

Chemistry Curriculum Overview KS3

7E		
Mixtures and Separation	<ul style="list-style-type: none"> Classify mixtures and how to separate insoluble solids from a liquid using a filter. Describe how soluble substances can form solutions. Describe how solutes can be separated from a solution by evaporation. Describe how chromatography can be used to identify substances in a mixture. Explain how distillation can be used to separate a solvent from a solution. 	<ul style="list-style-type: none"> Identify risks when using a Bunsen Burner
7F		
Acids and Alkalis	<ul style="list-style-type: none"> Recognise some common hazard symbols and their meaning. Name examples of indicators and how they can be used. Name common acids and alkalis. Describe the pH scale. Describe what happens during neutralisation. Describe everyday neutralisation reactions. 	<ul style="list-style-type: none"> Plan and explain safety precautions
7G		
The particle model	<ul style="list-style-type: none"> Name the three states of matter and give examples of each. Describe, draw and recognise the arrangement of particles in solids, liquids and gases. Explain how Brownian motion supports particle theory. State what is meant by diffusion and recall some of its effects. Say what is meant by gas pressure and recall some of its effects. 	<ul style="list-style-type: none"> Identify questions, hypotheses and predictions

7H		
Atoms, elements and molecules	<ul style="list-style-type: none"> • Recognise the difference between atoms and molecules. • Recall that different elements have different properties and uses. • Describe and identify metals and non-metals by their properties. • Name simple compounds and what you might see when they are formed. • Use and understand word equations for chemical reactions. 	<ul style="list-style-type: none"> • Draw and use different ways to present data.
8E		
Combustion	<ul style="list-style-type: none"> • Use word equations to model combustion reactions. • Explain changes in mass seen in oxidation reactions. • Use the fire triangle to explain how to control a fire. • Describe pollutants that are formed by burning fuels. • Describe the greenhouse effect and how it is caused. 	<ul style="list-style-type: none"> • Identify variables in an experiment
8F		
The periodic table	<ul style="list-style-type: none"> • Describe Dalton's atomic theory • Describe elements using physical properties. • Explain the difference between physical and chemical changes and properties. • Use the periodic table to find elements with similar properties. • Explain melting, freezing and boiling points. • Identify metals and non-metals by their position in the periodic table. • Describe the reactions of some elements with water and oxygen. 	<ul style="list-style-type: none"> • Explain anomalous results

8G		
Metals and their uses	<ul style="list-style-type: none"> • Describe some common properties and uses of metals. • Describe what happens during corrosion and rusting. • Place metals in order of reactivity. • Describe the reactions of metals with acids. • Use models to explain the properties of alloys and why alloys are used. 	<ul style="list-style-type: none"> • Explain what is meant by accurate data.
8H		
Rocks	<ul style="list-style-type: none"> • Describe the textures of some different rocks. • Describe how igneous and metamorphic rocks are formed. • Describe how weathering can break up rocks. • Describe how sedimentary rocks are formed. • Use the rock cycle to link the three types of rock. • Describe how metals are obtained. 	<ul style="list-style-type: none"> • Describe the scientific method used by geologists
9E		
Making materials	<ul style="list-style-type: none"> • Name some examples of ceramics and their uses. • Name some examples of polymers and their uses. • Explain composite materials, give examples and their uses • Explain how making and using materials can cause problems. • Explain the advantages of recycling. 	<ul style="list-style-type: none"> • Describe the process of peer review

9F		
Reactivity	<ul style="list-style-type: none"> • Identify and explain the differences between physical changes and chemical reactions. • Use particle theory to explain gas pressure. • Describe the reactions of metals with water, dilute acids and air. • Explain how metals are placed in the reactivity series. • Describe the test for oxygen. • Classify changes as exothermic and endothermic reactions. • Explain what happens in a displacement reaction. • Explain why the method used to extract a metal is related to the metal's reactivity • 	<ul style="list-style-type: none"> • Calculate percentage change of mass
9		
Separation techniques	<p>Consolidation of some KS3 topics</p> <ul style="list-style-type: none"> • State the names of certain elements and compounds. • Write word equations • Describe separation techniques • Describe how the atomic model has changed. 	
Reactivity	<ul style="list-style-type: none"> • Describe the reactions of metals with acids and water • Describe the order of reactivity 	