



**Science Autumn 1 Year 2 Chemistry - Uses of Everyday Materials**

**TAPS Assessment: Waterproof materials**

| <b>Key vocabulary:</b> Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent, and translucent, reflective, nonreflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching   |          |   |  |   |   |
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| National Curriculum  | Week     | NC - Coverage   | Disciplinary Knowledge   | Substantive Knowledge   | Activity Outline  |
| <p><b>The national curriculum for Science aims to ensure that all pupils:</b></p> <p align="center"><b>Working Scientifically Key stage 1</b></p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <p>§ asking simple questions and recognising that they can be answered in different ways</p> <p>§ observing closely, using simple equipment</p> <p>§ performing simple tests</p> <p>§ identifying and classifying</p> <p>§ using their observations and ideas to suggest answers to questions</p> <p>§ gathering and recording data to help in answering questions</p> <p><b>Subject Content</b></p> <ul style="list-style-type: none"> <li>identify and compare the suitability of a variety of</li> </ul> | <b>1</b> | Describe the simple physical properties of a variety of everyday materials e.g wood plastic metal   | observing closely, using simple equipment  | Describe the simple physical properties of a variety of everyday materials e.g wood plastic metal   | Children first to use adjectives to describe materials in a feely bag. Then independently identify objects around the classroom and describe the materials they were made from.     |
|  | <b>2</b> | Identify and describe the suitability of a variety of everyday materials, including wood, metal, glass, brick, rock, paper and cardboard for particular uses. | Classify and sort materials by their properties e.g. natural, manmade  | Identify and describe the suitability of a variety of everyday materials, including wood, metal, glass, brick, rock, paper and cardboard for particular uses. | Complete worksheet from the previous activity to guide the children to think more explicitly about <b>the properties of the materials</b> used for different objects.               |
|  | <b>3</b> | Find out how the shapes of solid objects can be changed by squashing, bending, twisting and stretching.   | Investigate and observe what happens to different materials during testing and use this to inform explanation of their properties Explain from their observations how materials change when a force is exerted | Find out how the shapes of solid objects can be changed by squashing, bending, twisting and stretching.   | Children to match vocabulary to actions when manipulating playdough, and describe how some materials can be changed. Can children use the words “flexible”, “rigid” and “stretchy”. |



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| <p>everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <ul style="list-style-type: none"> <li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul> <p><b>School Context</b><br/>Children to compare the uses of everyday materials in and around the school with materials found in other places</p> <p><u>Common Misconceptions</u><br/>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.</p> |   |   | on them by squashing, bending, twisting and stretching.   |  |   |
|  | 4 | Describe the simple physical properties of a variety of everyday materials e.g wood plastic metal   | Investigate which materials are fit for a purpose e.g. What is the best material for an umbrella? | Identify and describe the suitability of a variety of everyday materials, including wood, metal, glass, brick, rock, paper and cardboard for particular uses | <b>TAPS Assessment: Waterproof materials</b><br>Set children a problem linked to their pirate theme, with a focus on making objects with the properties of stretchiness/stiffness and flexibility/rigidity. |
|  | 5 | Identify and describe the suitability of a variety of everyday materials, including wood, metal, glass, brick, rock, paper and cardboard for particular uses. | Perform simple tests to test suggested suitability for material's new use.                        | Identify and describe the suitability of a variety of everyday materials, including wood, metal, glass, brick, rock, paper and cardboard for particular uses | Give children an object and ask them to think of a new use for the material it was made from e.g. a paperclip   |
|  | 6 | Find out how the shapes of solid objects can be changed by squashing, bending, twisting, and stretching.  | Asking simple questions and recognising that they can be answered in different ways.              | Find out how the shapes of solid objects can be changed by squashing, bending, twisting, and stretching.   | The children were asked to find objects in the classroom, identify the material they were made from, and then test them to see if they could change their shape in different ways                           |

