

Year 11 Revision Booklet 2024-25



This booklet contains all the GCSE and BTEC subjects that will be sat in the December mocks and in the summer term.

You have been given spaces to complete the following:

- 1. RAG rate (colour red, amber or green) all the December mock topics for your subjects. This will allow you to see where you feel confident and which topics you need to immediately prioritise.**
- 2. RAG rate the topics once your mocks have been marked and passed back to you. You can then see where your gaps are when in an exam situation.**
- 3. Repeat this process to allow you to plan for the summer exams.**

English Language

December Mocks			
Topic	1	2	3
Paper 2 Reading Skills Q1-True/false			
Paper 2 Reading Skills Q2-Summarise			
Paper 2 Reading Skills Q3-Language analysis			
Paper 2 Reading Skills Q4-Comparison			
Paper 2 Writing Skills Speeches			
Paper 2 Writing Skills Letters			
Summer Examination			
Topic	1	2	3
Paper 1 Reading Skills Q1-List/find questions			
Paper 1 Reading Skills Q2-Language analysis			
Paper 1 Reading Skills Q3-Structure analysis			
Paper 1 Reading Skills Q4-Evaluation			
Paper 1 Writing Skills Narrative Writing			
Paper 1 Writing Skills Descriptive writing			
Paper 2 Reading Skills Q1-True/false			
Paper 2 Reading Skills Q2-Summarise			
Paper 2 Reading Skills Q3-Language analysis			
Paper 2 Reading Skills Q4-Comparison			

Paper 2 Writing Skills Speeches			
Paper 2 Writing Skills Letters			
Paper 2 Writing Skills Articles			

English Literature

December Mocks			
Topic	1	2	3
An Inspector Calls Theme of responsibility			
An Inspector Calls Theme of capitalism v socialism			
An Inspector Calls Character – Sheila			
An Inspector Calls Character - Mrs Birling			
Jekyll and Hyde Theme of violence			
Jekyll and Hyde Theme of secrecy and mystery			
Jekyll and Hyde Character of Utterson			
Jekyll and Hyde Character of Jekyll			
Summer Examination			
Topic	1	2	3
Romeo and Juliet Plot			
Romeo and Juliet Key characters – traits, key scenes and quotes			
Romeo and Juliet Key themes – Conflict			
Romeo and Juliet Key themes – Love – romantic, family			

Romeo and Juliet Key themes – Youth vs age			
Romeo and Juliet Key themes – Fate			
Jekyll and Hyde Plot			
Jekyll and Hyde Key characters – traits, key scenes and quotes			
Jekyll and Hyde Key themes – Violence			
Jekyll and Hyde Key themes – Duality			
Jekyll and Hyde Key themes – Appearance Vs Reality			
Jekyll and Hyde Key themes – Reputation			
Jekyll and Hyde Key themes – Good vs Evil			
An Inspector Calls Plot			
An Inspector Calls Key characters – traits, key scenes and quotes			
An Inspector Calls Key themes - Responsibility			
An Inspector Calls Key themes - Youth vs Age			
An Inspector Calls Key themes - Class			
An Inspector Calls Key themes - Gender			
An Inspector Calls Key themes - Capitalism vs Socialism			
Power and Conflict Poetry The general context for each poem			
Power and Conflict Poetry How poems are linked by theme			
Power and Conflict Poetry 3-5 quotes per poem			

Maths

All previously taught topics could come up in the mocks. We have not taught these topics this year, and so are worth revising:

December Mocks			
Topic	1	2	3
Transformations			
Number (HCF, LCM, Primes, surds, fractions, decimals, percentages, recurring decimals)			
Algebra (Sequences, Quadratics (solving, sketching), expanding, factorising, solving, simultaneous), inequalities and functions.			
Triangles (Pythagoras, trigonometry, sine rule, cosine rule)			
Properties of Shapes (angles, sides etc.)			
Angles in parallel lines			
Ratio and Proportion			
Linear Graphs			

