	Year 7 Chemistry					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content *(max 5)* Please log into Seneca and Salters Chemistry Club to support your child to understand this learning.	***How can investigations be carried out safely to answer scientific questions?*** Select appropriate lab equipment for given tasks. Identify hazards and construct a risk assessment. Devise a scientific question and identify variables. Obtain and record data. Present data graphically and use this to draw a scientific conclusion.	***How can we explain the world around us using the particle model?*** Describe the properties of solids, liquids and gases. Explain the properties of solids, liquids and gases in terms of the particle model e.g. Brownian motion. Define density. Compare the density of given solids. Compare the viscosity of given liquids.	***How can we explain why smells spread from one place to another and why substances can exist as solids, liquids and gases?*** Describe the process of diffusion. Identify and name changes of state. Compare evaporation and boiling. Describe temperature changes on heating/cooling and identify latent heat. Explain changes of state using the particle model and ideas about energy transfer.	***Solutions are examples of mixtures. How can we explain the properties of mixtures?*** Define the terms mixture and pure substance. Compare the properties of mixtures and pure substances. Explain the terms solvent, solution, solute and soluble. Plan an experiment to investigate the effect of temperature on solubility. Construct graphs to represent solubility.	***How can we separate and purify mixtures to get the individual parts?*** Identify methods to separate mixtures. Explain why distillation can purify substances. Devise ways to separate mixtures, based on their properties. Explain how chromatography separates mixtures. Use evidence from chromatography to identify unknown substances in a mixture.	***How does the Earth fit into the Universe?*** Describe the characteristics of a star. Explain the concept of galaxies and the position of our galaxy compared to others. Explain variation in length of day, apparent position of the Sun and seasonal variations. Explain the limitation of units such as kilometres in describing astronomical distances. Explain what causes the appearance of the Moon to change.
Vocabulary *(max 10)* Please log into MAPPER to support your child to learn these words.	Concentration Correlation Dependent variable Hazard Hypothesis Independent variable Observation Prediction Reactant Volume	Compressed Density Electrical conductor Gas pressure Hardness Intermolecular forces Malleable Particle State of Matter Viscosity	Boil Boiling point Condense Diffusion Evaporate Freeze Latent Heat Melt Melting point Sublime	Compound Mixture Pure Concentrated Dilute Saturated Solubility Solute Solution Solvent	Chromatogram Chromatography Condense Distillation Evaporation Filtration Fractional distillation Insoluble Purify Vapour	Axis of rotation Equator Galaxy Hemisphere Light year Nuclear fusion Orbit Planet Season Star
Catholic Link	Life and Dignity of the Human Person: Every human life is sacred and must be protected.	Call to Family, Community, and Participation: Particles do not exist in isolation; they constantly interact.	Care for God's Creation: Air and water pollution spread rapidly across the planet via the natural scientific laws of diffusion.	Solidarity: We are one human family, meaning chemical issues in one country affect everyone.	Option for the Poor and Vulnerable: Access to pure water and clean air is a basic human right often denied to the poor.	Care for Creation: Learning about Earth's unique place in the solar system, its atmosphere, and the resources that support life.
Careers Link	Food Chemist, Environmental Chemist, Atmospheric Scientist	Particle Physicist, Quantum Physicist, Polymer Chemist, Materials Chemist	Food Chemist, Organic Chemist, Cosmetic Chemist	Forensic Chemist, Medicinal Chemist, Food Chemist	Forensic Chemist, Physical Chemist, Industrial Chemist	Climatologist, Environmental consultant, Space weather scientist

Ways to enrich the Y7 Chemistry curriculum at home:

- With the supervision of a grown up, check which safety labels can be found on different cleaning, DIY or cosmetic products.
- Explore this online simulator about the particle model and states of matter https://phet.colorado.edu/sims/html/states-of-matter-basics/latest/states-of-matter-basics_all.html
- Observe an ice cube floating in water. Watch this video and then make a poster explaining when ice floats in water https://www.bbc.co.uk/teach/class-clips-video/articles/zbk8qp3