



The Radclyffe School
"Working Together for Excellence"

EXCELLENCE EVENING



**Known. Supported.
Expected to Succeed.**

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CURRICULUM VISION

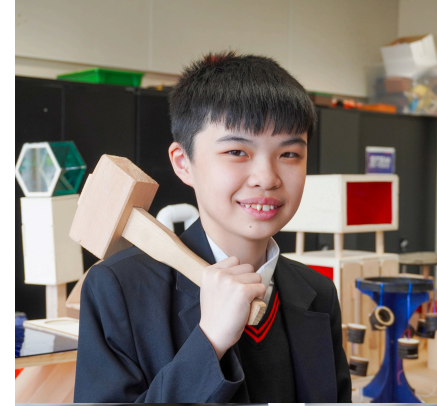
At The Radclyffe School we believe in the transformative power of knowledge and learning in tackling social inequality and providing our students with the best possible chance of success. We are committed to providing young people with the highest quality of education for them to achieve their personal excellence.

All children deserve the very best education in order to fulfil their potential; we believe that academic success complemented with life-enriching experiences will prepare them for success now and in the future.

Our vision is that every student who attends The Radclyffe School will have access to a knowledge-led curriculum that will not only allow them to learn the essential knowledge across a range of subjects but enable them to build on this knowledge in the future and use it to make sense of the world around them.

We want all our students, no matter what their background or previous social and academic experience, to leave school as well qualified, resilient, independent and confident young adults, ready to make a highly positive contribution to their community and wider society.

In a rapidly changing world we feel strongly that our students should show adaptability and resilience as well as demonstrating respect, kindness and tolerance of people from all faiths, cultures and backgrounds.



CURRICULUM INTENT

At The Radclyffe School we offer a purposeful, academically rich and coherent curriculum which leads to the development of deep subject knowledge in a broad range of subjects. Our curriculum is planned and sequenced so that new knowledge is built on what has been taught before as students work towards defined milestones at the end of academic each year. Students are supported in developing rich interconnected webs of knowledge and the cultural capital they need to succeed in life.

Our curriculum is designed to allow students to acquire and retain the core knowledge in each subject through careful planning, sequencing and revisiting of threshold concepts. Our curriculum is designed to provide opportunities to develop common skills that make up the wider curriculum; Literacy (written fluency, stamina and reading), numeracy, SMSC, engagement and cultural capital. The curriculum is brought to life through high quality teaching which develops and extends these threshold concepts to provide a rich and engaging curriculum.

The curriculum is planned as a five-year journey where students spend three years studying a broad range of subjects at Key Stage 3, followed by two years studying a range of GCSE courses in more depth. We have a clear picture of the overall provision map for each subject year by year in the form of a standard long-term plan which is supported with a clear narrative to provide coherence. We have considered the way that students learn and aim to deliver the key knowledge in a way that supports a change in long term memory to develop a secure memory store whilst avoiding avoid cognitive overload.

If you would like any more information about the curriculum we offer to our students please address your questions to the Curriculum Deputy Head, Miss Catlow, via email at scatlow@theradclyffeschool.co.uk, or by phone **0161 622 3200**.



THE KS3 CURRICULUM

ORGANISATION & SUBJECT LEARNING HOURS

	Year 7	Year 8	Year 9
ENGLISH	6	6	6
MATHS	7	7	7
SCIENCE	6	6	6
FRENCH	4	4	4
GEOGRAPHY	3	3	3
HISTORY	3	3	3
COMPUTING	2	2	2
RELIGIOUS STUDIES	2	2	2
PERSONAL DEVELOPMENT	2	2	2
DESIGN TECHNOLOGY	3	3	3
ART	2	2	3
MUSIC	2	2	2
DRAMA	2	2	1
PE	4	4	4
ENGLISH GRAMMAR	1	1	1
READING	1	1	1

Students follow a two-week timetable.

Students are organised into two 'populations' or 'sides': **E and I**.

In most subjects, most students will be in mixed attainment groupings.

In English, there will be a top set in each population.

In Maths, each population is split into attainment-led sets.

A small number of identified students who require some additional support and curriculum adaptation will be taught in a small targeted group for some subjects.

In PE, students will be taught in single gender groups.

All students have access to the full and broad curriculum, and literacy development is prioritised through standalone reading and grammar lessons throughout Years 7-9.

THE KS4 CURRICULUM

ORGANISATION & SUBJECT LEARNING HOURS

	Years 10 & 11
ENGLISH	8
MATHS	8
SCIENCE	9
PERSONAL DEVELOPMENT	2
PE	3
OPTION BLOCK A	5
OPTION BLOCK A	5
OPTION BLOCK A	5
OPTION BLOCK A	5

Students follow a two-week timetable.

In Years 10 & 11, students 'specialise' through their options, reducing their range of subjects to the compulsory elements of core, PE and Personal Development, plus 4 option subjects.

In English, Maths & Science, students are organised into two 'populations' or 'sides': X and Y; each population is then split into attainment-led sets.

In Personal Development, the classes mirror those in Science.

In PE, students will be taught in single gender groups.

In Option Blocks, students will mostly be taught in mixed attainment groups.



THE BIG IDEA

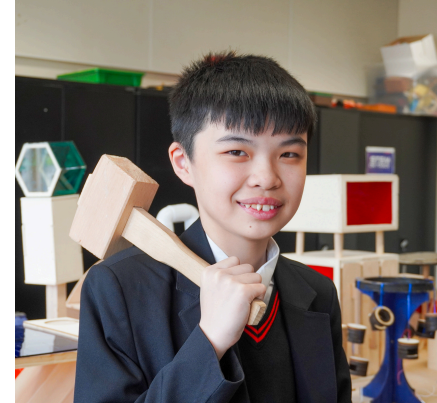
YEAR 7: BELONG

Excellence – HT2/5

- ☐ Set goals with the help of my PLG and make progress towards those goals
- ☐ Improve a piece of work after feedback
- ☐ Complete home learning in all subjects at a high standard
- ☐ Achieve 97% or better attendance overall

Effective Study Habits – Responsible Choices

- ☐ Know how to check my home learning and complete it on time
- ☐ Bring correct equipment to every lesson
- ☐ Understand and use basic note taking
- ☐ Break down a task into smaller steps
- ☐ Submit home learning on time without reminders



THE BIG IDEA

YEAR 8: EXPLORE

Excellence – HT2/5

- ☐ Join at least one new enrichment activity
- ☐ Present your learning to a group or class
- ☐ Participate in a school event outside of lesson
- ☐ Complete weekly reflections on your learning
- ☐ Achieve 97% or better attendance overall

Effective Study Habits – Responsible Choices

- ☐ Organise a weekly home learning / study timetable
- ☐ Keep work and revision organised
- ☐ Identify strengths and areas to develop
- ☐ Summarise information using mind-maps, diagrams or flashcards
- ☐ Use feedback to improve a piece of work

YEAR 9: CHOICES

Excellence – HT2/5

- ☐ Set subject targets and review them
- ☐ Create a revision resource to share
- ☐ Lead a small group task successfully
- ☐ Prepare for assessments independently
- ☐ Achieve 97% or better attendance overall

Effective Study Habits – Responsible Choices

- ☐ Ask teachers for subject specific revision strategies and use them
- ☐ Revise topics using “spaced practice”
- ☐ Identify which subjects / topics need more focus and plan time accordingly
- ☐ Use digital tools to support study
- ☐ Reflect and adapt study methods

THE BIG IDEA

YEAR 10: INDEPENDENCE

Excellence HT2/5

- ☐ Plan and follow a revision timetable
- ☐ Access additional support for a difficult topic
- ☐ Extend your knowledge beyond the curriculum
- ☐ Lead a group study session to support others
- ☐ Achieve 97% or better attendance overall

Effective Study Habits – Responsible Choices

- ☐ Plan revision for assessments across subjects
- ☐ Use active recall techniques (self-quizzing, teaching others)
- ☐ Manage distractions while studying
- ☐ Create a revision timetable and stick to it
- ☐ Ensure all deadlines are met

YEAR 11: MOVING ON

Excellence – HT2/5

- ☐ Follow and sustain a full revision plan
- ☐ Share revision strategies with younger students
- ☐ Take a full active role in future planning for post 16
- ☐ Write a letter of advice on how to get the best out of school to a new Y7 student
- ☐ Achieve 97% or better attendance overall

Effective Study Habits – Responsible Choices

- ☐ Prioritise revision tasks
- ☐ Use a range of subject specific revision techniques
- ☐ Balance study with wellbeing activities (sleep, exercise, rest)
- ☐ Reflect weekly and adapt revision plans
- ☐ Ensure priorities align with post-16 planning

LONG TERM CURRICULUM PLANS

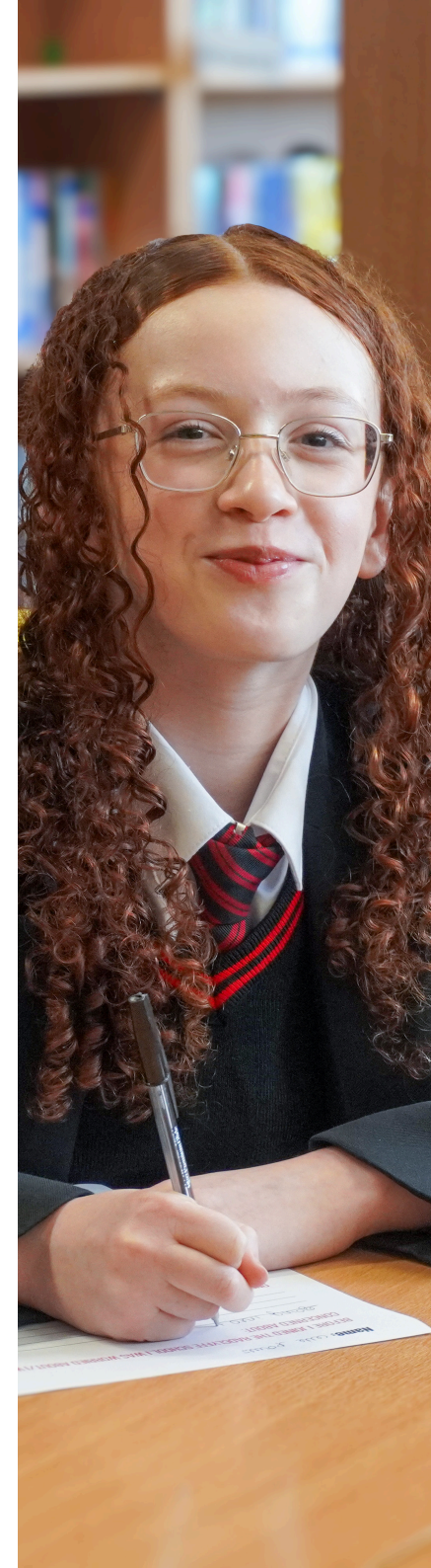
Over the next few pages, we have given you the long term plans for the core subjects.

