Mayflower FEDERATION

# Mixing and Making Year 2

| Science Concepts | Nature<br>Knowing about the natural world | Phenomenon<br>Observing facts and events | The Real World<br>Knowing about scientists and science in our everyday lives |
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| **National Curriculum** | • Identifying and comparing the suitablility of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses<br>• Find ot how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | | Asking questions<br>Observing and measuring<br>Gathering and recording data<br>Identifying and classifying |
| **Common Misconceptions** | Some children may think:<br>• only fabrics are materials<br>• only building materials are materials<br>• only writing materials are materials<br>• the word 'rock' describes an object rather than a material<br>• 'solid' is another word for hard.<br>• distinction between the properties of materials and the objects they are made into.<br>• focus on the material, not the object when describing properties.<br>• mis-use the word "material" to describe what should be called fabric.<br>• absorbent materials such as paper towels are waterproof – confusing absorbent (soaks water up) with waterproof (keeps water out). | | |
| **Safety** | • cooking activities must observe conditions of high levels of hygiene including handing washing, use of clean utensil and disinfecting surfaces<br>• use of cookers must be clearly supervised<br>• Children should not touch ice immediately out of the freezer<br>• Small samples of chocolate can be melted using small tea lights standing in a metal tray with dry sand. Children should stand away from the naked flame<br>• Take great care with hot water and steam. Note that some plastics soften in contact with hot water or steam. Children should keep well back | | |

| Lesson | Learning Intention | |
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| **1. What are the differences between solids, liquids and gases? (NOA)** | • Examples of solids, liquids and gases<br>• How to identify solids, liquids and gases | The Real World |
| **2. What are the differences between solids, liquids and gases?** | • Examples of solids, liquids and gases<br>• How to identify solids, liquids and gases | The Real World |
| **3. What happens when you heat a solid? (NOA)** | • Describe melting<br>• Observe different examples of melting | Phenomenon |
| **4. Which mixture makes the best bubbles? (NOA)** | • Defining a mixture<br>• Testing different mixtures | The Real World |
| **5. What happens when I mix a solid and a liquid together? (NOA)** | • Insoluble and soluble solids<br>• Observing different examples | The Real World |
| **6. How can I separate a mixture? (NOA)** | • Sorting mixtures by hand, sieving and magnetism<br>• Choosing the appropriate method to separate materials | The Real World |
| **7. Are there some changes we can't reverse? (NOA)** | • Reversible vs irreversible changes<br>• Examples of irreversible changes e.g. cooking | Phenomenon<br>The Real World |
| **8. Are there some changes we can't reverse?** | • Irreversible changes<br>• Examples of irreversible changes e.g. cooking | Phenomenon<br>The Real World |

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| **9. What happens when we cool steam?** | • Water turns into steam when it is heated but on cooling the steam turns back to water | Phenomenon |
| **Review** | • Complete end of unit quiz.<br>• Return to cover page and identify any misconceptions they may have had at the beginning of the unit, or add anything further to the question. | |