

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

YEAR: A

TERM: Spring

YEAR GROUPS: 5/6

KEY QUESTION: Can materials really vanish?

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

- To know that the term material is a wide term in science (ie not a synonym for fabric)
- To know that materials have different properties that make them suitable for different purposes
- To know that all materials can be categorised as solid, liquid or gas
- To know that materials can be changed e.g. by temperature.

End of Unit Objectives

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

- Use given criteria to **help** to classify some solids, liquids and gases. **KQ1**
- Mix materials and, with support, try to recover them. **KQ2**
- Understand the difference between mixtures and solutions and know the different ways of separating each **KQ2**
- With support, plan and carry out an investigation into solubility. **KQ3**
- Explore how to make a new material. **KQ4**
- Describe the changes that take place when iron becomes rusted or when burning a material. **KQ5**

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

- Use given criteria to classify solids, liquids and gases. **KQ1**
- Mix materials and explain ideas about possible ways of recovering them. **KQ2**
- Describe and explain the differences between mixtures and solutions and how to separate them. **KQ2**
- Carry out a solubility investigation taking accurate measurements of eg volume and temperature. **KQ3**
- Recognise that carbon dioxide is a new material and that an irreversible change has been made when it has been produced. **KQ4**
- Recognise burning and rusting as processes that create new materials and that the change that resulted, cannot be reversed. **KQ5**

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

- Work out some ways of classifying solids, liquids and gases. **KQ1**
- Mix materials and use scientific terms to match to the mixtures made and explain possible ways of recovering components. **KQ2**
- Make a definition for scientific terms related to mixtures and solutions. **KQ2**
- Provide explanations and hypotheses based on the findings of an investigation into solubility. **KQ3**
- Make hypotheses about the chemical changes produced when making bread. **KQ4**
- Relate learning to the work of famous chemists. **KQ5**

ASSESSMENT OPPORTUNITIES – What are children aiming for?

Children will be able to demonstrate their learning through:

- Verbal responses during discussion in lessons and further questioning to extend their understanding.
- The completion of practical tasks based on learning
- The ability to solve problems.

ENRICHMENT OPPORTUNITIES –

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

We will endeavour to include:

- A range of materials to explore in engaging contexts.
- The opportunity to work, and to explore, in pairs and small groups.

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:

- **History** – the mystery of the empty grave
- **English** – describing, instructing and explaining.

LEARNING BEHAVIOURS *Children will be expected to:*

Tries new things	be willing to try something even though it may not be successful at first.
Works hard	respond to pink marking and discussion with a teacher order to further understanding.
Concentrates	complete tasks within the given time frame and shows that they are using learning in subsequent tasks.
Self-motivates	ask questions to extend knowledge and understanding.
Imagines	visualise ways of achieving a goal/challenge set.
Improves	respond positively to feedback.
Understands others	work collaboratively to solve problems and to enhance achievement across the class.
Doesn't give up	persevere with challenges that are set.