



KS4 Learning overview

Subject: Year 9 Combined Science

Exam board: AQA

Year 9		
Term	Topics	Extra learning opportunities
Autumn 1	Cell Biology	1) Observe animal and plant slides using virtual microscope https://www.ncbionetwork.org/iet/microscope/ 2) Watch David Attenborough's new documentary 'Green Planet' (available on Netflix) 3) Carry out the diffusion experiment using skittles and water https://youtu.be/IPs0LJK3gro
Autumn 2	Organisation	1) Free Exhibition at Science Museum: 'Cancer Revolution: Science, Innovation and Hope' (25 May 2022 – January 2023) 2) Permanent exhibition: Medicine: the welcome galleries (Level 1 at Science Museum) 3) Watch Netflix documentary 'Human: the world within'
Spring 1	Atomic structure and periodic table	1) Go on Periodic table scavenger hunt (Find real-life examples of elements) 2) Research about the future of prosthetics https://www.science.org.au/curious/people-medicine/bionic-limbs 3) Visit a salt mine (e.g. Winsford Salt Mine)
Spring 2	Structure, bonding and properties of matter	Research how diamonds can be grown in the lab: Diamond Types Lab-Grown vs Natural - YouTube Research what makes some diamonds more expensive than others: Diamond Quality Factors (gia.edu)

Summer 1 & 2	Energy	Visit a wind farm Research how roller coasters work: How rollercoasters work Science of rollercoasters (explainthatstuff.com) Take a virtual tour of a power station: Take a virtual tour of Pitlochry Power Station and Dam SSE Renewables Virtual tours for school students [Key Stage 2] - YouTube Specific Heat Capacity Demonstration with Balloons - GCSE Physics - YouTube – practical at home
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