If you would like the curriculum details of all our other subjects, you can access them via the QR codes below.

KEY STAGE 3



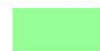
KEY STAGE 4



YEARS 7-9 ENGLISH

English Key Stage Three Curriculum

	HT1	HT2	HT3	HT4	HT5	HT6
Y7 <i>Power</i>	The Iliad (Kagan strategies)	Re-imagining Greek Mythology	Romeo and Juliet		The Art of Rhetoric (speeches)	Romantic Poetry (structured discussions)
Y8 <i>Conflict</i>	Crime and Punishment	The Body- Snatchers	Wilfred Owen War Poetry	Animal Farm (whole class debates)		Dystopian Fiction
Y9 <i>Identity</i>	The Tempest	Descriptive Writing	Poetry from Different Cultures (group presentations)	Small Island		Protest Articles



= Reading skills scheme



= Writing skills scheme (fiction)



= Writing skills scheme (non-fiction)



= formal written assessment



= explicit teaching of oracy skills

YEAR 7 & 8 MATHS

Vision:

Mathematics is a creative, highly valued, and interconnected subject that plays a vital role in everyday life. It underpins almost every career path and supports learning across a wide range of disciplines, including science and geography. Our carefully designed, knowledge-rich curriculum is structured to ensure all students make meaningful progress, regardless of their starting point. By providing accessible learning experiences, we enable students to develop a strong understanding of the world around them, think and reason mathematically, and appreciate the power and relevance of mathematics. Through this approach, we aim to foster confidence, curiosity, enjoyment, and a lasting passion for this remarkable subject.

	HT1 (7.5 weeks) 2 nd Sep – 23 rd Oct	HT2 (7 weeks) 2 nd Nov – 18 th Dec	HT3 (6 weeks) 4 th Jan – 12 th Feb	HT4 (5 weeks) 22 nd Feb – 25 th March	HT5 (7 weeks) 12 th April – 28 th May	HT6 (6.5 weeks) 7 th June – 21 st July	Threshold concepts
Year 7	- Sequences (2 weeks) - Algebraic Notation (2 weeks) - Expressions and Equations (2 weeks) - Place value and ordering (1 week)	- Place value and ordering (1 week) - Four operations (2 weeks) - Averages and range (1 week) - Rounding and Estimation (1 week) - Graphing Data (1 week) EOT assess + revision (1 wk)	- Graphing Data (2 weeks) - Fractions, decimals and percentages (3 weeks) - Directed numbers (1 weeks)	- Directed numbers (1 week) - Fractions and percentages of amounts (2 weeks) - Perimeter and Area (1 weeks) EOT assess + revision (1 wk)	- Perimeter and Area (1 week) - Speed, distance and time (3 weeks) - Properties of numbers (3 weeks)	- Add and subtract fractions (3 weeks) - Angles and polygons (3 weeks) EOT assess + revision (1 wk)	- Linear and non-linear sequences in both diagram and number form - Algebraic manipulation with inverse operations, simplifying, solving and substitution - An understanding of the implications of place value in ordering, rounding, estimating and performing calculations - Equivalence of, and conversions between, fractions decimals and percentages - Appropriate strategies using the four operations - Manipulation of fractions - Geometric constructions and angle calculations - An understanding of the different averages used - Comparisons of different types of graphs
Year 8	- Ratio (2 weeks) - Proportion and scale (2 weeks) - Algebraic manipulation (2 weeks) - Coordinates and Graphs (1 weeks)	- Coordinates and Graphs (2 week) - Multiply and divide fractions (2 weeks) - Symmetry and reflection (1 week) - Area, volume and density (1 weeks) EOT assess + revision (1 wk)	- Area, volume and density (1 weeks) - Equations and inequalities (2 weeks) - Percentages (3 weeks)	- Indices (2 weeks) - Standard form (1week) - Interpret and represent data (1 weeks) EOT assess + revision (1 wk)	- Interpret and represent data (1 weeks) - Angles in parallel lines and polygons (3 weeks) - Tables and probability (3 weeks)	- Circles (2 weeks) - Graphs and charts (2 weeks) - Sequences (1 week) - Taskmaster (1 week) EOT assess + revision (1 wk)	- Analysis of ratio and multiplicative reasoning - Fraction reciprocals - Construction and interpretation of straight-line graphs and equations - Design, interpretation and average calculations of data representations - Manipulation of algebraic expressions - Generation of complex sequences - Representations of ordinary numbers in standard index form - Geometric notation and calculation; angles and area - Appropriate strategies using the four operations - Manipulation of fractions - Geometric constructions and angle calculations - Probability representation and calculation

YEAR 9 MATHS

	HT1 (7.5 weeks) 2 nd Sep – 23 rd Oct	HT2 (7 weeks) 2 nd Nov – 18 th Dec	HT3 (6 weeks) 4 th Jan – 12 th Feb	HT4 (5 weeks) 22 nd Feb – 25 th March	HT5 (7 weeks) 12 th April – 28 th May	HT6 (6.5 weeks) 7 th June – 21 st July	Threshold concepts
Year 9	1. Properties of numbers (2 weeks) 2. Percentages (2 weeks) 3. Area and volume (2 weeks) 4. Equations, inequalities and formulae (1 weeks)	5. Equations, inequalities and formulae (1 weeks) 6. Fractions (1 week) 7. Rates (2 weeks) 8. Standard form (1 week) 9. Maths and money (1 weeks) EOT assess + revision (1 wk)	10. Maths and money (2 weeks) 11. Straight line graphs (2 weeks) 12. Ratio and proportion (2 weeks)	13. Constructions and congruence (2 weeks) 14. Similarity (1 week) 15. Algebraic manipulation (1 week) EOT assess + revision (1 wk)	16. Algebraic manipulation (1 week) 17. Pythagoras' theorem (2 weeks) 18. Non-linear graphs (2 weeks) 19. Probability (2 weeks)	20. Transformations (2 weeks) 21. Simultaneous equations (2 weeks) 22. Trigonometry (2 weeks) EOT assess + revision (1 wk)	- Understand the meaning of m (gradient) and c (y-intercept) in the standard format of the equation of a straight line given by $y=mx + c$ - Solving equations and inequalities - Test conjectures about patterns and relationships - Identify properties of 2-D and 3-D shapes - Apply formulae to calculate and solve problems in 2-D and 3-D shapes - Use Mathematical tools to construct accurate drawings - Use 4 operations with integers, decimals and fractions - Use and manipulate numbers in standard form - Use the equivalence of fractions, decimals and percentages - Solve percentage problems with and without a calculator - Practice number skills in various financial contexts - Solve and reason angle problems which include algebra - Translate and rotate shapes - Use Pythagoras's Theorem to solve problems involving right-angled triangles - Construct similar shapes by enlargement - Solve problems involving ratio and proportion - Know and use formulae for speed, distance, time and density mass, volume - Calculate frequency and expected outcomes - Draw and interpret quadratic graphs

YEARS 7 - 8 SCIENCE

KS3

Vision: To deliver a curriculum that fosters curiosity and make scientifically literate members of society who have the tools to make informed decisions about the world around them. The KS3 plan is designed to increase the depth and scientific rigour of the studies the students will have experienced at primary school. We will take advantage of both our specialist resources and knowledge to push students beyond their current levels of understanding and provide a grounding for further study. It is our goal that all students should be prepared to study science at KS4 and beyond based on the foundations they have mastered during years 7-9.

Year 7	Particle model Substances and Mixtures	Cells Organ Systems	Forces Speed	Atoms and Elements Introduction to chemical reactions	Reproduction in humans and plants	Organisms in <u>their</u> Habitat	- Describe how the particle model can be used to explain the differences between solids, liquids and gases. - Explain that all materials are made up of either a single substance or a mixture of substances and describe how these can be separated. - Explain that cells are the basic units of life and are organised into tissue, organs and organ systems. - Explore cell structures and difference between plant and animal cells. - Explain that forces arise when two objects interact. - Describe the movement of objects. - Describe the differences between atoms, elements and compounds. - Explain the difference between chemical and physical changes. - Explore some simple chemical reactions. - Describe the male and female reproductive parts of humans and plants. - Describe how plants and animals interact with their environment and with each other.
Year 8	Sound Light	Understanding chemical reactions Digestion	Circuits Acids and Alkali	Heating and Cooling Structure of Earth	More on forces	Biochemistry	- Describe how light travels and how we see objects. - Explain how sound travels through a media. - Describe chemical reactions in terms of conservation of mass. - Represent chemical reactions using formulae and using equations. - Learn about acids and alkalis as classes of chemicals with distinct properties and uses. - Circuit components and symbols - Drawing simple series circuits - Build a series circuit to measure potential difference. - Content of a healthy human diet, including detailed information of each nutrients use. - Learn about the structure and function of organs of the digestive system. - Learn about mechanism of heat transfer: conduction, convection and radiation. - Describe the structure of the Earth and the rocks found. - Describe the rock cycle and the formation of sedimentary, metamorphic and igneous rocks. - Describe the water cycle and carbon cycle. - The properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure. - Describe the chemical reactions that make and break down substances in living cells: photosynthesis and cellular respiration. - Describe forces associated with deforming objects; stretching and squashing.

