

Curriculum maps with Christian and school ethos links

Subject: Chemistry A-level

Year: 12 and 13

Topics and links	Autumn Term Yr 12		Spring Yr 12		Summer Yr 12	
	Cycle A	Cycle B	Cycle C	Cycle D	Cycle E	Cycle F
	<p>Atoms, Ions and Compounds.</p> <p>Amount of Substance.</p> <p>Electrons and Bonding</p>	<p>Acids and Redox</p> <p>Shapes of Molecules</p> <p>Intermolecular Forces</p>	<p>Periodicity</p> <p>Reactivity Trends</p> <p>Basic Concepts of Organic Chemistry</p> <p>Alkanes</p> <p>Alkenes</p> <p>Alcohols</p>	<p>Enthalpy</p> <p>Haloalkanes</p> <p>Reaction Rates and Equilibrium</p> <p>Organic Synthesis</p> <p>Spectroscopy</p>	<p>Exam preparation and resilience</p>	<p>Aromatic Chemistry</p> <p>Rates of Reactions</p>
<p>Links with Values and Christian ethos and spiritual development opportunities</p>	<p>What makes up the building blocks of your life?</p> <p>Being consistently rigorous in the application of fundamental skills. Being honest with oneself about being consistently the best that you can be.</p>	<p>Intermolecular Forces cannot be physically seen yet have wide ranging effects across our lives. What other effects do unseen forces have on our lives?</p>	<p>The properties of the elements require us to relate the micro structure to the macro properties. How do our relationships with individuals influence the community as a whole?</p>	<p>Enthalpy is one of the more challenging topics in Y12, students learn to develop the resilience they need to problem solve and to learn from their mistakes.</p> <p>Synthesis allows us to understand how one molecule can be transformed into another through the use of reagents and conditions. Creating the right learning conditions and community allows us to learn and change into better versions of ourselves.</p>	<p>Exam preparation and resilience and courage to face up to the challenge ahead.</p> <p>Rates of reactions looks at factors that effect the speed at which change can happen by accelerating or decelerating the process. What factors effect the speed at which we can make progress in our own lives?</p>	

Topics and links	Autumn Term Yr 13		Spring Yr 13		Summer Yr 13	
	Cycle A	Cycle B	Cycle C	Cycle D	Cycle E	Cycle F
	Equilibrium Acids, Bases and pH Carbonyls and Carboxylic Acids	Buffers and Neutralisation Enthalpy and Entropy Amines, Amino Acids and Proteins	Redox and Electrode Potentials Organic Synthesis	Transition Elements Chromatography and Spectroscopy	Exam preparation and resilience	Exams
Links with Values and Christian ethos and spiritual development opportunities	Equilibrium looks at how the products of the reaction can be changed by a range of factors. In our lives the outcomes can change depending on how we approach the challenges in our lives and the support we receive from our family and friends.	Amino Acids are the building blocks of life and this topic heavily overlaps with biological content. It is important that scientists from different areas learn to collaborate and work together as one community to reach the best possible outcomes.	Synthesis allows us to understand how one molecule can be transformed into another through the use of reagents and conditions. Creating the right learning conditions and community allows us to learn and change into better versions of ourselves.	Developments in technology have led to improved techniques in chromatography and the invention of spectroscopy. Ideas in science are ever evolving but how do we become convinced by ideas so abstract to us?	Exam preparation and resilience and courage to face up to the challenge ahead.	Empathy and kindness to support others in their preparations.

Sixth form Chemistry

1. Courage:

Becoming confident to face challenges in a challenging science environment.

2. Forgiveness:

Working in teams and accepting mistakes of team members.

3. Honesty:

Working independently. Students honest with themselves as well as those around them.

4. **Kindness:**

Working with peers, helping them when they struggle.

5. **Respect:**

Respecting the opinions of others.

6. **Empathy:**

Understanding that different pupils come from different backgrounds in science. Understanding how issues raised in science make others feel.

7. **Resilience:**

Completing tasks even though the style of challenge may seem daunting and new. Being able to evaluate work and learn from mistakes.