Maths

Foundation Summer

<u>Summer</u>			
<u>Basic Number</u>	1	2	3
Add/subtract/multiply and divide integers			
Order of operations			
Positive and negative numbers			
Multiply and divide negative numbers			
Place value			
<u>Factors and Multiples</u>	1	2	3
Factors and multiples of numbers			
Prime numbers			
<u>HCF/LCM</u>	1	2	3
Write a number as a product of its prime factors			
Reciprocal of a number			

<u>Fractions</u>	1	2	3
Equivalent fractions			
Simplify fractions			
Order fractions			
Fraction of a quantity			
One number as a fraction of another			
Add/Subtract fractions			
Multiply/divide fractions			
All operations with mixed numbers			
Increase and decrease by fractional scale factor			
<u>Percentages</u>	1	2	3
Percentage of a quantity			
Increase and decrease by a percentage			
Express one quantity as a percentage of another			
Work out percentage increase and decrease			
Change between fraction/decimal/percentage			
Reverse percentages			
Calculate simple interest			
Calculate compound interest and decay			
Use multipliers to find a percentage of a quantity, increase and decrease by a given percentage			
<u>Decimals</u>	1	2	3
Place value of a digit			
Order decimals			
Add/subtract decimals			
Multiply decimals			
Divide by a decimal			
Change between terminating decimals and fractions and vice versa			
Write money correctly, problem solve with money			
<u>Angles</u>	1	2	3
Conventional terms for points, angles, vertices etc			
Draw triangles given instructions			
Missing angles in a triangle, around a point, straight line			
Missing angles in parallel lines and reasons			
<u>Ratio and Proportion</u>	1	2	3
Interpret and work with fractions in ratio problems			
Use ratio notation and simplify ratios to their simplest form			
Share an amount into a given ratio			

Apply ratio to real life contexts			
Carry out calculations that involve direct proportion			
To compare which products are the best value for money - best buys			
<u>Rounding</u>	1	2	3
Round to the nearest integer			
Round to the nearest 10, 100 and 1000			
Round to a given number of decimal places			
Round to 1 significant figures			
Estimate answers to problems involving decimals			
Estimate square roots			
Estimate answers that involve decimals			
Estimate answers involving division of numbers less than 1			
Calculate upper and lower bounds of a measurement			
Carry out simple calculations with upper and lower bounds			
<u>Basic Algebra</u>	1	2	3
Vocab on expressions, identities, equations and terms			
Simplify algebraic expressions			
Expand single brackets			
Expand double brackets			
Expand and simplify expressions			
Factorise linear expressions			
Factorise quadratic expressions			
Use a written formula			
Substitute into a formula			
Change the subject of a formula			
Solve equations - one step			
Solve equations - two steps			
Solve equations - with brackets			
Solve equations - with fractions			
Solve equations - x on both sides			
<u>Sequences</u>	1	2	3
Write terms in a sequence given an nth term (linear sequence)			
Find nth term of a sequence			
Write terms for a quadratic sequence from nth term			
Recognise different types of sequences			
<u>Coordinates and Linear Graphs</u>			
Use coordinates in all 4 quadrants			
Draw vertical and horizontal lines such as $y = 3$ and $x = -2$			
Draw linear graphs such as $y = 2x + 3$			

