Progression of Science NC Objectives - Chemistry

Chemistry	Year 1 Identifying and naming	Year 2 Suitability & changing shape	Year 4 Solids, liquids and gases.	Year 5 Dissolving/evaporating; reversible/irreversible
Materials + Properties 	-Describe the properties of wood. -Sort objects that are made from wood and objects not made from wood. -Describe the properties of plastic. -Sort objects that are made from plastic and objects not made from plastic. -Describe the properties of metal. -Sort objects that are made from metal and objects not made from metal. -Name an object and the material that it is made from. -Describe the properties of in a variety of everyday materials. -Compare and group together a variety of everyday materials based on their simple properties. -Investigate whether plastic, wood and metal floats or doesn't float. -Investigate which materials are bendy and which are not. -Investigate which materials are easily broken or not. -Investigate which materials are absorbent and which are not. -Investigate which materials are waterproof and which are not. -Investigate which materials are transparent and which are not.	-Discuss the uses of metal, wood, plastic, glass, brick, rock, paper and cardboard and their properties. -Compare the suitability of a variety of materials for particular uses. -Investigate the changes in wooden, plastic, metal and glass objects when they are squashed. -Investigate the changes in wooden, plastic, metal and glass objects when they are bent. -Investigate the changes in wooden, plastic, metal and glass objects when they are twisted. -Investigate the changes in wooden, plastic, metal and glass objects when they are stretched.	-Learn about the properties of solids, liquids and gases. -Identify what a solid, a liquid and a gas is. -Compare and group together materials according to whether they are solids, liquids or gases. -Observe water as a solid, a liquid and a gas and note the changes to water when it is heated and cooled. -Investigate the changes in various materials state, including water, chocolate and butter, when they are heated. -measure the temperature at which this happens. -Investigate the changes in various materials state, including water, chocolate and butter, when they are cooled. -measure the temperature at which this happens. -Learn about the stages of the water cycle. -Learn what evaporation and condensation is in the water cycle and associate the rate of evaporation with temperature.	-Compare, group and explain materials based on the properties of solubility, conductivity and responses to magnets. -Understand how knowledge of material properties has helped people create new items to solve a problem. -Explore how solids and liquids can be separated efficiently. - report and present findings from enquiries, including conclusions, explanations of results. -Research how clean water can be contaminated. -Explore the materials needed to clean water. -Investigate how dirty water can be made cleaner. -Learn the difference between soluble and insoluble. -Explore and explain how some materials will dissolve in liquid to form a solution. -Describe how to recover a substance from a solution. Soluble and Insoluble Investigation. -observe and take measurements, using a range of equipment, with increasing accuracy. -record data and results of increasing complexity using diagrams and graphs, etc. -Demonstrate that dissolving, mixing and changes of state are reversible changes. -Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. -Demonstrate that dissolving, mixing and changes of state are reversible changes. -Explore and explain how 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