Science curriculum outline 2021/2022

Intent

The Science curriculum is intended to teach pupils about the incredible world that they live in and how they grow as humans and develop and thrive in the incredible, diverse and ever changing planet we live on. Pupils will gain a range of skills and knowledge throughout their science lessons including teamwork and practical skills when completing scientific experiments and debating and literary techniques when considering the impact of scientific theories and practices.

Development of pupils scientific knowledge will be vital to pupils progression and the sciences are separated into Biology, Chemistry and Physics, to ensure pupils are able to fully comprehend the breadth and depth of this awe inspiring subject. The schemes of work have been carefully planned to ensure pupils develop in depth knowledge and understanding of the sciences and are scaffolded to ensure that complex concepts are accessible and are explicitly developed from Key Stage 3 into Key Stage 4.

Practical work is at the heart of the 3 sciences and pupils complete a vast, variety of investigations throughout both Key Stages, to allow pupils to fully immerse themselves into their learning journey. Pupils will have many opportunities to develop their spiritual, moral, ethical, social and cultural understanding and discuss their personal interpretations and ideas, to develop themselves as a well-rounded, scientifically aware citizen of the world.

Implementation

In Science, pupils are taught using a range of learning resources, scientific equipment and modelling practices. Pupils will explore the sciences through practical experimental work, research and independent work using a variety of resources, such as laptops, interactive presentations, whiteboards, online learning experiences and visualisers to model key concepts and examples. Pupils will also experience science in action with regular practical activities, both inside and outside of the classroom, where they can undertake scientific investigations to explain key ideas, develop their understanding and practical skills.

There are regular real-life opportunities of scientific experiences both in the classroom, during lessons, CSI experiences and science clubs, as well as externally at the Big Bang Show and university events. Pupil progress is facilitated through detailed planning of lessons and practical activities, revision classes and scaffolded concepts across the Key Stages. Progression is measured through both formative and summative assessments, including practice papers, teacher questioning, regular feedback, classroom observation and individual discussions.

Impact

The Science department has continued to build upon its successes over the years and many pupils make excellent progress, regardless of their initial starting point. The departments progress 8 scores across both combined and triple sciences are consistently high and key measures such as 4+, 5+ and 7+ percentages place us well above national averages.

Science is a very popular subject at Studley with an average of 60 students a year opting to take our Triple Science provision. We have built a curriculum that supports positive pupil progress and skill development across the Sciences. The practical nature of Science equally allows pupils to develop a range of life skills, such as decision making, evaluating, team working, independent questioning and the ability to work safely and precisely with complex equipment. These transferable skills will be vital in their further education, apprenticeships and the world of work, as well as preparing them for building their own independent lives in their future.

We aim to create learners that are accountable, considerate, compassionate and able to articulate their opinions in a factual and balanced manner, which will not only support their studies at Studley but throughout their adult lives.

Programme of Study, Key Stage 3:

Pupils at KS3 will be assessed throughout the year with formal exam questions and 'How Science Works' investigation to ascertain the grade at which they are working and how they have improved during their studies. The topics they cover are listed under the separate year group headings.

Year 7 Science Topics:

In Year 7 students look at topics covering the full range of sciences, Biology, Chemistry and Physics in an interesting way which links these subjects with day to day life.

Areas covered are:-

- Working In A Lab
- Cells, Reproduction and Photosynthesis
- Electricity and Energy Resources
- Particles and Reactions
- Forces and Speed
- Environment and Classification

Year 8 Science Topics:

In Year 8 students continue their studies from Year 7 in Biology, Chemistry and Physics. The topics still link the subjects with day to day life and areas covered are:-

- Food and Digestion
- Atoms and Elements
- Waves and Energy
- Chemical Reactions
- Magnets and Space
- Health and Disease