Find the midpoint of a line segment			
Solve problems involving linear graphs			
Recognise equations of straight line graphs			
Find the gradient of a straight line graph graphs			
Use the form $y=mx+c$ to identify parallel lines			
Find the equation of a straight line, given a gradient and one point			
Find the gradient of a straight line given two points			
Identify and interpret gradients and intercepts of linear functions graphically and algebraically			
<u>Standard Form</u>	1	2	3
Calculate square and square roots with and without a calculator			
Calculate cube and cube roots with and without a calculator			
Use function buttons on calculator for powers and roots			
Use index notation and index law for positive and negative powers			
Read and write numbers in standard form			
Convert between ordinary numbers and numbers in standard form and vice versa			
Add/subtract standard form numbers without a calc			
Multiply and divide numbers in standard form without calc			
Use a calculator to deal with numbers in standard form			
<u>Quadratic Graphs and Functions</u>	1	2	3
Draw simple quadratic functions such as $y = 3x^2$			
Draw harder quadratic functions such as $y = x^2 - 2x - 4$			
Find the point of intersection of a quadratic graph and straight line			
Find the approximate solutions to a quadratic equations			
Identify and interpret roots, intercepts and turning points of quadratic functions graphically			
Construct quadratic and other functions from real life problems and draw graphs for them			
Draw cubic graphs			
Recognise the difference between linear, quadratic, cubic and reciprocal graph			
<u>Perimeter and Area</u>	1	2	3
Properties of shapes			
Calculate perimeter of 2D shapes and compound shapes			
Calculate the area of 2D shapes			
Calculate the area of compound shapes			
Find surface area of cuboids, triangular and cylinder, pyramids and composite solids			

<u>Circumference and Area</u>	1	2	3
Properties of circles			
Calculate area of a circle			
Calculate circumference of a circle			
Area and perimeter of composite shapes involving parts of circles			
Work backwards from area/circumference to find radius/diameter			
Calculate length of arc			
Calculate area of sector			
Calculate the surface area of spheres, cones and composite solids including frustums			
<u>Congruence and Similarity</u>	1	2	3
Basic congruence criteria for triangles			
Recognise shapes that are congruent and which are similar			
Explain why two triangles are similar			
Find missing lengths and angles in similar shapes			
<u>Transformations</u>	1	2	3
Carry out rotations, reflections and transformations			
Carry out enlargements by positive and fractional scale factors			
Describe all four of the above transformations			
<u>Plans and Elevations</u>			
Properties of 3D shapes - edges, faces, vertices			
Recognise and draw nets of 3D shapes			
Draw plans and elevations of 3D shapes			
<u>Probability</u>	1	2	3
Use words to describe probabilities			
Use probability scale			
Express probabilities as fractions			
Display outcomes of events systemically			
Understand the difference between theoretical and experimental probability			
Record, describe and analyse the frequency of outcomes of probability experiments using tables and frequency			
Understand and use relative frequency			
Use probability to estimate the outcome for a population			
Understand that experimental probabilities tend towards theoretical probabilities the greater the sample size			
Complete Venn diagrams and calculate probabilities from them			

Complete and read information from frequency trees			
Use tree diagrams to calculate probabilities of two independent events			
<u>Volume</u>	1	2	3
Find the volume of a cube/cuboid			
Find a missing length in a cube/cuboid given the volume			
Calculate the volume of a prism			
Calculate the volume of a sphere, cone, pyramid			
<u>Scatter Graph</u>	1	2	3
Draw a scatter graph			
Draw a line of best fit and use it to predict data			
Know the different types of correlation			
<u>Inequalities</u>	1	2	3
Solve inequalities			
Represent inequalities on a number line			
Read inequalities from a number line			
Pythagoras Theorem			
Know the formula for pythagoras			
Apply pythagoras to find missing lengths in right angles triangles			
<u>Trigonometry</u>	1	2	3
Know the trigonometric ratios and apply them to find lengths and angles in triangles			
Know the exact values for sin and cos of angles 0, 30,45, 60 and 90 degrees			
Know the exact values for tan of angles 0, 30, 45 and 60 degrees			
<u>Simultaneous Equations</u>	1	2	3
Solve simultaneous equations with two variables			
Find approximate solutions to simultaneous equations using a graph			
Solve simultaneous equations in an applied context, where the simultaneous equations need to be written first			
<u>Measures</u>	1	2	3
Convert between metric measures e.g cm to m etc			
Convert between metric and imperial measures eg. Km to miles			
Convert between units for area cm^2 and m^2			
Convert between units for volume cm^3 and m^3			
<u>Compound Measures</u>			
Calculate speed, distance and time			
Calculate density, mass and volume			
Calculate pressure, force and area			
<u>Vectors</u>			
Add and subtract vectors	1	2	3

