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| **Year 2: Uses of Materials (Materials and Changes of State) UPDATED November 2023** | |
| **Links made with other subjects** | DT – textiles kites  English – fairytales |
| **The BIG Question** | How do we choose materials? |
| **The BIG Outcome** | Present results to one of the questions answered as part of a comparative test explaining why they chose one material and not another. |
| **Science objectives**  (link to NC) | - identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. |
| **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 can explain why some things occur. They can talk about changes.  Yr 1: **Comparing and Identifying materials** |
| **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 4: **Changes of State**  Yr 5: **Separating mixtures, Types of Change and Materials** |
| **Science strands** | Related Enquiry Questions   |  | | --- | | **Classifying** | | Based on the children’s own criteria, classify materials e.g. samples of wood, metal, plastic, etc | | **Observing over time** | | Not relevant | | **Pattern Seeking** | | Not relevant | | **Comparative testing** | | -Test materials for different uses e.g. Which material can you use to make an aeroplane? Which fabric would you use for curtains? Which materials are best for Cinderella’s mop? Which fabric would you choose for Elastigirl’s costume? Which paper can be used for a book, fabrics for a child’s dungarees, materials for aeroplanes etc? | | **Researching** | | Not relevant | |
| **Vocabulary/ Glossary** | **Names of materials** – wood, metal, plastic, glass, brick, rock, paper, cardboard  **Properties of materials** – object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through, opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/puling, twist/twisting, squash/squashing, bend/bending, stretch/stretching |
| **Knowledge**  (see italics for knowledge to remember) | *The knowledge that children will learn and remember:*   1. *All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task.* 2. *For example, a water bottle is made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water.* 3. *When choosing what to make an object from, the properties needed are compared with the properties of the possible materials, identified through simple tests and classifying activities.* 4. *A material can be suitable for different purposes and an object can be made of different materials.* |
| **SEND expectations** | 1. *Materials are chosen for something based on their properties.* 2. *Objects can made from more than one material.* |
| **Misconceptions** | Some children may think:  - only fabrics are materials  - only building materials are materials  - only writing materials are materials  - the word rock describes an object rather than a material  - solid is another word for hard |