

	Year 8 Chemistry					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content <i>(max 5)</i> Please log into Seneca and Salters Chemistry Club to support your child to understand this learning	<i>What makes a substance acidic or alkaline and how do they interact with each other?</i> Describe what acids and alkalis are and give examples. Identify the hazards that acids and alkalis pose. Compare concentrated and dilute acids Describe what a pH scale measures. Use indicators to identify acids and alkalis and compare the effectiveness of different indicators.	<i>How do acids and alkalis interact to cancel each other's properties and how does our knowledge of these reactions mean we can use them in everyday life?</i> Use indicators to identify chemical reactions. Explain colour changes of universal indicator in terms of pH and neutralisation. Describe the usefulness of neutralisation in industry. Obtain data to compare the effectiveness of indigestion remedies Analyse data to identify a suitable indigestion remedy.	<i>How does our knowledge of the reactivity of metals help us choose the most appropriate metal for a given purpose?</i> Recognise the properties and uses of metals and non-metals. Describe the reaction between acids and metals. Use reactions of acids and metals to determine an order of reactivity for given metals. Use the reactivity series to make predictions about the reactions of metals.	<i>How can we use our understanding of oxidation and displacement reactions to harness their usefulness and avoid destructive effects like rust and decay?</i> Define oxidation. Describe the changes caused by oxidation reactions. Describe oxidation using word equations and particle diagrams. Represent and explain displacement reactions using equations and particle diagrams Make inferences about reactivity from displacement reactions.	<i>How does Earth continuously recycle rocks between igneous, sedimentary, and metamorphic forms?</i> Describe the layers of the Earth. Describe how igneous, sedimentary and metamorphic rocks are formed. Compare the properties of igneous, sedimentary and metamorphic rocks. Describe the rock cycle. Explain how rocks can change from one type to another.	<i>The Periodic Table is a way of organising all the known chemical elements so that similar elements are grouped together. How does it help us predict the chemical reactions of elements?</i> Identify features of the periodic table and describe how it is organised. Describe the properties of Group 1 metals and the pattern in reactions of Group 1 metals. Describe the properties of the halogens and the pattern in reactions of the halogens. Describe observations from displacement reactions. Describe the properties of the elements in Group 0 and explain the usefulness of these elements in everyday life/industry.
Vocabulary <i>(max 10)</i> Please log into MAPPER to support your child to learn these words	Acid Alkali Base Concentrated Corrosive Dilute Indicator Irritant pH Scale Universal indicator	Antacid Control variable Correlation Dependent variable Ductile Independent variable Neutral Neutralisation Salt Titration	Alloy Conduct Conduction Conductor (electrical) Conductor (of heat) Magnetic Malleable Metal Non-metal Sonorous	Combustion Displacement reaction Oxidation Oxide Product Reactant Reactivity Reactivity series Rusting Word equation	Core Crust Erosion Igneous rocks Mantle Metamorphic rocks Sedimentary rocks Tectonic plate Weathering Rock cycle	Alkali metals Chemical properties Element Group Halogen Inert Noble gas Period Periodic table Physical properties
Catholic Link	Option for the Poor and Vulnerable: Environmental damage from acids and alkalis disproportionately hurts the poor.	Life and Dignity of the Human Person: Healthcare is a basic human right.	Solidarity: Pure metals can be soft or weak. When mixed with other elements, the atoms work together making the entire structure stronger and more resilient.	Option for the Poor and Vulnerable: Sacrificial protection and galvanisation.	Rights and Responsibilities: Balancing our need for raw materials with ethical sourcing.	Solidarity: Elements in the same group or period share distinct trends and properties.
Careers Link	Biochemist, Chemist, Pharmacologist	Medicinal Chemist, Pharmacist, Doctor, Nurse	Materials Chemist, Engineer, Civil Engineer	Energy Systems Engineer, Renewable Energy Scientist	Geologist, Volcanologist, Geochemist.	Organic Chemist, Industrial Chemist, Physical Chemist

Ways to enrich the Y8 Chemistry curriculum at home:

- Make red cabbage indicator with the help of a grown up and test household substances to check if they are acid or alkali: <https://www.youtube.com/watch?v=BvMDei5ODuE>
- Make a list of metals that you can see in the home and garden. Do you know which metal they are made from? Can you see any signs of oxidation? Do you think they are reactive or non-reactive metals?
- Explore the Royal Society of Chemistry interactive periodic table <https://periodic-table.rsc.org/>