Multiply a vector by a number			
Read vectors from a diagram			

Maths

Higher Summer

<u>Basic Number, Factors and multiples</u>	1	2	3
Add and subtract all numbers			
Multiply and divide numbers			
Know the factors and multiples of a number			
Find the highest common factor and lowest common multiple of a pair of numbers			
Know prime numbers less than 100, be able to find out whether a number is prime by divisibility			
Find the prime factors of a number (factor tree)			
Find the HCF and LCM from the prime factors using a Venn diagram			
<u>Fractions and decimals</u>	1	2	3
Find a fraction of an amount			
Multiply and divide fractions			
Add and subtract fractions			
Calculate with fractions			
Convert between terminating decimals and fractions and vice versa			
Convert between recurring decimals and fractions and vice versa			
<u>Percentage</u>	1	2	3
Find a percentage of a quantity			
Increase and decrease by a given percentage (calc)			
Calculate percentage change			
Calculate reverse percentages			
Calculate compound interest and decay			
Deal with repeated percentage change using multipliers			
<u>Rounding</u>	1	2	3
Round numbers to 1,2 and 3 decimal places			
Round numbers to 1,2 and 3 significant figures			
Estimate/Approximate answers to calculations by rounding each number to 1 significant figure			
Calculate the upper and lower bounds for a measure			
Calculate with upper and lower bounds			
<u>Ratio and proportion</u>	1	2	3
Work with fractions and ratios in problems			
Express one quantity as a fraction of another			
Use ratio notation and simplify ratios			
Divide an amount into a given ratio			
Apply ratio to real life problems involving conversion, comparison, scaling, mixing etc			

<u>Indices</u>	1	2	3
Know square numbers, square roots, cube numbers, cube roots			
Use index notation and index laws for positive and negative powers			
Use index laws for fractional powers			
<u>Standard form</u>	1	2	3
To read and write numbers in standard form, convert between ordinary numbers and standard form and vice versa			
Add/subtract/multiply and divide numbers in standard form without a calculator			
Use a calculator to add/subtract/multiply and divide numbers in standard form			
Solve problems that involve standard form numbers			
<u>Surds</u>	1	2	3
Simplify surds			
Add/subtract/multiply/divide surds			
Rationalise the denominator			
Solve problems involving surds			
<u>Use of symbols</u>	1	2	3
Know what an expression, identity, equations, term and formulae are and the difference between them			
Simplify algebraic expressions			
Expand a single term over a bracket e.g $6(x+3)$ or $5(x+4) - 3(2x-3)$			
Expand two brackets such as $(x+5)(x-4)$ and $(2x+1)(x-6)$			
Factorise expressions that involve common factors, difference of two squares and trinomials			
Find a solution to a problem by forming an equations and solving it			
Rearrange a linear formulae/equation			
Rearrange formulae/equations that involve brackets, fractions and square roots			
Rearrange formulae/equations where the subject appears twice			
<u>Equations</u>	1	2	3
Solve equations that involve one unknown			
Solve equations with unknowns on both sides			
Solve equations that involve fractions			
Solve equations that involve fractions on both sides of the equals sign			
<u>Simultaneous equations</u>	1	2	3
Solve simultaneous equations such as $2x + y = 5$ and $3x - 2y = 4$			
Understand that simultaneous equations represent linear graphs and the point of intersection is the solution, to be able to graph and thus solve simultaneous equations on a graph			
Solve simultaneous equations where one is a linear and one is a non linear (quadratic)			
Solve simultaneous equations where one is linear and one is a non linear (equation of a circle)			
<u>Inequalities</u>	1	2	3
Solve inequalities			
Represent a set of solutions on a number line			
Represent an inequality on a graph			
<u>Coordinates and linear graphs</u>	1	2	3
Draw linear/straight line graphs such as $y=2x+3$ with and without a table being given			
Find the midpoint of a line segment			