YEAR 9 SCIENCE

KS3

Vision: To deliver a curriculum that fosters curiosity, and make scientifically literate members of society who have the tools to make informed decisions about the world around them. The KS3 plan is designed to increase the depth and scientific rigour of the studies the students will have experienced at primary school. We will take advantage of both our specialist resources and knowledge to push students beyond their current levels of understanding and provide a grounding for further study. It is our goal that all students should be prepared to study science at KS4 and beyond based on the foundations they have mastered during years 7-9.

Year 9	Periodic Table and Reactivity Magnets and Electromagnets	Inheritance and Evolution	Earth's Atmosphere and Resources	Energy Resources Health and Diseases	Health and Diseases Solar System	Enquiry Process	• Metal and non-metals have different physical properties. • Use of the reactive series of metals to identify which metals are more reactive. • Use data to describe a trend in physical properties. • Use observations of a pattern in chemical reactions to predict the behaviour of an element in a group. • Describe heredity as the process by which genetic information is transmitted from one generation to the next. • Learn about the simple model of chromosomes, genes and DNA. • Learn about the greenhouse effect, global warming, and climate change. • Look at human activity is causing global warming or climate change. • Describe how human activities affect the carbon cycle. • Explain that fossil fuels are non-renewable energy resources. • Explain that renewable energy resources can be a used to generate electricity. • State different types of energy resources. • Calculation of fuel uses and costs. • Explore energy stores and transfers. • Explain that the physical and mental health of an individual results from the interaction between the organism's body, behaviour environment and other organism. • Explore the solar system. • Explain that a lunar eclipse occurs when the moon goes into the shadow of the Earth. • To know the life cycle of a star. • Explain that the Earth is the only planet (in the Solar system) with an oxygen-rich atmosphere and liquid water on the surface that supports life. • Make predictions using scientific knowledge and understanding. • Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate • Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety • Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements. • Undertake basic data analysis.
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YEARS 10 - 11 ENGLISH LANGUAGE

Year 10 Language					
Half-term 1: Language Paper 1	Half-term 2: Language Paper 1	Half-term 3 Language Paper 1	Half-term 4 Spoken Language /Language Paper 2	Half-term 5 Language Paper 1	Half-term 6 Literature
Language and Critical Evaluation	Structure and Critical Evaluation	Descriptive and Narrative writing	Spoken Language Preparation (writing a speech) and Performances	Language Paper 1 PPE Preparation	Literature Focus
Year 11 Language					
Half-term 1: Language Paper 2	Half-term 2: Language Paper 2	Half-term 3: Language Paper 2	Half-term 4 Revision	Half-term 5 GCSE Exams	Half-term 6 GCSE Exams
Synthesis and Language Evaluation	Comparison and Critical Evaluation	Non-Fiction writing	Revision of knowledge and skills	Exams	Exams

YEAR 10 -11 ENGLISH LITERATURE

Year 10 Literature					
Half-term 1: Modern text	Half-term 2: Modern text	Half-term 3: Shakespeare	Half-term 4: Shakespeare	Half-term 5: Anthology Poetry	Half-term 6: Anthology Poetry
An Inspector Calls	An Inspector Calls	Macbeth	Macbeth	Power and Conflict Poetry	Power and Conflict Poetry
Year 11 Literature					
Half-term 1: 19 th Century Text	Half-term 2: 19 th Century Text	Half-term 3: Unseen Poetry	Half-term 4: Revision	<i>Half-term 5: GCSE Exams</i>	<i>Half-term 6: GCSE Exams</i>
A Christmas Carol	A Christmas Carol	Unseen Poetry	Revision of Knowledge and Skills	<i>Exams</i>	<i>Exams</i>

YEAR 10 MATHS

	HT1 (7.5 weeks) 2 nd Sep – 23 rd Oct	HT2 (7 weeks) 2 nd Nov – 18 th Dec	HT3 (6 weeks) 4 th Jan – 12 th Feb	HT4 (5 weeks) 22 nd Feb – 25 th March	HT5 (7 weeks) 12 th April – 28 th May	HT6 (6.5 weeks) 7 th June – 21 st July	Threshold concepts
Year 10 FOUNDATION	7.5 weeks – 30 hours Number (2.5 weeks/12-16 hours R) - Place value - Decimals - Indices - Factors, multiples & primes - HCF & LCM Algebra (2 weeks/9-11 hours R) - Expressions - Function machines - Substitution - Expanding - Factorising Data (3 weeks/15-18 hours R) - Tables, charts & graphs - Pictograms - Bar charts - Pie charts - Stem & leaf diagrams - Scatter graphs - Frequency polygon	7 weeks – 28 hours Fractions & percentages (3 weeks/11-13 hours R) - Convert FDP - Fraction calculations - Percentage of amount - Percentage increase/decrease - Profit/loss - Simple/compound interest - Reverse percentage Equations & inequalities (3 weeks/12-14 hours R) - Functions machines - Solving equations - Solving inequalities - Rearrange simple equations - Substitution - Algebra shape problems - Inequality number lines - Sequences - Nth term Angle rules (1 week/9-11 hours R) - Shape properties - Basic angle rules - Angles in parallel lines	6 weeks – 24 hours Angle rules (1 week/9-11 hours R) - Angles in parallel lines - Interior/exterior angles Averages (1 week/6-8 hours R) - Types of data - Averages from a list - Averages from a table - Sampling - Compare graphs/tables Perimeter, area & volume (2 weeks/9-11 hours R) - Perimeter - Area of 2D shapes - Surface area - Volume Graphs (2 weeks/12-14 hours R) - Coordinates - Conversion graphs - Real life graphs - Linear graphs	5 weeks – 20 hours Transformations (2 weeks/10-12 hours R) - Draw transformations - Describe transformations - Series of transformations Ratio & proportion (2 weeks/7-9 hours R) - Ratio problems - Scales - Recipes - Currency conversion - Direct/inverse proportion Pythagoras & trig (1 week/4-6 hours R) - Pythagoras missing lengths - SOHCAHTOA - Exact trig values	7 weeks – 28 hours Probability (2 weeks/11-13 hours R) - Probability scale - List outcomes - Single probability - Sample space - Expected outcomes - Probabilities from tables - Venn diagram notation - Tree diagrams Multiplicative reasoning (2 weeks/6-8 hours R) - Convert units - DMV - SDT - FPA - Percentage profit/loss - Rate of pay - Best buy Elevations & construction (2 week/10-12 hours) - Nets - Plans & elevations - Sketch 3D solids - Draw/measure angles - Construct triangles - Bisectors - Loci - Bearings Quadratic equations (1 week/7-9 hours R) - Expand/factorise quadratics - Solve quadratics - Difference of 2 squares - Roots of quadratic equations	6.5 weeks – 20/26 hours Quadratic equations (1 week/7-9 hours R) - Plot quadratic graphs - Approximate solutions - Roots & intercepts Circles (1.5 week/5-7 hours R) - Area & circumference - Arcs & sectors - Perimeter of circles - Compound shapes - SA cylinders, pyramids, cones & spheres Bootcamp (1 week/4 hours) - 4 revision lessons PPEs (2 weeks/8 hours) - Missed content - Exam practice Work experience (1 week/4 hours)	- Secure place value and number sense - Understand multiplicative relationships, including factors, ratio and proportion - Recognise equivalence between fractions, decimals and percentages - Use algebra to represent, manipulate and generalise relationships - Understand inverse operations and maintain equality when solving - Interpret and compare data using appropriate representations - Apply key geometric properties, including angle rules and transformations - Understand and use measures of length, area, volume and scale - Interpret graphs as representations of relationships and rates of change - Select and apply appropriate mathematical methods in unfamiliar problems

