St Winefride’s Catholic Voluntary Academy

Curriculum Plan for Science

Year Group: 5

Title of Unit: Reversible and Irreversible Changes

**Key Knowledge and Skills:**

•Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets

•Know and explain how a material dissolves to form a solution

•Know and show how to recover a substance from a solution

•Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating)

•Know and demonstrate that some changes are reversible and some are not

•Know how some changes result in the formation of a new material and that this is usually irreversible

**National Curriculum Requirement:**

•Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets

•Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution

•Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating

•Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic

•Demonstrate that dissolving, mixing and changes of state are reversible changes

•Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda

**Key Knowledge and Skills Expectation**

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| compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| •know and explain how a material dissolves to form a solution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| •know and show how to recover a substance from a solution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| •know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| •know and demonstrate that some changes are reversible and some are not |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| •know how some changes result in the formation of a new material and that this is usually irreversible |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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