Solve problems involving linear graphs, such as finding the point where $y = x + 2$ crosses the line $y = 1$			
Recognise which equations are equations for straight lines and therefore take the form $y = mx + c$			
Understand what the parts of a linear graph equation mean			
Find the gradients of straight lines from a graph and an equation			
Understand which graphs are parallel			
Know how to calculate the gradient of a line which is perpendicular to another straight line			
Find the equation of a line given the gradient and a coordinate point			
Find the equation of a line between two given coordinate points			
Solve simultaneous equations using graphs			
Use and understand coordinates in 3D			
<u>Quadratic graphs</u>	1	2	3
Draw simple quadratic functions such as $y = 3x^2$ and $y = x^2 + 4$ (be prepared to draw your own set of axis)			
Draw harder quadratic functions such as $y = x^2 - 2x - 4$			
Find the point of intersection of a quadratic graph and a straight line			
Use a quadratic graph to find approximate solutions to a quadratic equation			
Construct quadratic and other functions from real life problems and draw graphs for them.			
<u>Probability</u>	1	2	3
Use probability to estimate outcomes of a population			
Use relative frequencies to find probabilities			
Use a two way table to find a probability			
Use the fact that probabilities add up to 1			
Understand dependant and independant events			
Complete a tree diagram for independant events			
Draw a tree diagram			
Draw a tree diagram for dependant events			
Use tree diagrams to find the probability of successive independant events			
Use a tree diagram to find the probability of successive dependant events			
Complete Venn diagrams and calculate probabilities from them			
Use the product rule for counting			
<u>Sequences</u>	1	2	3
Write the terms in a sequence or a series of diagrams from an nth term for a linear sequence			
Find the nth term for a linear sequence			
Write the terms in a quadratic sequence given the nth term			
Find the nth term for a quadratic sequence			
Recognise and use: sequences of triangular numbers, square and cube numbers, arithmetic sequence, geometric sequence and Fibonacci sequences			
<u>Quadratic functions</u>	1	2	3
Solve quadratic equations by factorisation			
Solve quadratic equations by using the formula (remember: you need to learn this!)			
Solve quadratic equations such as $4/(x+2) + 3/(2x-1) = 2$			
Write quadratic expressions in completing the square form			
Solve equations by writing them in completing the square form			

