Corpus Christi Catholic Primary School
Year 5 – Properties and changes of materials - MTP Unit Overview

Outcomes:

By the end of this unit <u>all</u> pupils should know:

Pupils should be taught to:

- 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

By the end of this unit pupils should have developed the following working scientifically skills:

- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions.

Progression:

Prior learning:

Yr2: Pupils should be taught to:

- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Yr 4: Pupils should be taught to:

- compare and group materials together, according to whether they are solids, liquids or gases
- recognise some common conductors and insulators, and associate metals with being good conductors
- **Building towards:**

KS3 Materials

- the order of metals and carbon in the reactivity series
- the use of carbon in obtaining metals from metal oxides
- properties of ceramics, polymers and composites (qualitative)