YEAR 10 MATHS

	HT1 (7.5 weeks) 2 nd Sep – 23 rd Oct	HT2 (7 weeks) 2 nd Nov – 18 th Dec	HT3 (6 weeks) 4 th Jan – 12 th Feb	HT4 (5 weeks) 22 nd Feb – 25 th March	HT5 (7 weeks) 12 th April – 28 th May	HT6 (6.5 weeks) 7 th June – 21 st July	Threshold concepts
Year 10 HIGHER	Autumn 1 7.5 weeks – 30 hours Number (2.5 weeks/12-15 hours R) - Rounding - Laws of indices - Reciprocals - HCF & LCM - Standard form - Basic surds Algebra (3 weeks/12-14 hours R) - Expressions - Function machines - Substitution - Solving equations - Expand & factorise quadratics - Difference of 2 squares - Simple change the subject - Arithmetic & geometric sequences - Nth term - Quadratic sequence Averages/data (2 weeks/7-9 hours R) - Fill in tables - Averages from a list - Averages from tables - Bar charts - Scatter graphs - Pie charts - Frequency polygon	Autumn 2 7 weeks – 28 hours Fractions & percentages (2 weeks/11-13 hours R) - Convert FDP - Improper to mixed - Fraction calculations - Recurring decimals - Percentage of an amount - Percentage increase/decrease - Reverse percentages Ratio & proportion (1 week/5-7 hours R) - Ratio problems - Direct proportion - Recipes - Currency conversion Angle rules (1 week/5-7 hours R) - Basic rules - Angles in parallel lines - Interior/exterior angles - Angle problems Pythagoras & trig (1 week/5-7 hours R) - Pythagoras - SOHCAHTOA - Exact trig values Graphs (2 weeks/17-20 hours R) - Real life graphs - Midpoints - Linear graphs - Quadratic graphs	Spring 1 6 weeks – 24 hours Graphs (1 week/17-20 hours R) - Cubic graphs - Reciprocal - Circle graphs Perimeter, area, volume & circles (3 weeks/14-17 hours R) - Area of 2D shapes - Perimeter/area of compound shapes - Area & circumference - Arcs & sectors - SA & volume of cylinders, pyramids, cones & spheres - Bounds Transformations & construction (2 weeks/11-13 hours R) - Draw & describe transformations - Series of transformations - Plans & elevations - Scale drawings - Construct triangles - Bisectors - Bearings - Loci	Spring 2 5 weeks – 20 hours Quadratic, simultaneous equations & inequalities (2 weeks/11-13 hours R) - Factorise quadratics - Completing the square - Quadratic formula - Simultaneous equations - Inequality number line - Inequality graph solutions Probability (2 weeks/7-9 hours R) - Expected outcomes - Probabilities from tables & graphs - List outcomes - Sample space - Venn diagram notation - Tree diagrams Multiplicative reasoning (1 week/6-8 hours R) - Solve proportions problems - Convert units - DMV - SDT	Summer 1 7 weeks – 28 hours Multiplicative reasoning (1 week/6-8 hours R) - FPA - $y=kx$ - Proportion graphs Similarity & congruence (1 week/5-7 hours R) - Laws of congruence - Linear, area & volume scale factors Further trig & graphs (3 weeks/13-15 hours R) - Trig graphs - Exact trig values - Graph transformations - $\frac{1}{2}$ absinc - Sine rule - Cosine rule - 3D problems - 3D Pythagoras & trig Data (2 weeks/10-12 hours R) - Types of data - Bias/fairness - Sampling - Cumulative frequency - Box plots - Averages - Histograms	Summer 2 6.5 weeks – 20/26 hours Triple bracket & circle graphs (1.5 week/6-8 hours R) - Quadratic roots/solutions - Expand triple brackets - Sketching graphs - Linear inequalities using graphs - Iteration Circle theorems & circle geometry (1 week/8-10 hours R) - All theorems - Circle graphs & equations - Equation of a tangent Bootcamp (1 week/4 hours) - 4 revision lessons PPEs (2 weeks/8 hours) - Missed content - Exam practice Work experience (1 week/4 hours)	• Apply number properties confidently, including indices, standard form, surds and bounds • Manipulate algebraic expressions and solve increasingly complex equations • Recognise and generalise linear, quadratic and geometric sequences • Interpret, construct and compare statistical representations • Use fractions, percentages, ratio and proportion in multi-step problems • Apply angle, Pythagoras and trigonometric relationships to geometric problems • Interpret and sketch linear, quadratic, cubic, reciprocal and circle graphs • Use perimeter, area, surface area and volume relationships, including similarity and scale factors • Combine probability methods, including tree diagrams, Venn diagrams and sample spaces • Select and apply appropriate mathematical methods to unfamiliar and multi-step problems

YEAR 11 MATHS

	HT1 (7.5 weeks) 2 nd Sep – 23 rd Oct	HT2 (7 weeks) 2 nd Nov – 18 th Dec	HT3 (6 weeks) 4 th Jan – 12 th Feb	HT4 (5 weeks) 22 nd Feb – 25 th March	HT5 (7 weeks) 12 th April – 28 th May	HT6 (6.5 weeks) 7 th June – 21 st July	Threshold concepts
Year 11 FOUNDATION	7.5 weeks – 30 hours Ratio and proportion (2) Area, perimeter and volume (2) Linear graphs, gradients and lines/ /using graphs (2) - Cubic and reciprocal graphs Exp and factorising/changing the subject (2) *(bring in shape revision with algebra) - Rearranging formulae - Simultaneous equations (PPE prep final week woven in) - Core skills: mixed fraction calculations and reciprocals	7 weeks – 28 hours (PPE prep woven in) Sequences and proof (1) PPEs (2) Angles and trigonometry (2) Work with circles inc cylinders (1) ** recap which is why condensed to 1 week Standard form (1) - Laws of indices and standard form calculations MAD TIME from PPEs built in	6 weeks – 24 hours Do Nows/home learning based on QLA from PPEs Transformations (2) - Similarity and congruence - Vectors linked to translations Rates (1) Venn diagrams and set notation (1) PPES (2) Constructions and loci (Weaved into PPE lesson) - Bearings	5 weeks – 20 hours MAD TIME from PPEs Personalised medium term plans based on PPE results (2)	7 weeks – 28 hours Personalised medium term plans/ GCSE prep (3) GCSE begins (week 4)		• Apply ratio, proportion and multiplicative reasoning to multi-step problems • Use perimeter, area, surface area and volume relationships confidently • Interpret and use linear, quadratic, cubic and reciprocal graphs • Manipulate algebraic expressions, rearrange formulae and solve equations • Recognise and generalise sequences, and construct mathematical arguments and proofs • Apply angle rules, Pythagoras and trigonometry in 2D and 3D contexts • Use properties of circles, cylinders and standard form accurately • Understand transformations, similarity, congruence and vectors as geometric relationships • Apply rates, set notation, Venn diagrams, constructions and bearings to problem-solving • Identify individual gaps from assessment and independently select and apply appropriate GCSE methods
Year 11 HIGHER	Autumn 1 7.5 weeks – 30 hours Ratio and proportion (2) - Direct and inverse proportion - $y = kx$ and proportionality graphs - Squared and cubed proportion Area and volume (2) (inc cones and spheres and frustums- set 1 only) set 2 can do later in the year if mastered everything else Gradients and lines/non-linear graphs/using graphs (3)* Expanding and factorising/changing the subject (1)	Autumn 2 7 weeks – 28 hours Expanding and factorising/changing the subject (1) Sequences and proof (1)* Proof set 1 only PPEs (2) Equations and formulae (2) - Complex rearranging - Algebraic fractions - Rationalising surds - Function notation Transformations inc neg, fractional (1) MAD TIME FROM THE PPES	Spring 1 6 weeks – 24 hours Probability (1.5)** Functions and graphs (1.5) - Reciprocal and exponential graphs Rates (1) - Rate of change - Gradient of a tangent - Area under graphs PPEs (2)	Spring 2 5 weeks – 20 hours Constructions and loci (1) Circle theorems (1) set 1 - Circle graphs and equations - Equation of a tangent Vectors (1) set 1 - Geometrical proof Personalised plans based on the PPES	Summer 1 7 weeks – 28 hours Personalised plans based on the PPES		• Apply direct, inverse, squared and cubed proportion to unfamiliar problems • Use area, surface area and volume relationships in complex 2D and 3D contexts • Interpret gradients, equations of lines and non-linear graphs • Manipulate complex algebraic expressions, equations and formulae • Generalise sequences and construct algebraic or geometric proof • Use function notation, algebraic fractions and surds confidently • Model and interpret probability using appropriate representations • Understand rates of change, gradients of tangents and areas under graphs • Apply transformations, constructions, circle theorems and vectors to geometric problems • Identify individual gaps from assessment and independently select and apply appropriate GCSE methods

AQA UNIT LIST BY PAPER

Biology – paper 1

- 4.1. Cell biology
- 4.2. Organisation
- 4.3. Infection and response
- 4.4. Bioenergetics

Chemistry – paper 1

- 5.1. Atomic structure and the periodic table
- 5.2. Bonding, structure, and the properties of matter
- 5.3. Quantitative chemistry
- 5.4. Chemical changes
- 5.5. Energy changes

Physics – paper 1

- 6.1. Energy
- 6.2. Electricity
- 6.3. Particle model of matter
- 6.4. Atomic structure

Biology – paper 2

- 4.5. Homeostasis and response
- 4.6. Inheritance, variation and evolution
- 4.7. Ecology

Chemistry – paper 2

- 5.6. The rate and extent of chemical change
- 5.7. Organic chemistry
- 5.8. Chemical analysis
- 5.9. Chemistry of the atmosphere
- 5.10. Using resources

Physics – paper 2

- 6.5. Forces
- 6.6. Waves
- 6.7. Magnetism and electromagnetism
- 6.8 Space Physics (triple only)

YEAR 10 COMBINED SCIENCE

Combined Science - Teacher A	Combined Science - Teacher B
5 science lessons over a fortnight	4 science lessons over a fortnight
Topics covered..... Energy Cell biology Organisation Bonding, structure and properties of matter Infection and response Bioenergetics Chemical changes homeostasis	Topics covered..... Atomic structure and the periodic table Electricity Quantitative chemistry Particle model Energy changes Atomic structure

YEAR 10 TRIPLE SCIENCE

Triple Biology - One teacher	Triple Chemistry – One teacher	Triple Physics - One teacher
5 science lessons over a fortnight	4 science lessons over a fortnight	4 science lessons over a fortnight
Topics covered..... Cell biology Organisation Infection and response Bioenergetics Homeostasis	Topics covered..... Atomic structure and the periodic table Bonding, structure, and the properties of matter Quantitative chemistry Chemical changes	Topics covered..... Energy Electricity Particle model of matter Atomic structure

YEAR 11 COMBINED SCIENCE

Combined science - One teacher

9 science lessons over a fortnight

Topics covered.....