Use completing the square to find the maximum and minimum values in a quadratic function.			
Where appropriate, interpret simple expressions as functions with inputs and outputs			
<u>Pythagoras</u>	1	2	3
Use Pythagoras theorem to find the hypotenuse of a right angled triangle			
Use Pythagoras theorem to find any side of a right angled triangle			
Use Pythagoras theorem in equilateral and isosceles triangles			
Use Pythagoras theorem to find the length of a line between two coordinate points			
Use Pythagoras theorem in real life problems			
Use Pythagoras theorem in 3D problems			
<u>Trigonometry</u>	1	2	3
Use sine, cosine and tangent to calculate a side in a right angled triangle			
Use sine, cosine and tangent to calculate missing angles in a right angled triangle			
Use trigonometry (SOHCAHTOA) to find missing sides in right angled triangles in real life problems			
Use trigonometry (SOHCAHTOA) to find missing angles and lengths in 3D objects			
Know the exact values for sin and cos for 0, 30, 45, 60 and 90 degrees and tan for 0,30,45,and 60 degrees			
<u>Cubic, exponential and trigonometric functions</u>	1	2	3
Complete a table of values for and draw a cubic function/graph (be prepared to draw your own axis)			
Use cubic graphs to solve equations			
Complete a table of values for and draw reciprocal graphs (be prepared to draw your own axis)			
Use reciprocal graphs to solve equations			
Plot and sketch an exponential graph			
Recognise the shape of the function from an equation – match graphs and equations			
Understand and use the Cartesian equation for a circle when the centre is at the origin			
Recognise and use the equations of a circle when the centre is not at the origin			
Recognise and draw the graphs of sine x, cosine x and tan x			
<u>Transforming functions and graphs</u>	1	2	3
Transform the graphs for $y = f(x)$, such that $y = f(x)$ is linear, quadratic, cubic, sine or cosine function, using the transformation $y = f(x) + a$, $y = f(x + a)$, $y = af(x)$ and $y = f(ax)$			
<u>Area and volume</u>	1	2	3
Find the area of triangles, parallelograms, kites and trapeziums (remember you need to know all the formulas)			
Find the area and perimeter of compound shapes			
Calculate the surface area of a cuboid, triangular prism, cylinder and composite prisms			
Calculate the area and circumference of circles			
Calculate the area of part circles/sectors			
Calculate the perimeter/length of an arc of part circles/sectors			
Calculate the volume of cuboids, triangular prisms, cylinders and composite prisms			
Convert between measures for area and volume eg, convert from cm^2 to cm^3			
Calculate the volume and surface area of a cone, square based pyramid, sphere and hemisphere			
Calculate the volume and surface area of compound prisms that involve the 3D shapes above			
Calculate the volume of a frustum			
<u>Angles and properties of polygons</u>	1	2	3

Calculate missing angles in a triangle, around and point and on a line.			
Calculate missing angles in parallel lines and the reasons			
Classify a quadrilateral by its geometric properties			
Calculate the exterior and interior angles of regular polygons			
Solve angle problems			
<u>Circle theorems</u>	1	2	3
Recognise all the different circle theorems and the reasons for them			
<u>Similarity and congruence</u>	1	2	3
Know what congruence and similar mean			
Know the different congruence criteria: SSS, SAS, ASA, RHS			
Find the length on a 2D shape given lengths on a similar 2D shape			
Find the area of a 2D shape, given the area of a similar 2D shape			
Find the volume of a 3D shape given the volume of a similar 3D shape			
Prove that two triangles are congruent			
<u>Transformations and enlargements</u>	1	2	3
Reflect a shape in a given line of reflection			
Rotate a shape around a given point			
Translate a shape given a vector			
Enlarge a shape given a centre of enlargement and a scale factor: including negative and fractional scale factors			
Describe single transformation			
Describe combined transformations			
<u>Sine and Cosine rule</u>			
Know and apply the sine rule to find missing angles and lengths (LEARN the rule)			
Know and apply the cosine rule to find missing angles and lengths (LEARN the rule)			
Know and apply $\frac{1}{2} ab\sin C$ to calculate the area of a triangle, an angle or missing sides.			
<u>Statistics and scatter graphs</u>	1	2	3
Know the different types of data: primary, secondary, discrete and continuous data			
Calculate the mean, median, mode, range and interquartile range for a data set			
Calculate the mean, median and mode from data in a frequency table			
Calculate the estimated mean, modal group, median and range for continuous/grouped data			
Draw pie charts and frequency polygons and read info from them			
Draw a cumulative frequency curve and read the median, and interquartile range from it			
Draw a box plot and compare two box plots			
Draw histograms and read information from them			
Apply statistics (averages and range etc) to describe a population			
Calculate a stratified sample			
Draw and read data from a time series graph			
Draw scatter graphs, line of best fit, use the line of best fit to make predictions and recognise correlations.			
<u>Measures</u>	1	2	3
Convert between measures for lengths, area, volume and capacity			
Calculate and use compound measures including speed, rates of pay, prices, density and pressure			
<u>Real life graphs, including pre calculus, gradients and rates of change</u>	1	2	3

