

KS4 Learning overview

Subject: Combined Science

Exam board: AQA

Year 11				
Term	Topics	Extra learning opportunities		
Autumn 1	 Rate and extent of chemical change Organic Chemistry 	Research the effect of temperature on rate of reaction by making lava at home. Write a report on the outcome. Make sure you include pictures of your fun experiment. Use this link: <u>Make an Alka-Seltzer Powered Lava Lamp STEM</u> <u>Activity (sciencebuddies.org)</u> Find out how perfumes are made and what are the		
		key ingredients in them		
Autumn 2	1. Chemical Analysis	Research how chemical analysis is used in forensic science to solve a crime scene		
	2. Chemistry of the atmosphere	Using the link below, monitor the levels of pollutants example sulfur dioxide, particulates on a daily basis for a week, and write down what you notice, for example are there certain days or time of day where pollutants are highest/lowest and why you think that might be Latest measured levels based on data provided by the Environment Agency - Defra, UK.		
Spring 1	1. Earth's resources	Worldwide one in three people do not have access to safe drinking water. Research how different countries get their water <u>How Different Countries Get Their Water</u> (businessinsider.com) Magazines and journals:		
	2. Forces	Physics World- The Institute of Physics own magazine covering current Physics research and latest developments New Scientist- Reports on current developments from across the world of science		

Science Daily-Website featuring the latest Scien developments, with a specific area for Physics research Specific Topic resources: Formula 1 Car Development And Production HC IT'S MADE - YouTube BBC Documentary - Super Sub USS Submarines Ultimate Structures -National Geographic - YouTi How Gravity Shapes The Human Body With Jim Al Khalili Gravity, Size and mass Physics - Wonders of Life YouTube BBC iPlayer - Brian Coxs Adventures in Space and Time - Series 1: 3. What Is Gravity? Spring 2 1. Waves Magazines and journals: Physics World - The Institute of Physics own maga covering current Physics research and latest developments New Scientist - Reports on current developments across the world of science BBC Science News - the latest news in science for aroos the world Science Daily- Website featuring the latest Scien developments, with a specific area for Physics research Specific Topic resources: Electromagnetics: Documentary on How the Electromagnetic Spectrum Works (Full Documer - YouTube NASA - Tour of the Electromagnetic Spectrum -	BBC Scie around t	s- the latest news in science from
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	electromagnets	Physics World- The Institute of Physics own magazine covering current Physics research and latest developments
		New Scientist- Reports on current developments from across the world of science
		BBC Science News- the latest news in science from around the world
		Science Daily- Website featuring the latest Science developments, with a specific area for Physics research
		Specific Topic resources:
		Nikola Tesla Documentary The Forgotten Inventor - YouTube
		Research Nikola Tesla, and how electric cars work.