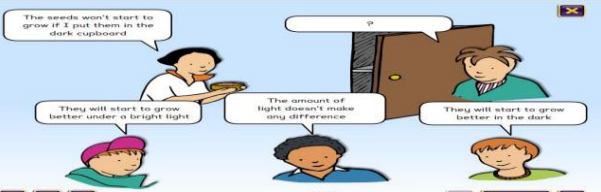


**Subject –Science Autumn 2 Year 2 Biology: Plants**

**TAPS Assessment: Comparing plant growth in different conditions**

| <p><b>Key vocabulary:</b> Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and wild flowering plants in the local area<br/>As for Year 1 plus light, shade, sun, warm, cool, water, grow, healthy</p>                     |                 |   |  |  |   |
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| National Curriculum   | Week            | NC - Coverage   | Disciplinary Knowledge   | Substantive Knowledge  | Activity Outline  |
| <p><b>The national curriculum for Science aims to ensure that all pupils:</b></p> <p align="center"><b><u>Working Scientifically Key stage 1</u></b></p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> | <p><b>1</b></p> | <p>Observe and describe how seeds and bulbs grow into mature plants</p> | <p>Observing closely, using simple equipment</p> <p>Can spot similarities and difference between bulbs and seeds</p> <p>Classify seeds and bulbs</p> | <p>Know and describe the basic structure of a variety of common flowering plants, including trees.</p> | <p>Give children a selection of seeds and bulbs on their table and ask to have a look at them and talk about what they notice. Ask children how they could sort the objects Get children to make careful observational drawings of seeds and bulbs.</p> |



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| <p>§ asking simple questions and recognising that they can be answered in different ways</p> <p>§ observing closely, using simple equipment</p> <p>§ performing simple tests</p> <p>§ identifying and classifying</p> <p>§ using their observations and ideas to suggest answers to questions</p> | 2   | Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy | Research and plan when and how to plant a range of seeds and bulbs                    | Knows that plants may grow from either seeds or bulbs  | <p>Discuss ideas on the Concept Cartoon below:</p>  <p>Plant sunflower seeds and keep them by the window, fridge and in the cupboard. Make careful observations until wk 3 to see if seeds start to grow.</p> |
| <p>§ gathering and recording data to help in answering questions</p> <p><b>Subject Content</b></p> <ul style="list-style-type: none"> <li>observe and describe how seeds and bulbs grow into mature plants</li> </ul>   | 3   | Observe and describe how seeds and bulbs grow into mature plants                                       | Make close observations and measurements of their plants growing from seeds and bulbs | Know that plants need water, light and a suitable temperature to grow.   | Make observations/drawings and comparisons from previous week using them to conclude which conditions enable plants to be healthier.   |
| <ul style="list-style-type: none"> <li>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>  | 4   | Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy | Research and plan when and how to plant a range of seeds and bulbs                    | Knows that some plants are better suited to growing in full sun and some grow better in partial or full shade. | Give children a selection of summer bulbs to plant in pots. Children to make predictions e.g. I will plant some bulbs upside down to see if that would make a difference.  |
| <p><b>School Context</b></p> <p>Children observe plants and the conditions they are growing in around the school grounds, including in the Forest School.</p> <p><b>Common Misconceptions</b></p>   | 5&6 | Observe and describe how seeds and bulbs grow into mature plants                                       | Make comparisons between plants as they grow  | Knows that seeds and bulbs can germinate and then grow into seedlings and then continue                        | Make observations/drawings and comparisons from previous week using them to conclude which conditions enable plants to be healthier.   |



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| <p>Some children may think:</p> <ul style="list-style-type: none"><li>• plants are not alive as they cannot be seen to move</li><li>• seeds are not alive</li><li>• all plants start out as seeds</li><li>• seeds and bulbs need sunlight to germinate</li></ul> |  |  |  | <p>to grow into mature plants</p> |  |
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