Read and interpret real life graphs			
Draw and interpret distance time graphs			
Draw and interpret velocity time graphs and other kinematic problems			
Interpret the gradient as a rate of change (acceleration)			
Calculate the area under a graph using the trapezium rule and interpret what it means			
<u>Direct and indirect proportion</u>	1	2	3
Solve problems that involve direct and indirect proportion including algebraic and graphical representation			
Construct equations that involve direct and indirect proportions			
Recognise and interpret direct and indirect proportion.			
<u>Equation of a circle</u>	1	2	3
Recognise and use the equations of a circle with the centre at the origin			
Find the equation of a tangent to a circle at a given point.			
<u>Vectors</u>	1	2	3
Read and write vectors			
Add and subtract vectors			
Multiply vectors by a scalar			
Represent vectors as diagrammatic and column representations			
Construct geometric arguments and proofs			
<u>Algebraic fractions</u>	1	2	3
Simplify and manipulate algebraic fractions: simplify algebraic fractions (think- factorise), add/subtract/multiply and divide algebraic fractions (same methods as number fractions)			
<u>Iteration</u>	1	2	3
Use iteration to find solutions to equations to a given number of decimal places			
<u>Function</u>	1	2	3
TBAT understand and use function notation			
TBAT substitute values into a function, knowing that for example $f(2)$ is the value of the function when $x=2$			
Solve equations that use function notation $fg(x)$			
Understand, interpret and use inverse function $f^{-1}(x)$			
Interpret the succession of two functions as composite functions			
<u>Loci and Bearings</u>	1	2	3
TBAT read, draw and interpret bearings			
TBAT construct diagrams from bearing information to solve trigonometry problems			
TBAT construct a line bisector			
TBAT construct and angle bisector			
TBAT construct all types of triangles			
TBAT deal with Loci problems			

Science

Mock Priorities: Paper 1

Highlighted are Y9 taught

HT means higher tier

T means triple only

Biology	Chemistry	Physics
<p>B1</p> <ul style="list-style-type: none"> Eukaryotes and prokaryotes Cell structure Microscopes required practical (RP) Differentiation Stem cells Cell Cycle Diffusion, Osmosis, Active Transport RP Osmosis Culturing microorganisms (T) 	<p>C1</p> <ul style="list-style-type: none"> Atoms, elements, compounds, mixtures Balancing equations Development of the model of the atom Atomic structure Electronic structure Periodic table development Groups 0, 1 & 7 Transition metals (T) 	<p>P1</p> <ul style="list-style-type: none"> Energy stores and systems Kinetic energy, EPE, GPE Specific heat capacity RP Specific heat capacity Power Dissipation of energy Efficiency Energy resources RP 2: Insulation (T)
<p>B2</p> <ul style="list-style-type: none"> Organisation Digestive System, Enzymes and Digestive Enzymes RP Food Tests RP Amylase Heart, Blood and Blood vessels Health: cancer, CHD. Plants: tissues, organs, leaf structure, Transpiration 	<p>C2</p> <ul style="list-style-type: none"> Ionic Bonding Ionic compounds Covalent bonding Giant covalent compounds including polymers, diamond and graphite Metallic Bonding States of matter and state symbols Metals and alloys Nanoparticles (T) 	<p>P2</p> <ul style="list-style-type: none"> Circuit symbols Ohms Law Charge RP Resistance of a wire RP IV – and graphs Series & Parallel DC & AC Mains electricity and energy transfers National grid Static electricity (T) Electric fields (T)
<p>B3</p> <ul style="list-style-type: none"> Bacterial, viral, fungal and protist diseases. Human defence Vaccination Antibiotics and painkillers Development of drugs Monoclonal antibodies (T) Plant diseases and defences (T) 	<p>C3</p> <ul style="list-style-type: none"> Conservation of mass Relative formula mass Calculating moles (HT) Avogadro's Constant (HT) Limiting Reactants (HT) Concentration of solutions % yield (T) Atom economy (T) Concentration in mol/dm³ (HT) (T) 	<p>P3</p> <ul style="list-style-type: none"> Density of materials RP Density Changes of state Internal energy Specific latent heat Particle motion in gases Pressure in gases (T) Increasing pressure (T) (HT)

