



TNHA Curriculum Planning Document

Subject: Science

Year: 10

Timescale	Autumn			Spring			Summer		
Prior Learning (from KS2/3)	Yr 7- What am I Yr 7 - Sports Science Yr 8- Hospital Yr 8 – Farm Yr 9- Cells Yr 9- Organisation Yr 9- Energy	Yr 7- Scientist Yr 8- CSI Yr 9- Bonding Yr 9- Atoms Yr 9- Quantitative chemistry	Yr 8 – Power Yr 9- Atoms	Yr 7- What am I Yr 8- Hospital Yr 9- Cells Yr 9- Organisation	Yr 7 – Oceans Yr 7 – Sports Yr 8 - CSI Yr 9- Atoms	Yr 7- Cars Yr 7- Space Yr 8 – Theme	Yr 7- What am I Yr 7- Dinosaurs Yr 7- Zoo Yr 9- Cells Yr 9- Infections	Yr 7 – Dinosaurs Yr 7 – Oceans Yr 8 - CSI Yr 8 – Power Yr 9- Bonding Yr 9- Atoms	Yr 7 – Oceans Yr 8- Disco Yr 9- Energy
Topic/ Unit title	Biology Biological Reactions (Bioenergetics) Photosynthesis and Respiration	Chemistry Chemical Reactions Acids and Alkalis, Neutralisation, electrolysis, Salts	Physics Atomic structure Radiation, Half life, atomic structure.	Biology Homeostasis & response Reflex actions, Glucose control, Menstrual cycle	Chemistry Rates of Reaction Effect of temperature, pressure and concentration on rates of reaction. Collision theory.	Physics Forces Forces, resultant forces and velocity. Distance time graphs. Stopping distances.	Biology Inheritance, variation & evolution Genes, Inheritance, reproduction, Punnett squares, Evolution and Extinction	Chemistry Organic Chemistry Hydrocarbons, Alkene, Alkanes and Cracking.	Physics Waves The electromagnetic spectrum, Properties of waves and uses.
SMSC/Cultural Capital/Character/FBV- outline specific areas that are covered in this unit	The impact of exercise The consequences of deforestation Farming: The use of technology to	Group work. The importance of alkali solutions in first aid kits in major cities. Environmental impact of	Group work. Safety in radiation. Worlds responsibility for Chernobyl.	Beliefs around contraception Focus on the ethics behind IVF Group work.	Group work. Industry use to increase cost effectiveness vs. Environmental impact.	Investigating stopping distances and factors that affect these in relation to driving cars unsafely. Group work.	Genetic Engineering and cloning - Use understanding of cloning techniques to evaluate whether embryo	Consider the impact of multiple chemical and industrial processes on the environment - including the combustion of hydrocarbons	Group work. Industrial use of EM Spectrum. The effect of the EM spectrum on the human body.



	help with world hunger. Group work.	gaining/using metal ores.					cloning should be allowed. Group work. Evaluate the human impact on extinction.	and the impacts of global warming and acid rain on the environment. Group work.	
Assessment Opportunities	<p style="text-align: center;">Each unit is assessed by an end of topic test. During the year students will be assessed on their Working Scientifically skills. These include: Graph drawing, practical planning, error identification, Conclusion writing.</p>								
Links to other units in KS3/4.	Yr 7- What am I Yr 7 - Sports Science Yr 8- Hospital Yr 8 – Farm Yr 9- Cells Yr 9- Organisation Yr 9- Energy Yr 11- Ecology	Yr 7- Scientist Yr 8- CSI Yr 9- Bonding Yr 9- Atoms Yr 9- Quantitative chemistry Yr 10- Rates	Yr 8 – Power Yr 9- Atoms Yr 10 - Waves	Yr 7- What am I Yr 8- Hospital Yr 9- Cells Yr 9- Organisation	Yr 7 – Oceans Yr 7 – Sports Yr 8 - CSI Yr 9- Atoms Yr 10- Chemical reactions Yr 10 – Organic chemistry	Yr 7- Cars Yr 7- Space Yr 8 – Theme	Yr 7- What am I Yr 7- Dinosaurs Yr 7- Zoo Yr 9- Cells Yr 9- Infections Yr 10- Biological reactions Yr 11- Ecology	Yr 7- Dinosaurs Yr 7 – Oceans Yr 8 - CSI Yr 8 – Power Yr 9- Bonding Yr 9- Atoms	Yr 7 – Oceans Yr 8- Disco Yr 9- Energy Yr 10- Atomic Structure Yr 11- Electromagnetism



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Year: 11

Timescale	Autumn			Spring	Summer
Prior Learning (from KS2/3)	Yr 7- Zoo Yr 8- Dinosaurs Yr 9- Chemical Reactions Yr 10- Biological reactions Yr 10 - Inheritance, variation & evolution	Yr 7- Scientists Yr 7- Earth Yr 8- CSI Yr 9- Atoms	Yr 8 Disco Yr 8 Power Yr 9- Electricity Yr 10 - Waves	GCSE Specification- Trilogy AQA 8464	
Topic/ Unit title	Biology Ecology Classification, Distribution, Pollution and deforestation	Chemistry Analysis & Earths Resources Chromatography and gas tests. Life cycle assessments, earth's atmosphere and climate change	Physics Magnetism and electromagnetism Magnetic fields, Flemings left hand rule and electromagnetism.	Revision and Exam Preparation Students will complete revision activities to develop further knowledge and test areas of weakness from mock exam testing.	
SMSC/Cultural Capital/Character/FBV- outline specific areas that are covered in this unit	Impact of pollutions on ecosystems. Humans responsibility to avoid pollution and stop deforestation. Sustainability.	The importance of fossil fuels to human society and the impact their usage is having	The use of magnetic fields in navigation.	The Importance of revising for GCSE Science. The use of GCSE science in college applications. How to deal with stress during exam times.	
Assessment Opportunities	Each unit is assessed by an end of topic test. Mock Exam Autumn Term			Mock Exam Early Spring Term. Exam questions and QWC questions during lesson activities.	



Links to other units in KS3/4.	Yr 7- Zoo Yr 8- Dinosaurs Yr 9- Chemical Reactions Yr 10- Biological reactions Yr 10 - Inheritance, variation & evolution	Yr 7- Scientists Yr 7- Earth Yr 8- CSI Yr 9- Atoms	Yr 8 Disco Yr 8 Power Yr 9- Electricity Yr 10 - Waves	Prior GCSE Content.
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