

Pioneer Federation
Medium term plan
KS1 - Cycle 2, Term 4
Science



Subject: Science	
Key Concept/ Theme: materials- split over 2 terms, in term 6 they will be focusing on glass, brick, rock, wood, paper. This term will be plastic focus and comparing properties of all materials.	
Prior Learning links: Y1/2 Cycle 2 term 4 R- T4	
Vocabulary: Types of materials: wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, flour, butter, milk, soil Properties of materials: hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky Verbs associated with materials: crumble, squash, bend, stretch, twist Senses: touch, see, hear, smell and taste	
School specific areas to cover (where applicable): n/a	
1.	<p>Deeper learning question for the term: What are materials made from? Prior learning reconnection (year group, cycle & term): Y1/2 Cycle 1 term 4 R- T4 LO: Let's learn to sort materials Enquiry skill: classifying and sorting Activity: Reconnect to previous learning and use this activity to asses understanding of language linked to materials. Year 2 will have more experience of materials. Children to sort materials based on name of material and then based on properties. For year 1 give them pictures and words to help them sort based on properties. Use the 'Odd fish' to read them the story and set the context of the term and make links to recycling. Ask the children to think of questions they want to know about materials. These could be recorded as a class and will help to gain more understanding of their knowledge of materials. Future learning links: C2 t6 materials part 2</p>
2.	<p>Deeper learning question: Why do materials have different properties? Reconnection: Children to name materials from objects given. LO: Let's learn about the properties of materials. Enquiry skill: questioning Activity: Use the book 'Stanley's bag'. Get the children to identify the material. In each lesson remind children that the material is what it is made from but it can be made into the object it is named. Show them a plastic carrier bag from the story. Introduce recycling and reusing- link to the stories and problems in the sea. Tell the children that we have been asked by scientists working in the ocean to help them. They would like to know the properties of plastic so they can use them in different ways. Set up tables with</p>

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	different questions for the children to answer and test. EG is it waterproof? Is it stretchy? Is it strong?... The children need to answer the questions and then at the end conclude what they know about plastic for the scientist. At the end set up simple classification question tree to complete together.
3	<p>Deeper learning question: Why do we need to ask questions?</p> <p>Reconnection: Children to identify the properties of plastic</p> <p>LO: Let's ask questions to help sort materials.</p> <p>Enquiry skill: sort and classify</p> <p>Activity: This session will start with a letter from the scientist asking them to sort other materials they have found floating in the sea and that they need certain properties to help them make an object for the island. Children to use the modelled question tree to sort the materials. Remind them of senses and how to check for different properties. Children to then let the scientists know which materials would be good for their project.</p>
4	<p>Deeper learning question: How does heat change the material?</p> <p>Reconnection: Why do we ask questions to sort materials?</p> <p>LO: Let's learn how materials change with heat.</p> <p>Enquiry skill: fair test and predicting</p> <p>Activity: Letter from the scientists to help them understand what food does in the sun. What happens when materials are heated and cooled? Reminders of safety for this lesson and refer to risk assessments for heating. Children to observe butter, ice cube, chocolate melting. Can they predict which one will melt the fastest? Teach the children what a fair test is and how this will help the experiment. Children then to make jelly in groups explaining what happens using their knowledge from the previous task.</p>
5	<p>Deeper learning question: Why do fabrics have different properties?</p> <p>Reconnection: Recap on how the properties of materials change.</p> <p>LO: Let's investigate the properties of different fabrics.</p> <p>Enquiry skill: fair test and predicting</p> <p>Activity: Today the scientists asked the children to investigate which fabric will be best for a life jacket. (see Kent planning page 10-11) Children to record and create a graph on purple mash.</p>
6	Quiz session

End points:

- To be able to compare properties of materials.
- To know the vocabulary linked to describing materials.
- To identify and name materials.
- To predict what will happen to the materials. To suggest ideas about fair tests in investigations.
- To sort and classify materials.
- To ask and use questions to sort materials.