	AUTUMN 7.5 WEEKS	7AUTUMN 7 WEEKS	SPRING 6 WEEKS	SPRING 6 WEEKS	SUMMER 6 WEEKS	SUMMER 7 WEEKS
YEAR 7 3 LESSONS EACH WEEK	**WORKING IN A LAB**	**CELLS, REPRODUCTION & PHOTOSYNTHESIS**	**ELECTRICITY & ENERGY**	**PARTICLES AND REACTIONS**	**FORCES AND SPEED**	**ENVIRONMENT & CLASSIFICATION**
	ASSESSMENT POINT: 1 HSW- DISSOLVING JELLY 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- GROWING CRESS SEEDS 2 CELLS COMPETITION 3 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- ENERGY IN FUELS 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- DIFFUSION 2 END OF TOPIC TEST	ASSESSMENT POINT: 1-HSW- HOOKES LAW 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- QUADRATS 2 END OF TOPIC TEST
	SKILLS FOCUS- CONTENT PRACTICAL WORK AND LAB SAFETY LITERACY	**SKILLS FOCUS-** CONTENT IMAGINATION LITERACY PRACTICAL WORK AND LAB SAFETY	**SKILLS FOCUS-** CONTENT CITIZENSHIP PRACTICAL WORK NUMERACY	**SKILLS FOCUS-** CONTENT PRACTICAL WORK DATA ANALYSIS EVALUATION NUMERACY	**SKILLS FOCUS-** CONTENT PRACTICAL WORK DATA ANALYSIS EVALUATION	**SKILLS FOCUS-** CONTENT CITIZENSHIP ENVIRONMENTAL VALUES INDEPENDENT LEARNING

YEAR 8 3 LESSONS EACH WEEK	**FOOD AND DIGESTION**	**ATOMS & ELEMENTS**	**WAVES & ENERGY**	**CHEMICAL REACTIONS**	**MAGNETS AND SPACE**	**HEALTH & DISEASES**
	ASSESSMENT POINT: 1 HSW- ENERGY IN CRISPS 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- RATES OF REACTION CARBONATES 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- INSULATION 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- TITRATIONS 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW-MAKING AN ELECTROMAGNET 2 END OF TOPIC TEST	ASSESSMENT POINT: 1 HSW- DISINFECTANT (MICROBES) 2 END OF TOPIC TEST
	SKILLS FOCUS- CONTENT LITERACY CALCULATIONS GRAPHS	**SKILLS FOCUS-** CONTENT DATA COLLECTION GRAPHS ANALYSIS PRACTICAL WORK AND LAB SAFETY	**SKILLS FOCUS-** CONTENT ANALYSIS CITIZENSHIP	**SKILLS FOCUS-** CONTENT DATA COLLECTION PRACTICAL WORK AND LAB SAFETY ANALYSIS	**SKILLS FOCUS-** CONTENT CITIZENSHIP NUMERACY IMAGINATION	**SKILLS FOCUS-** CONTENT CITIZENSHIP MORAL VALUES

Year 9 Lessons

	AUTUMN 7.5 WEEKS	AUTUMN 7 WEEKS	SPRING 6 WEEKS	SPRING 6 WEEKS	SUMMER 6 WEEKS	SUMMER 7 WEEKS
YEAR 9 PHYSICS 3 LESSONS EACH WEEK	**Forces**	**Forces and Electricity**	**Energy**	**Waves**	**Energy**	**Energy**
	Assessment: HSW Hookes Law Formal Knowledge Assessment	Assessment: HSW Speed Formal Knowledge Assessment	Assessment: HSW Conduction	Assessment: HSW Reflection and Refraction	ASSESSMENT: Required practical on SHC &	ASSESSMENT: Required practical on SHC & Investigating ways of reducing energy loss.

			Formal Knowledge Assessment	Formal Knowledge Assessment	Investigating ways of reducing energy loss.	
	SKILLS FOCUS- CONTENT PRACTICAL WORK AND LAB SAFETY LITERACY	**SKILLS FOCUS-** CONTENT IMAGINATION LITERACY PRACTICAL WORK AND LAB SAFETY	**SKILLS FOCUS-** CONTENT CITIZENSHIP PRACTICAL WORK NUMERACY	**SKILLS FOCUS-** CONTENT PRACTICAL WORK DATA ANALYSIS EVALUATION NUMERACY	**SKILLS FOCUS:** Numeracy Content Practical Work	**SKILLS FOCUS:** Numeracy Content Practical Work
YEAR 9 BIOLOGY 3 LESSONS EACH WEEK	**Cells and Diffusion**	**Heart, Blood, Lungs, Respiration, Digestion and Enzymes**	**Photosynthesis**	**Human Reproduction and Hormones**	**OSMOSIS ACTIVE TRANSPORT ENZYMES**	**DISEASES**
	Assessment: HSW Diffusion Formal Knowledge Assessment	Assessment: HSW Enzymes Formal Knowledge Assessment	Assessment: HSW Rates of Photosynthesis Formal Knowledge Assessment	Assessment: Formal Knowledge Assessment	**ASSESSMENT POINT:** Required Practical 2- Osmosis Required Practical 3- Food Tests	**ASSESSMENT POINT** CLASS PRACTICALS ON AGAR PLATES
	SKILLS FOCUS- CONTENT LITERACY CALCULATIONS GRAPHS	**SKILLS FOCUS-** CONTENT DATA COLLECTION GRAPHS ANALYSIS PRACTICAL WORK AND LAB SAFETY	**SKILLS FOCUS-** CONTENT CITIZENSHIP MORAL VALUES	**SKILLS FOCUS-** CONTENT DATA COLLECTION PRACTICAL WORK AND LAB SAFETY ANALYSIS	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS CITIZENSHIP MORAL ETHICS