Variation and evolution

Ecology

Rates of reactions

Organic Chemistry

Chemical analysis

Chemistry of the atmosphere

Using resources

Forces

Waves

Magnetism and electromagnetism

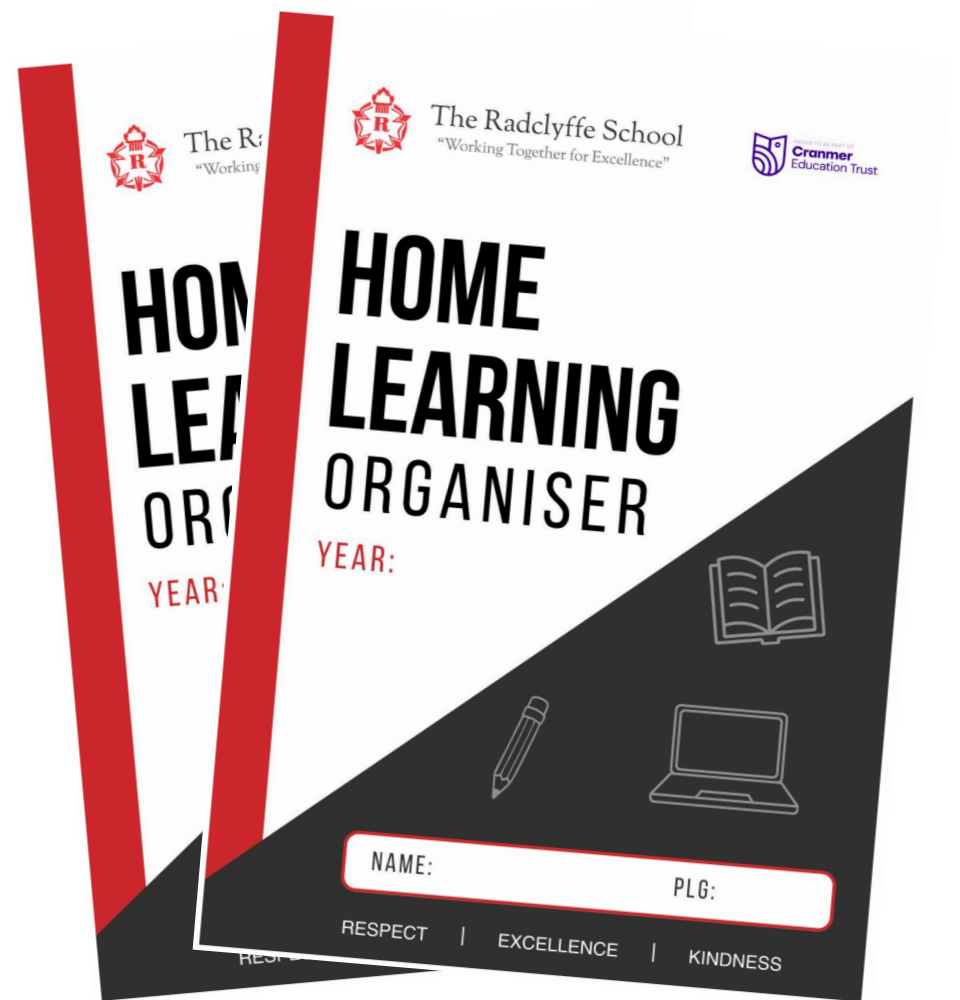
YEAR 11 SCIENCE

Triple Biology - One teacher	Triple Chemistry - One teacher	Triple Physics - One teacher
5 science lessons over a fortnight	4 science lessons over a fortnight	5 science lessons over a fortnight
Topics covered..... Variation and evolution Ecology	Topics covered..... Rates of reactions Organic Chemistry Chemical analysis Chemistry of the atmosphere Using resources	Topics covered..... Forces Waves Magnetism and electromagnetism Space physics

HOME LEARNING ORGANISER

ALL STUDENTS WILL;

- 1 Use the home learning organiser to write down all home learning tasks.
- 2 Use the home learning organiser to organise and complete all tasks on time.
- 3 Speak to staff if they are struggling to complete their home learning .
- 4 Accept rewards or consequences for home learning tasks.



HOME LEARNING ORGANISER

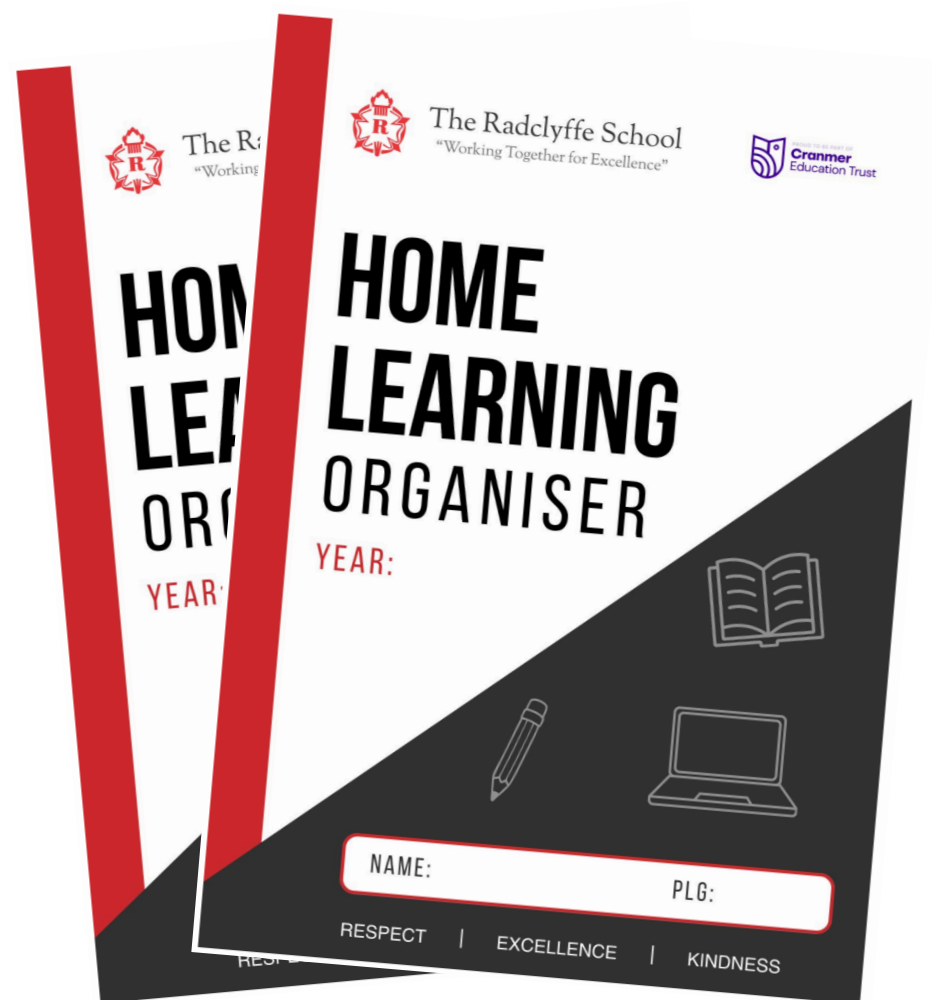
MONDAY			
Subject	Home Learning	Due	Done?

TUESDAY			
Subject	Home Learning	Due	Done?

WEDNESDAY			
Subject	Home Learning	Due	Done?

THURSDAY			
Subject	Home Learning	Due	Done?

FRIDAY			
Subject	Home Learning	Due	Done?



LEARNING EXPECTATIONS

Utilise the time in lessons to complete all work set. Plan, organise and complete all Home Learning tasks.

Prepare for every KS3 and KS4 assessment.



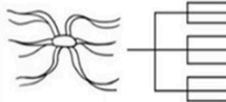
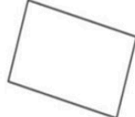
Take personal responsibility and develop organisation skills.

TOP REVISION TIPS FOR SUCCESS



TODAY I'M DOING
MINDMAP MASTERY

- I will choose 2 topics from one subject.
- I will spend 30 minutes creating a mindmap for Topic 1.
- I will take a 15-minute break—go for a walk or listen to music. I will spend 30 minutes creating a mindmap for Topic 2.
- I will finish by reviewing both mindmaps for 10 minutes to make sure I've remembered the key points.
- I will put a star on my Reward Chart!

Map It Create a mind map of the key points. 	Journey It Remember lists of information by placing images on a journey. 	Index It Transfer the key points to index cards. 
Story It Create a weird and vivid story using the key points. 	Mnemonic It Use the first letter of key words to create a sentence. A well known example: Never Eat Shredded Wheat 	Click It Create a presentation about the key points. 
Flip It Write questions and answers and flip it anywhere. 	Timeline It Place key points along a line in date order. 	Sing It Set key points to some familiar music/rap. 
Record It Use your mobile to record yourself explaining the key points and play it back regularly. 	Post It Write key words on to Post Its and stick them around your room. 	Comic It Create your own comic strip using the key points. 

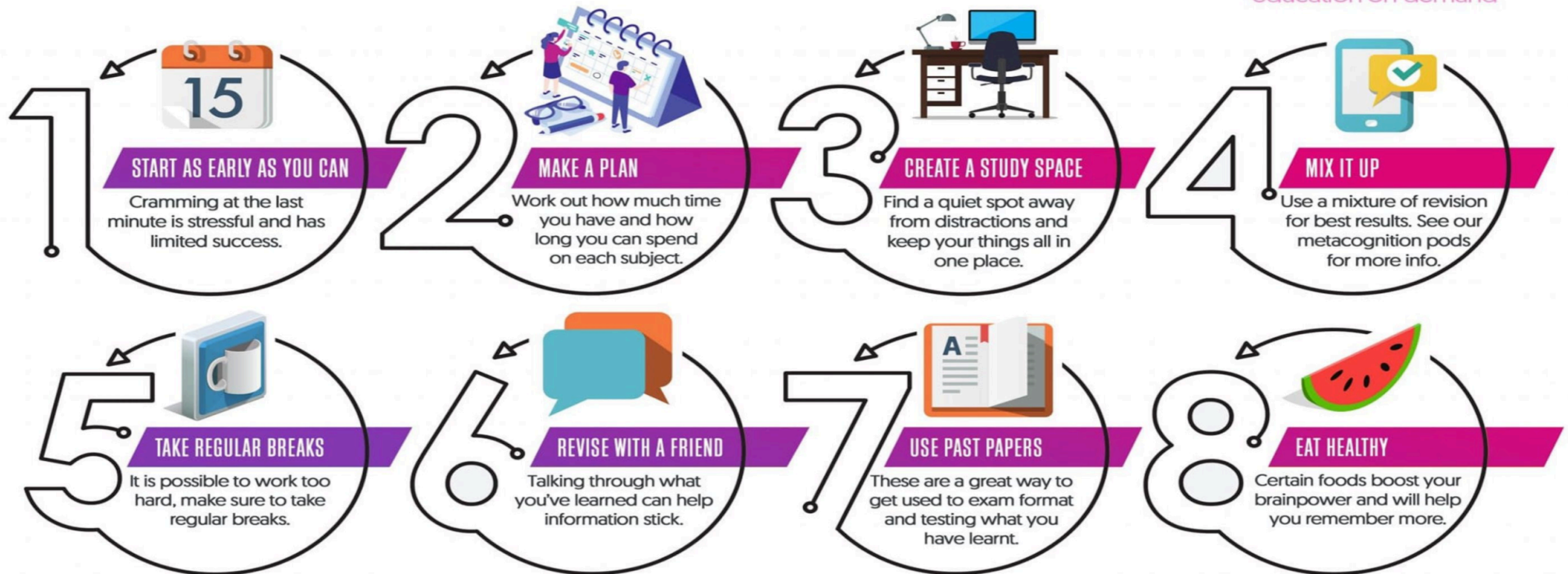
HOW DO YOU CURRENTLY REVISE? WHAT WORKS FOR YOU?

