| Year5 | | | | |
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| *Topic* | *Prior Learning* | *Present learning* | *Misconceptions* | *Future learning* |
| Properties and changes of Materials<br>**National Curriculum**<br>• 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.<br>• Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.<br>• Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.<br>• Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.<br>• Demonstrate that dissolving, mixing and changes of state are reversible changes.<br>• Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including<br>• changes associated with burning and the action of acid on bicarbonate of soda | • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)<br>• Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)<br>• Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. (Y3 - Forces and magnets)<br>• Compare and group materials together, according to whether they are solids, liquids or gases. (Y4 - States of matter)<br>• Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). (Y4 - States of matter)<br>• Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Y4 - States of matter) | **Knowledge and Understanding– Materials (Mixtures and Separation)**<br>• what are mixtures<br>• -what does dissolve means<br>• -know that some materials will dissolve in a liquid to form a solution<br>• -what processes can we use to separate mixture<br>***Materials – Changing State***<br>• Compare everyday materials based on their properties, including hardness, solubility, transparency., conductivity( electrical and thermal) and response to magnets<br>• understand what changes states of matter<br>• understand reversible and irreversible changes<br>• -differentiate between reversible and irreversible changes<br>***Investigations:— Materials (Mixtures and Separation)***<br>• -investigate how can dirty water be cleaned<br>• -investigate methods of separating heterogeneous and homogeneous mixture<br>***Materials – Changing State***<br>• -sort materials based on their properties, including hardness, solubility, transparency., conductivity( electrical and thermal) and response to magnets<br>• -investigate different methods of separation<br>• investigate reversible and irreversible changes<br>***Vocabulary:***<br>Matter<br>heterogeneous<br>mixture<br>dissolve<br>immiscible<br>solution<br>solute<br>insulator<br>immiscible | Some children may think:<br>• thermal insulators keep cold in or out<br>• thermal insulators warm things up<br>• solids dissolved in liquids have vanished and so you cannot get them back<br>• lit candles only melt, which is a reversible change. | This unit is further taught in KS3 |