YEAR 9 CHEMISTRY 3 LESSONS EACH WEEK	**Rocks and Weathering**	**States of Matter, Particle Theory and Periodic Table**	**Elements and Bonding**	**Acids and Alkali's and Chemical Reactions**	**Atomic Structure and the periodic table**	**Electronic Structures**
	Assessment: HSW Crystal Formation Formal Knowledge Assessment	Assessment: HSW States of Matter Formal Knowledge Assessment	Assessment: Formal Knowledge Assessment	Assessment: HSW Titrations Formal Knowledge Assessment	ASSESSMENT: History of the periodic table and atomic composition Formal Knowledge Assessment	ASSESSMENT: Formal Knowledge Assessment
	SKILLS FOCUS- CONTENT LITERACY CALCULATIONS GRAPHS	**SKILLS FOCUS-** CONTENT DATA COLLECTION GRAPHS ANALYSIS PRACTICAL WORK AND LAB SAFETY	**SKILLS FOCUS-** CONTENT CITIZENSHIP MORAL VALUES	**SKILLS FOCUS-** CONTENT DATA COLLECTION PRACTICAL WORK AND LAB SAFETY ANALYSIS	**SKILLS FOCUS:** Content Numeracy Analysis Application Research	**SKILLS FOCUS:** Content Numeracy Analysis Application Research

Programme of Study for Key Stage 4:

At Key Stage 4 Science can be studied in 2 ways depending on how deeply students wish to pursue the subject at 16+. All pupils will follow AQA specifications.

Pupils take their options in Year 9.

Pupils in Year 10 will start the KS4 AQA Specification. Pupils will have opted for either Triple Award Science or Combined Science.

There are two Options:

1) Triple Award = Separate Sciences, GCSE Biology, GCSE Chemistry and GCSE Physics.

Therefore pupils will be awarded 3 GCSEs grades 9 to 1.

2) Combined Science "Trilogy" = this double award is equivalent to two GCSEs. Pupils will study some Biology, some Chemistry and some Physics. Pupils will then be awarded Two GCSEs grades 9 to 1.

Total – 6 lessons each week (2 Biology, 2 Chemistry and 2 Physics).

Triple Award

This is great preparation for those pupils wanting to study any science at AS and A level. Pupils will cover more content than GCSE Combined Sciences.

Pupils need to be working at a Grade 4 or above.

Each week pupils will have lessons of Biology, Chemistry and Physics. These will be taught by specialist teachers. Lessons will cover the new AQA specification and will cover subject content supported by integrated practical work.

At the end of Year 11 pupils sit 2 Biology papers, 2 Chemistry papers and 2 Physics Papers. Each paper is 1 hour 45 minutes long. Pupils can sit foundation or higher tier. Each paper is 100 marks. All papers will assess Knowledge and understanding as well as scientific ability.

Pupils will be awarded 3 grades 9 to 1

Biology Content	Chemistry Content	Physics Content
• Cell Biology • Organisation • Infection and response • Bioenergetics	• Atomic structure and the periodic table • Bonding, structure and the properties of matter	• Forces • Energy • Waves • Electricity

• Homeostasis and response • Inheritance, variation and evolution	• Quantitative chemistry • Chemical changes • Energy Changes • The rate and extent of chemical change • Organic chemistry • Chemical Analysis • Chemistry of the Atmosphere • Using resources.	• Magnetism and electromagnetism • Particle model of matter • Atomic structure • Space physics

Combined Science

This double award is equivalent to two GCSEs similar to the current core and additional science which many families are familiar with.