TOP REVISION TIPS

Don't let the stress of revision overwhelm you. Stay in control with these top tips.



gcsepod
education on demand



SUBJECT SUPPORT AND CHECKLIST FOR PARENTS

We are here to support your child in making **GOOD HABITS** within school!

Encourage your child to;

- attend school regularly and on time.
- be punctual and prepared for every lesson.
- attend any revision or intervention sessions.
- buy and use subject revision guides.
- consider online tutoring ready for Year 11.
- complete all home learning.



GCSE and equivalent
qualifications specifications
Includes spec, past papers/mark
schemes...

BE READY TO LEARN

**SUBJECT
SPECIFICATIONS, PAST
PAPERS AND MARK
SCHEMES**

SCAN THE CODE



WEEKLY REVISION PLANNER

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME	SATURDAY	SUNDAY

WEEKLY REVISION PLANNER

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME	SATURDAY	SUNDAY

MY CHILD AT SCHOOL (MCAS) APP

Mychildatschool (MCAS) is a FREE app that enables parents to view their child's performance at school in real time.

It provides anytime access to attendance, behaviour, reports, letters or important documents. Student timetables alongside the school calendar and exam timetables and results mean the Radclyffe School can keep parents/carers fully informed electronically.

This is where parents and carers will be able to view your child's options choices.



Scan the QR code below to download the MCAS app.



WHY SHOULD YOU ENCOURAGE YOUR CHILD TO READ?

- 25% of 15-year-olds have a **reading age of 12 or under**.
- 1 in 8 disadvantaged children in the UK **do not own a single book** at home
- Children who are **weak readers will struggle as much in maths and science** at GCSE as they do in English and the arts subjects
- Students are **less able to learn in school** if they do not develop sufficient reading skills
- In the words of the DfE, '**more demanding**' GCSE exams were introduced in 2017
- Exams now tend to include **wordier questions** – problematic for students with a low reading age



THE BENEFITS OF READING

Children who read books more than once a week by age 16 **gain higher results** than those who read less regularly.

19% of readers say that **reading stops them from feeling lonely**. Regular readers for pleasure reported fewer **feelings of stress and depression than non-readers**.

Studies have shown that those who read for pleasure have **higher levels of self-esteem** and a **greater ability to cope with difficult situations**.

Reading for pleasure has been found to improve **sleeping patterns**.

Adults who read for just 30 minutes a week are 20% more likely to report **greater life satisfaction**.

People who read for **3.5 hours a week** (30 mins a day) have a **17% higher life expectancy** than those who don't.

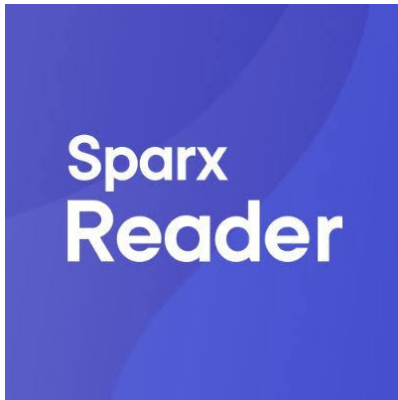


**30 Minutes is just
2% of your day!**

**30
min**

READING INTERVENTIONS

We have invested in two new reading programmes:



SPARX READER

- All students will have access.
- Can be accessed on most devices.
- Encourage students to read and regularly review their understanding as they go.



LEXIA POWERUP LITERACY

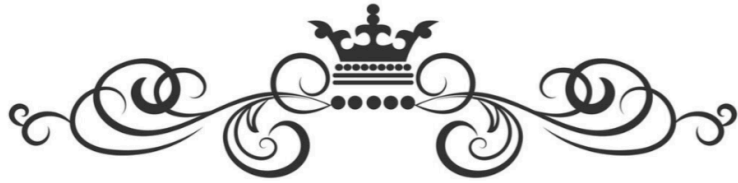
- A selection of students will be invited to attend (based on need).
- Identifies gaps in knowledge and tailors learning to student needs.
- Adaptive and reflective to ensure rapid progress
- Delivered weekly during PLG time (to avoid lost learning in other areas).

What we are doing:

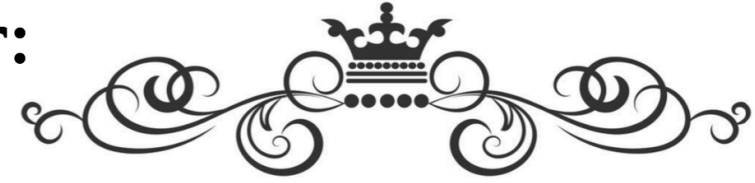
- PLG reading
- EXACT testing
- Literacy explicitly taught in lessons
- Access to library at break and lunch
- Lexia intervention
- Sparx Reader

What you can do:

- Encourage them to read 'widely and often'.
- Read with them/ to them.
- Support the interventions.



Knowledge Organiser: *The Iliad*



Ancient Greece

Xenia = hospitality. A divine law that Greeks must welcome strangers into their homes as guests.

Geras = war prizes. Rewards given to warriors if they were victorious in battle.

Demigod = half human and half divine. Possessed a special skill or power but were not immortal.

Heroes

Modern hero = people we think of as role models and admire for their bravery, which can take many forms.

Anti-hero = a leading character who lacks the traditional qualities of a hero. Although they have negative qualities, they have good intentions.

Homeric hero = typically demigods who are strong and skilled in battle. They earned 'immortality' by achieving glory in battle. Many were not great role models.

Tragic hero = a hero, usually of noble birth, who possesses a fatal flaw that leads to their downfall. The audience fears for them and pities their suffering.

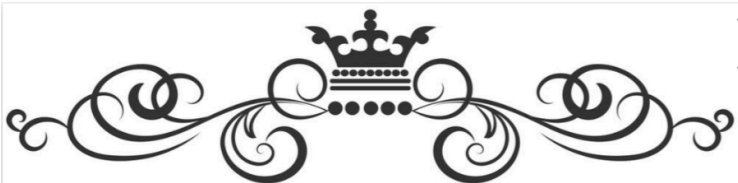
The Heroic Code of Conduct

Timê = honour. The respect and reverence a hero gained in recognition of their achievements in battle; war prizes were the external evidence of their timê.

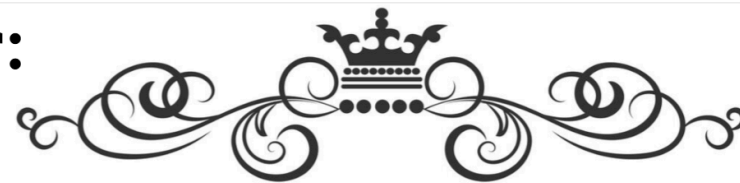
Kleos = glory. The fame and powerful reputation earned in battle or from accomplishing a great deed – the result was the immortality of being remembered after death as heroic.

Arête = excellence. Heroes being the best they can be and reaching their full potential; they were admired for being successful in battle and highly effective in all that they do.

Mēnis = wrath. Intense and all-consuming anger, rage or fury that prevented rational thought and caused harm to others – despite being a negative trait, it didn't affect their status as a hero.



Knowledge Organiser: Academic Writing



Inference = reading between the lines and using hints or clues to work out deeper meanings that we aren't explicitly told by the writer.

Characterisation = creating and describing fictional characters. The writer can do this directly (tell us) or indirectly (show us with STEAL).

Academic **verbs** for **characterisation**

depicts
portrays
illustrates
characterises
presents

Academic **adverbs**

clearly
effectively
convincingly
successfully
initially

Academic **verbs** for **making inferences**

suggests
implies
demonstrates
indicates
conveys

Conjunctions for **adding information and ideas**

Co-ordinating conjunction in a compound sentence (middle of sentence)	Relative clause in a complex sentence (middle of sentence)	Prepositional phrase in a complex sentence (start or middle of sentence)
and	who	when
so	which	while
for	that	as

Conjunctions for **explaining ideas**

because
since
if

Conjunctions for **contrasting ideas**

Compound sentence (middle of sentence)	Complex sentence (start or middle of sentence)
but	although
or	whereas
yet	despite

Noun **appositives**

A noun or noun phrase that sits next to another noun e.g. Achilles, the demigod warrior, was furious.

Participle **phrases**

Present participle phrases: start with '-ing' verbs

Past participle phrases: start with '-ed' verbs

Conjunctions for **linking sentences**

Additionally,
Furthermore,
Therefore,
However,
Subsequently,

Punctuation

Optional method for extending sentences
semi-colon ;
colon :
dash -

Quote	Character	Two Inferences	Keywords supporting inference
" This island's mine by Sycorax my mother. " (A1S2)	Caliban	1. Caliban believes he is the rightful owner of the island and feels it has been taken from him. 2. Caliban's claim is based on his family heritage, suggesting he inherited the island from his mother.	"Island's mine" "by <u>Sycorax</u> my mother"
"Thou poisonous slave, got by the devil" (S1S2)		1. 2.	
"I'll show thee every fertile inch o'th island." (A2S2)		1. 2.	
"I have done nothing but in care of thee." (A1S2)		1. 2.	

