons and how day length varies.

Focus:

- observe changes across the four seasons
- name the four seasons in order
- observing and describing weather associated with the seasons
- observing and describing how day length varies
- observing features in the environment and explaining that these are related to a specific season
- observing and talking about changes in the weather

- talking about weather variation in different parts of the world.
- Using different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions: observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, finding things out using secondary sources of information

ENRICHMENT OPPORTUNITIES –

What can we give children along the journey to help them remember more?

We will endeavour to include:

- Investigations using scientific equipment.
- Practical experiences.
- Time to share and compare their investigations with 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?

This itinerary fits with our other learning through:

- Art & Design – Create own night time paintings based on Van Gogh's 'Starry night'.
- Maths – Record amount of day light, rainfall etc.
- English / Drama – Weather reporting

LEARNING BEHAVIOURS *Children will be expected to:*

Tries new things	monitor the temperature / rainfall / wind / weather throughout the day.
Works hard	learn the names of the seasons and know the order.
Concentrates	listen attentively in group sessions.
Self-motivates	work in a group to share knowledge and use each other's strengths to help one another.
Imagines	help to create an investigation to measure rainfall.
Improves	gain a greater understanding of the environment over a period of time and explain how it is related to a particular season.
Understands others	increase their understanding of the way weather affects how people live their lives the UK, as well as other countries.
Doesn't give up	continue to work hard to explain their findings during an investigation and draw conclusions using scientific vocabulary.