Each week pupils will have 2 lessons of Biology, Chemistry and Physics. These will be taught by specialist teachers. Lessons will cover the new AQA specification and will cover subject content supported by integrated practical work.

At the end of Year 11 pupils sit 2 Biology papers, 2 Chemistry papers and 2 Physics Papers. Each paper is 1 hour 15 minutes long. Pupils can sit foundation or higher tier. All papers will assess Knowledge and understanding as well as scientific ability.

Each paper is worth 70 marks with a range of questions including questions accessible to the lowest ability students.

Pupils will be awarded 2 grades 9 to 1 e.g. 9-9, 9-8 through to 2-1,1-1.

Biology Content	Chemistry Content	Physics Content
• Cell Biology • Organisation • Infection and response • Bioenergetics • Homeostasis and response • Inheritance, variation and evolution • Ecology.	• Atomic structure and the periodic table • Bonding, structure and the properties of matter • Quantitative chemistry • Chemical changes • Energy Changes • The rate and extent of chemical change • Organic chemistry • Chemical Analysis • Chemistry of the Atmosphere • Using resources.	• Forces • Energy • Waves • Electricity • Magnetism and electromagnetism • Particle model of matter • Atomic structure

Biology Delivery Grid

YEAR 10 CORE 3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4	HEART & BLOOD	NERVOUS SYSTEM	NERVOUS SYSTEM	FEMALE HORMONES	RESPIRATION & METABOLISM	**DISEASES**
	ASSESSMENT POINT:	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**

	FORMAL KNOWLEDGE ASSESSMENT	FORMAL KNOWLEDGE ASSESSMENT	**REQUIRED PRACTICAL 6** **RULER DROP**		**REQUIRED PRACICAL 7 QUADRATS**	CLASS PRACTICALS ON AGAR PLATES
	SKILLS FOCUS: CONTENT CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS CITIZENSHIP MORAL ETHICS
YEAR 10 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	HEART & BLOOD	NERVOUS SYSTEM	EYE BRAIN SKIN EDOCRINE SYSTEM PANCREASE/DIABETES	KIDNEY FEMALE HORMONES	RESPIRATION METABOLISM	DISEASES
	ASSESSMENT POINT:	**ASSESSMENT POINT:REQUIRED PRACTICAL 7** **RULER DROP**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**	**ASSESSMENT POINT REQUIRED PRACICAL 9 QUADRATS**	**ASSESSMENT POINT:** REQUIRED PRACTICAL 2 ZONES OF INHIBITION ON

	FORMAL KNOWLEDGE ASSESSMENT				**REQUIRED PRACTICAL10 LIPASE DECAY**	BACTERIAL AGAR PLATES
	SKILLS FOCUS: CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS	**SKILLS FOCUS:** CONTENT	**SKILLS FOCUS:** CONTENT	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS	**SKILLS FOCUS:** CONTENT NUMERACY GRAPHS PRACTICAL WORK ANALYSIS CITIZENSHIP MORAL ETHICS
YEAR 11 CORE 3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4	**MITOSIS/MEIOSIS** **DNA GENOME** **VARIATION** **SEXUAL REPRODUCTION** **SELECTIVE BREEDING**	**MENDEL** **INHERITED DISORDERS** **STEM CELLS**	**GM** **GENETIC ENGINEERING** **4.7 ADAPTATION,ENVIRONMENT**	**THEORY OF EVOLUTION** **CLASSIFICATION** **SPECIATION** **FOSSILS**		
	ASSESSMENT POINT:	**ASSESSMENT POINT:**	**ASSESSMENT POINT: REQUIRED PRACICAL 7 QUADRATS**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**	**ASSESSMENT POINT:**