3. Using one of the quotations from the previous question, write an analytical topic sentence.

You must include:

- Academic adverbs
- Academic characterisation verbs
- Inference verbs
- Relevant quote embedded either seamlessly or with the colon method

Shakespeare ***effectively presents***
*Prospero as a protective yet dominant figure, **suggesting** that guidance can also become a form of control: "Be collected: no more amazement."*

Academic adverbs	Characterisation verbs	Inference verbs
clearly	depicts	suggests
effectively	portrays	implies
convincingly	illustrates	demonstrates
successfully	characterises	indicates
initially	presents	conveys

Micro quotes:

Anchor quote:

Quote 2:

Sheila

Inference words:

Quote 3:

Quote 4:

Micro quotes:	Anchor quote: “But these girls aren't cheap labour – they're people.” • Sheila's growing social conscience and empathy, contrasting with Arthur Birling's capitalist views. • It highlights her awareness of class inequality and humanity. • Dash emphasising the phrase, “they’re people. Sheila humanising what her father considers as disposable commodities.	Quote 2: “I told him if they didn't get rid of that girl...I’d persuade mother to close our account.” • Earlier behaviour reflects the abuse of the upper classes, exploiting their power and the working classes on a whim. • Adverbial “get rid” emphasising the contempt they have for the poor.
	•Naive (initially) •Empathetic •Perceptive •Transformative Sheila	
	Quote 3: “You mustn’t try to build up a kind of wall between us and that girl.” • Sheila criticises her family for trying to detach themselves from their culpability. • This metaphorical "wall" reflects the family's class prejudices, which Sheila begins to reject.	Quote 4: “It’s you two who are being childish—trying not to face the facts.” • Challenges her parents’ refusal to acknowledge their part in Eva’s death. • Her role as a moral voice reflects Priestley's message

MATHS:

USING DR FROST FOR INDEPENDENT STUDY

Use your QLA to choose the topics to practise first — especially questions where you did not get full marks.

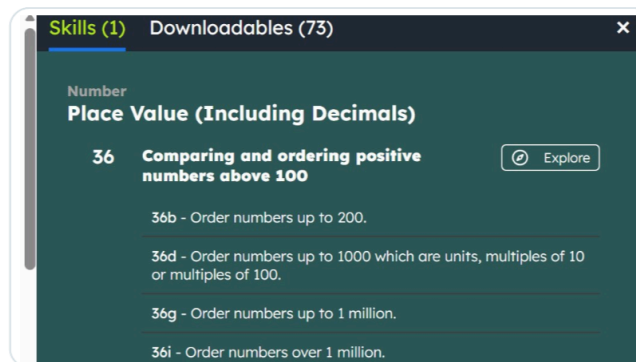
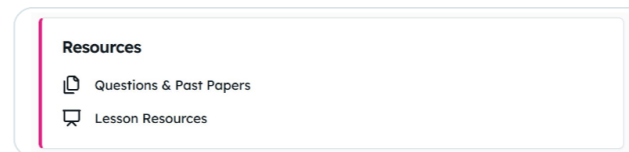
1. Start with your QLA / Revision List

Pick a topic where you lost marks.

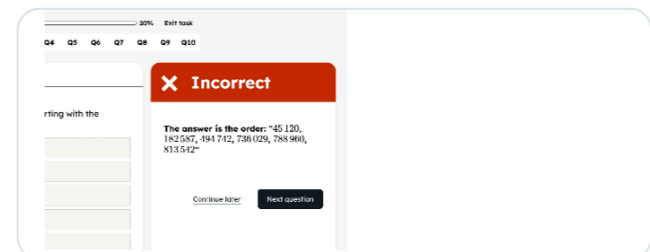
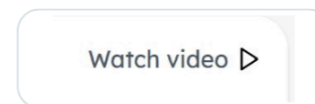
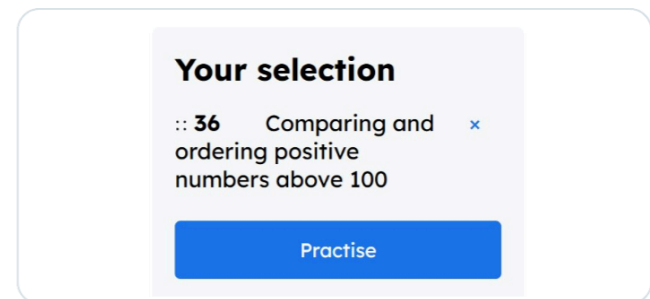
These are the best areas to revisit first.

Question	Question Title	Score
1	Round to nearest 10	1 / 1
2	Order numbers	0 / 1
3	Solve 1-step equation	1 / 1
4	Draw a parallel line	1 / 1
5	Decimal as a percentage	1 / 1
6	List combinations	2 / 2
7	Table of values	2 / 2
8	Fraction calculations	2 / 4
9	Factors and square roots	2 / 2
10	Worded problem	3 / 3
11	Accurate scale drawing	3 / 3
12	Draw a straight line graph	4 / 4
13	Worded money problem	1 / 3
14	Scale models	1 / 3
15	Frequency trees and probability	3 / 5

2. Find the topic on Dr Frost



3. Practice and Improve



VIDEO EXAMPLE

Copy the modelled question, working and answer.

INDEPENDENT PRACTICE

Try your own questions, then mark and correct them.

Year 7 Compulsory Practical *Friction and Drag* Topic *Forces*

What is the question we are trying to answer?

List independent, dependent and control variables of experiment

Hypothesis
and
Variables

Using bullet points to describe the steps, how is the experiment carried out.

Method

What risks are there with this experiment? How can I keep myself and others safe?

Which calculations will I need to do when I have collected my results?

Risk info
and
Numeracy
skills

Science
Learning
and
Conclusions

Which facts have I learnt that go with this practical.

Is there a pattern in the results?

Does this answer my question?



+ expand all

- collapse all

Introduction

The breakdown of
starch by amylase

Photosynthesis

Yeast respiration

Calcium carbonate -
HCl reactionDecomposition of
hydrogen peroxide

Heat of neutralization

Bouncing ball
experimentCar stopping
distancesEnergy stored in a
spring

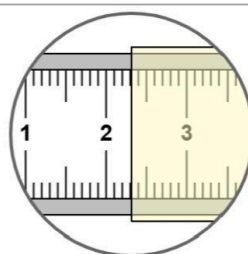
Expansion of a gas

Friction The heating effect of a
current

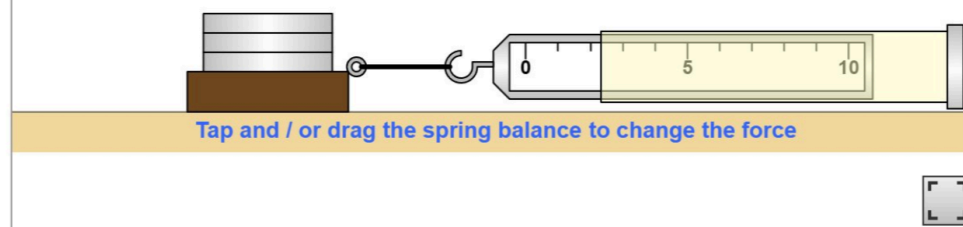
Resistance of wires

Friction

Surface roughness

☐ Smooth☐ Medium☒ Rough

Added weight 3 N

Surface area 50 cm²

Experiment

Design

Method

Results

Analysis

Conclusion

What is the question we are trying to answer?

List independent, dependent and control variables of experiment

Hypothesis
and
Variables

Using bullet points to describe the steps, how is the experiment carried out.

Method

What risks are there with this experiment? How can I keep myself and others safe?

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Risk info
and
Numeracy
skills

Science
Learning
and
Conclusions

Which facts have a learnt that go with this practical.

Is there a pattern in the results?

Does this answer my question?



+ expand all

- collapse all

Introduction

Osmosis

Transpiration

Reaction of rennin
with milkDecomposition of
 H_2O_2 by catalaseThe effect of Penicillin
on bacterial growthDecomposition of
sodium thiosulphate

Electrolysis

Heats of combustion
of alcohols

Neutralization

Bat and ball
experiment

Bending a beam

Filament lamp

Fuses

LEDs

Lift on a flat wing

Rates of cooling

Mass of water 50 g

Initial temperature 80 °C

Room temperature 20 °C

Layers of insulation 0

Time

Repeat reading

Experiment

Design

Method

Results

Analysis

Conclusion

In this experiment you can investigate the factors that determine the rate at which a container of water cools down.

Year 9 Compulsory Practical *Strength of an Electromagnet* Topic *Magnets and Electromagnets*

What is the question we are trying to answer?

List independent, dependent and control variables of experiment

Hypothesis
and
Variables

Using bullet points to describe the steps, how is the experiment carried out.

Method

What risks are there with this experiment? How can I keep myself and others safe?

Which calculations will I need to do when I have collected my results?

Risk info
and
Numeracy
skills

Which facts have I learnt that go with this practical.

Is there a pattern in the results?

Does this answer my question?

