Science Unit Planner Year: 2 Title: Materials – Changing Shape

<table>
<tr><td colspan="3">Materials – Changing Shape</td></tr>
<tr><td>Unit Overview</td><td colspan="2">Objects are made from a variety of materials. They have different properties and are used for different purposes because of these. The shape of many materials can changed.</td></tr>
<tr><td>Prior Learning/ Links</td><td colspan="2">EY – Describe objects and materials. Group objects and materials according to specific properties. Discuss why things change.
Y1 – Difference between an object and the material it is made from. Identify and name a variety of everyday materials. Describe the properties of materials. Group materials according to their properties.</td></tr>
<tr><td>Unit Title:</td><td>Substantive Knowledge</td><td>Disciplinary Knowledge</td></tr>
<tr><td>Key Questions:

How can we change materials?

Can all materials be changed?

Would a plastic bag be good for mopping up a spilt drink?</td><td>• Different materials can be used for different purposes. Children will be able to name several of the uses below:
-wood is used for doors, tables, furniture, garden furniture, ornaments, boats.
- plastic can be used for toys, pens, rulers, plates for young children, cutlery, bags, bottles.
- glass can be used for windows, spectacles, jars
- metal can be used for coins, cars, engines, cutlery, jewellery
- brick can be used to build walls and houses
- rock can be used for garden decoration, to build walls.
- paper is used for books, bags, wrapping paper
- card can be used for greetings cards, boxes

• Some objects are made from several materials and not just one.
• There have been many inventors who created new materials over time: Stephanie Kwolek, John Dunlop.
• Some materials are absorbent which means they can soak up liquids.
• What materials would be good at mopping up a spillage? Children can identify some absorbent materials.
• Materials can change shape through squashing, bending, stretching and twisting.
• Children know that we can ask questions and investigate findings.
• Children know some equipment we can use to measure and record.</td><td><u>Questioning and Planning</u>
Talk about why materials are chosen for a specific purpose.
<u>Observation and Measurement</u>
Measure the absorbency of different materials.
<u>Recording and Presenting</u>
Grouping materials according to their properties
Sort results onto a table.
Compare results on a venn diagram.
<u>Analysing and Evaluating</u>
Identify why materials are good for a specific purpose.</td></tr>
<tr><td>Vocabulary</td><td>Trips/ Visits/Useful Websites/ Resources</td><td>Key Misconceptions:</td></tr>
<tr><td>Substantive:</td><td>Year 2: Uses of Everyday Materials | STEM</td><td>That materials are objects – clarity about the difference.</td></tr>
</table>

wood, plastic, metal, brick, rock, paper, card, material, squashing, bending, stretching, twisting, absorbent, properties, material, raw materials, object, transparent, waterproof, hard, stretchy, soft, opaque, moulded, rigid, solid **Disciplinary:** change, description, (graph/ table/ results/ observation/ sort/ group/	Materials - Year 1/2 - P2/3 - Science Collection - Home Learning with BBC Bitesize - BBC Bitesize Stephanie Kwolek - Biography, Facts and Pictures (famousscientists.org) John Boyd Dunlop - Students | Britannica Kids | Homework Help	