	FORMAL KNOWLEDGE ASSESSMENT	FORMAL KNOWLEDGE ASSESSMENT		FORMAL KNOWLEDGE ASSESSMENT		
	SKILLS FOCUS **CONTENT**	**SKILLS FOCUS** **CONTENT**	**SKILLS FOCUS** **CONTENT** **NUMERACY**	**SKILLS FOCUS** **CONTENT**	**SKILLS FOCUS**	**SKILLS FOCUS**
YEAR 11 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	**MITOSIS/MEIOSIS** **DNA GENOME** **VARIATION** **SEXUAL REPRODUCTION** **SELECTIVE BREEDING**	**CLONNING** **MENDEL** **INHERITED DISORDERS** **STEM CELLS**	**GM** **GENETIC ENGINEERING** **4.7 ADAPTATION,ENVIRONMENT**	**THEORY OF EVOLUTION** **CLASSIFICATION** **SPECIATION** **FOSSILS** **EXTINCTION**	**PLANT HORMONES AND GROWTH**	
	ASSESSMENT POINT: FORMAL KNOWLEDGE ASSESSMENT	**ASSESSMENT POINT:** FORMAL KNOWLEDGE ASSESSMENT	**ASSESSMENT POINT: REQUIRED PRACICAL 9 QUADRATS** **REQUIRED PRACTICAL10 LIPASE DECAY**	**ASSESSMENT POINT:** FORMAL KNOWLEDGE ASSESSMENT	**ASSESSMENT POINT:** **Required Practical 8 Auxin**	**ASSESSMENT POINT:**
	SKILLS FOCUS **CONTENT**	**SKILLS FOCUS** CONTENT	**SKILLS FOCUS** CONTENT NUMERACY	**SKILLS FOCUS** CONTENT	**SKILLS FOCUS**	**SKILLS FOCUS**

Chemistry Delivery Grid

YEAR 10 CORE 3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4	**Chemical Changes**	**Energy Changes**	**The Rate and extent of chemical change**	**Organic Chemistry**	**Chemical Analysis**	**Chemical Analysis**
	ASSESSMENT: Required Practical 9- Electrolysis	ASSESSMENT: Required Practical 10- Temperature Changes	ASSESSMENT: Required Practical 11- Concentration affecting rates of reaction	ASSESSMENT: Alkanes and Alkenes	ASSESSMENT: Required Practical 12- Chromatography	ASSESSMENT: MOCKS
	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work

YEAR 10 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	**Chemical Changes**	**Energy Changes**	**The Rate and extent of chemical change**	**The Rate and extent of chemical change** **Organic Chemistry**	**Organic Chemistry**	**Organic Chemistry**
	ASSESSMENT: Required Practical 9- Electrolysis	ASSESSMENT: Required Practical 10- Temperature Changes	ASSESSMENT: Required Practical 11- Concentration affecting rates of reaction	ASSESSMENT: Required Practical 11- Concentration affecting rates of reaction	ASSESSMENT: Alkanes and Alkenes	ASSESSMENT: MOCKS
	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work
YEAR 11 CORE	**The Rate and extent of chemical change**	**Organic Chemistry**	**Chemical Analysis**	**Chemistry of the Atmosphere**	**Using Resources**	**Revision**

3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4				**(Recap)**		
	ASSESSMENT: Required Practical 11- Concentration affecting rates of reaction	ASSESSMENT: Alkanes and Alkenes	ASSESSMENT: Required Practical 12- Chromatography	ASSESSMENT: MOCKS	ASSESSMENT: Required Practical 8- Water Sample Analysis	ASSESSMENT: GCSE Exams
	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application
YEAR 11 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	**The Rate and extent of chemical change**	**Organic Chemistry**	**Chemical Analysis**	**Chemistry of the Atmosphere (Recap)**	**Using Resources**	**Revision**

	ASSESSMENT: Required Practical 11- Concentration affecting rates of reaction	ASSESSMENT: Alkanes and Alkenes	ASSESSMENT: Required Practical 12- Chromatography	ASSESSMENT: MOCKS	ASSESSMENT: Required Practical 8- Water Sample Analysis	ASSESSMENT: GCSE Exams
	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application	SKILLS FOCUS: Content Numeracy Analysis Application Practical Work	SKILLS FOCUS: Content Numeracy Analysis Application

Physics Delivery Grid

YEAR 10 CORE 3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4	**Atomic Structure & Particle Model of Matter**	**Atomic Structure & Particle Model of Matter**	**Forces**	**Forces**	**Waves**	**Waves**
	ASSESSMENT: Content tests about radiation	ASSESSMENT: Content tests about radiation	ASSESSMENT: Required Practical - Spring	ASSESSMENT: Required Practical -	ASSESSMENT Required Practical - Calculating Wave	ASSESSMENT Required Practical - Calculating Wave