Science
Learning
and
Conclusions



+ expand all

- collapse all

Introduction

The breakdown of
starch by amylase

Photosynthesis

Yeast respiration

Calcium carbonate -
HCl reactionDecomposition of
hydrogen peroxide

Heat of neutralization

Bouncing ball
experimentCar stopping
distancesEnergy stored in a
spring

Expansion of a gas

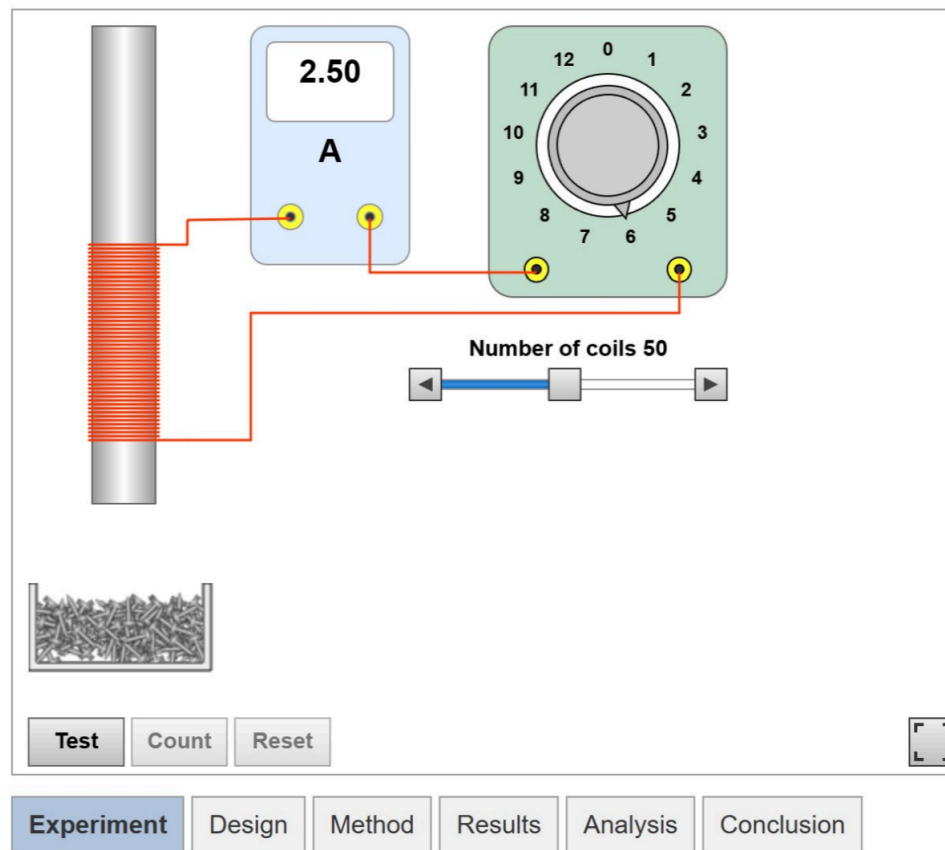
Friction

The heating effect of a
current

Resistance of wires

Strength of an
electromagnet 

Strength of an electromagnet

2.50

A

12 0 1

11 2

10 3

9 4

8 5

7 6

Number of coils 50

Test Count Reset

Experiment Design Method Results Analysis Conclusion

GCSE Required Practical*Specific Heat Capacity*.....Topic*Energy*..... Paper*Physics P1*.....

What is the question we are trying to answer?

List independent, dependent and control variables of experiment

Hypothesis
and
Variables

Using bullet points to describe the steps, how is the experiment carried out.

Method

What risks are there with this experiment? How can I keep myself and others safe?

Which calculations will I need to do with my results?

Risk info
and
Numeracy
skills

Which facts have I learnt that go with this practical.

Is there a pattern in the results?

Does this answer my question?

Science
Learning
and
Conclusions



+ expand all

- collapse all

Introduction

AQA

Combined science

Specific heat capacity

Radiation and absorption

Resistance

Current-Voltage
characteristics

Density

Waves

Force and extension

Force and acceleration

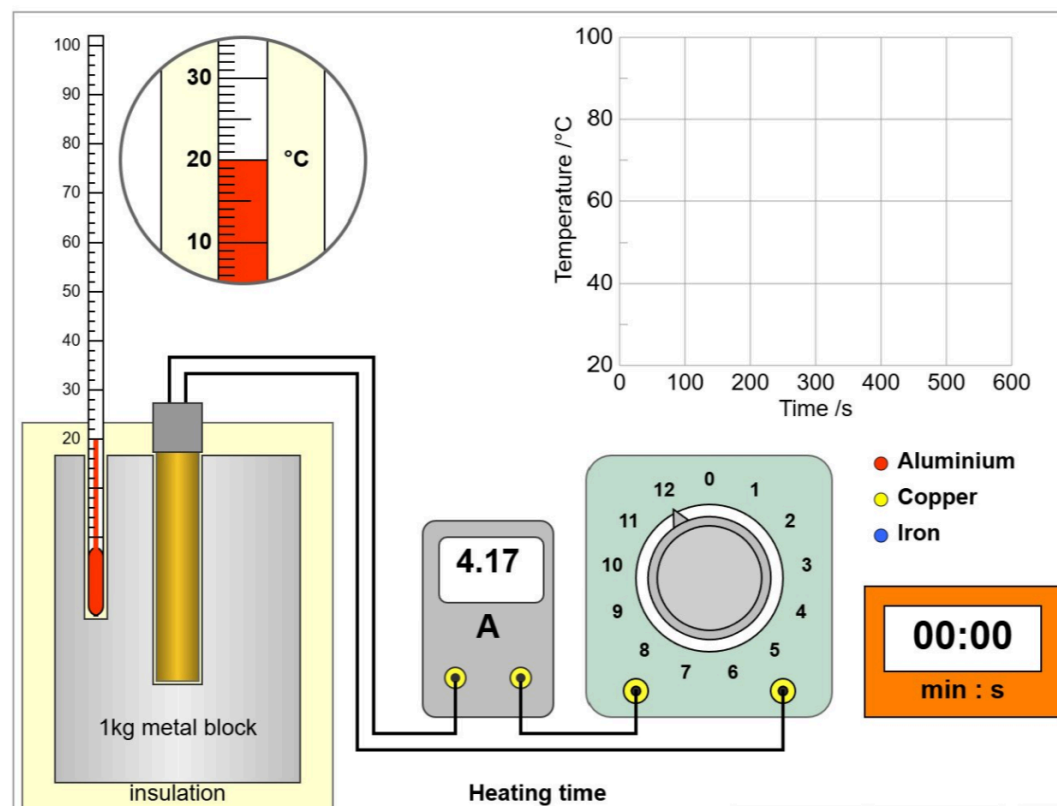
Edexcel

Combined science

OCR

WJEC (eduqas)

WJEC

Measuring specific heat capacity (SHC) of a
metal

GCSE Required Practical *Hooke's Law* Topic *Forces* Paper *Physics P2*

What is the question we are trying to answer?

List independent, dependent and control variables of experiment

Hypothesis
and
Variables

Using bullet points to describe the steps, how is the experiment carried out.

Method

What risks are there with this experiment? How can I keep myself and others safe?

Which calculations will I need to do with my results?

Risk info
and
Numeracy
skills

Which facts have a learnt that go with this practical.

Is there a pattern in the results?

Does this answer my question?

Science
Learning
and
Conclusions



+ expand all

- collapse all

Introduction

AQA

Combined science →

Specific heat capacity

Radiation and absorption

Resistance

Current-Voltage
characteristics

Density

Waves

Force and extension →

Force and acceleration

Edexcel

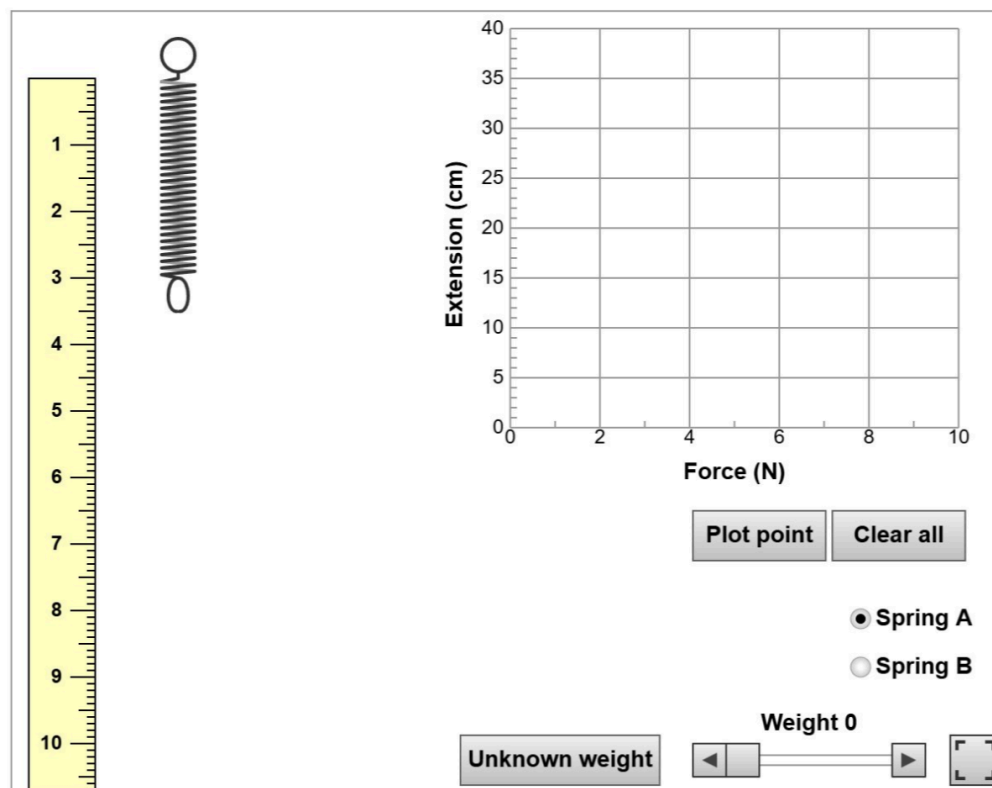
Combined science

OCR

WJEC (eduqas)

WJEC

Force and extension

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Experiment

Apparatus

Results

Analysis

Information

If you attended one of our Excellence Events, we would really like to hear your feedback! Scan the QR code below to access our feedback form.



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If you would like any more information about the curriculum we offer to our students please address your questions to the Curriculum Deputy Head, Miss Catlow, via email at scatlow@theradclyffeschool.co.uk, or by phone 0161 622 3200.



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