	and atomic structure. Required practical's on investigating the density of regular and irregular objects	and atomic structure. Required practical's on investigating the density of regular and irregular objects	Constant, F =ma (Newtons Laws),	Spring Constant, F =ma (Newtons Laws),	speed, Frequency, wavelength (Ripple Tank)	speed, Frequency, wavelength (Ripple Tank)
	SKILLS FOCUS: Numeracy Graphs - Half life Content Some practical work with Geiger Counters	SKILLS FOCUS: Numeracy Graphs - Half life Content Some practical work with Geiger Counters	SKILLS FOCUS: Numeracy Graphs - Speed, Velocity, Acceleration Content Practical work	SKILLS FOCUS: Numeracy Graphs - Speed, Velocity, Acceleration Content Practical work	SKILLS FOCUS Numeracy - Equations Content Graphs Practical work	SKILLS FOCUS Numeracy - Equations Content Graphs Practical work
YEAR 10 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	**Atomic Structure & Particle Model of Matter**	**Atomic Structure & Particle Model of Matter**	**Forces**	**Forces**	**Waves**	**Waves**
	ASSESSMENT: Content tests about radiation	ASSESSMENT: Content tests about radiation	ASSESSMENT: Numeracy	ASSESSMENT: Numeracy	ASSESSMENT: Required Practical - Calculating Wave	ASSESSMENT: Required Practical - Calculating Wave

	and atomic structure. Required practical's on investigating the density of regular and irregular objects	and atomic structure. Required practical's on investigating the density of regular and irregular objects	Graphs - Speed, Velocity, Acceleration Content & Practical work	Graphs - Speed, Velocity, Acceleration Content & Practical work	speed, Frequency, wavelength (Ripple Tank)	speed, Frequency, wavelength (Ripple Tank)
	SKILLS FOCUS: Numeracy Graphs - Half life Content Some practical work with Geiger Counters	SKILLS FOCUS: Numeracy Graphs - Half life Content Some practical work with Geiger Counters	SKILLS FOCUS: Numeracy Graphs - Speed, Velocity, Acceleration Content Practical work	SKILLS FOCUS: Numeracy Graphs - Speed, Velocity, Acceleration Content Practical work	SKILLS FOCUS: Numeracy - Equations Content Practical work	SKILLS FOCUS: Numeracy - Equations Content Practical work
YEAR 11 CORE 3 LESSONS A FORTNIGHT. ONE SUBJECT WILL GET 4	**Waves & Forces**	**Waves & Forces**	**Electromagnets**	**Electromagnets**	**Revision & recap of all required practical's**	**Revision & recap of all required practical's**
	ASSESSMENT: Required Practical -	ASSESSMENT: Required Practical - Calculating	ASSESSMENT: Required Practical -	ASSESSMENT: Required Practical -	ASSESSMENT:	ASSESSMENT:

	Calculating Wave speed, Frequency, wavelength (Ripple Tank) Required Practical - F =ma (Newtons Laws),	Wave speed, Frequency, wavelength (Ripple Tank) Required Practical - F =ma (Newtons Laws),	Making an electromagnet	Making an electromagnet	Recap of Required Practical's	Recap of Required Practical's
	SKILLS FOCUS: Numeracy - equations Graphs Content Practical work with ripple tank	SKILLS FOCUS: Numeracy - equations Graphs Content Practical work with ripple tank	SKILLS FOCUS: Numeracy - equations Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy - equations Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy - equations Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy - equations Content Graphs Equations Practical work
YEAR 11 TRIPLE 4 LESSONS A FORTNIGHT. TWO SUBJECTS WILL GET 5	**Waves & Forces**	**Waves & Forces**	**Electromagnets**	**Electromagnets**	**Space**	**Revision & recap of all required practical's**
	ASSESSMENT: Required Practical -	ASSESSMENT: Required Practical - Calculating	ASSESSMENT: Required Practical -	ASSESSMENT: Required Practical -	ASSESSMENT: Content Tests	ASSESSMENT: Recap of Required Practical's

	Calculating Wave speed, Frequency, wavelength (Ripple Tank) Required Practical - F =ma (Newton's Laws)	Wave speed, Frequency, wavelength (Ripple Tank) Required Practical - F =ma (Newton's Laws)	Making an electromagnet, Electric motors	Making an electromagnet, Electric motors		
	SKILLS FOCUS: Numeracy Graphs Content Practical work with ripple tank	SKILLS FOCUS: Numeracy Graphs Content Practical work with ripple tank	SKILLS FOCUS: Numeracy Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy Content Graphs Equations Practical work	SKILLS FOCUS: Numeracy - equations Content Graphs Equations Practical work