<p style="text-align: center;">B4</p> <ul style="list-style-type: none"> • Photosynthesis: equation, factors affecting rate • RP Light Intensity on pondweed • Uses of glucose • Aerobic respiration • Anaerobic Respiration • Metabolism 	<p style="text-align: center;">C4</p> <ul style="list-style-type: none"> • Metal oxides • Reactivity series • REDOX reactions • Strong and weak acids (HT) • Acids and metals • Neutralisation • pH scale • RP Making Salts • Electrolysis • <i>RP Titration (T)</i> 	<p style="text-align: center;">P4</p> <ul style="list-style-type: none"> • Atomic Structure • Mass number • Development of atom • Radioactive decay • Nuclear equations • Half life • Radioactive contamination • <i>Background radiation (T)</i> • <i>Nuclear fission (T)</i> • <i>Nuclear fusion (T)</i>
	<p style="text-align: center;">C5</p> <ul style="list-style-type: none"> • Exo and endothermic • RP temperature change • Reaction Profiles • Bond energies (HT) • <i>Fuel cells and batteries (T)</i> 	

Exam Priorities: All Paper 1 plus Paper 2:

HT means higher tier

T means triple only

Biology	Chemistry	Physics
<p style="text-align: center;">B5</p> <ul style="list-style-type: none"> • Homeostasis • Nervous system • RP Reaction Times • Endocrine system • Blood glucose • Hormones in human reproduction • Contraception • IVF (HT) • Feedback systems (HT) • <i>The brain (T)</i> • <i>The eye (T)</i> • <i>Body temperature (T)</i> • <i>Kidneys (T)</i> • <i>Plant hormones (T)</i> 	<p style="text-align: center;">C6</p> <ul style="list-style-type: none"> • Calculating rates of reaction • RP Rate of reaction • Collision theory • Catalysts • Reversible reactions • Le Chatelier's Principle (HT) 	<p style="text-align: center;">P5</p> <ul style="list-style-type: none"> • Scalar and vector quantities • Types of force • Weight, mass and gravity • Work Done • Elasticity • RP Hooke's Law • Distance and displacement • Speed and Velocity • Acceleration • RP Acceleration • Newton's Laws • Reaction Time and Stopping Distances • Momentum (HT) • <i>Moments (T)</i> • <i>Pressure in fluids (T)</i>

<p style="text-align: center;">B6</p> <ul style="list-style-type: none"> •Sexual and asexual •Meiosis •DNA and inheritance •Inherited disorders •Variation •Evolution and evidence •Genetic engineering and selective breeding •Extinction •Classification •<i>Advantages of sexual and asexual reproduction (T)</i> •<i>Structure of DNA (T)</i> •<i>Cloning (T)</i> •<i>Theory of evolution (T)</i> •<i>Speciation</i> •<i>Mendel's Genetics (T)</i> 	<p style="text-align: center;">C7</p> <ul style="list-style-type: none"> •Crude oil •Fractional distillation •Cracking •<i>Alkenes (T)</i> •<i>Alcohol (T)</i> •<i>Carboxylic Acids (T)</i> •<i>Polymerisation (T)</i> •<i>Amino Acids (T)</i> •<i>DNA (T)</i> 	<p style="text-align: center;">P6</p> <ul style="list-style-type: none"> •Transverse & Longitudinal Waves •Wave Properties •RP Ripple Tank •Electromagnetic Waves: uses and application •RP: Radiation •<i>Reflection of Waves (T)</i> •<i>Sound Waves (T)</i> •<i>Waves for detection or exploration (T)</i> •<i>Lenses (T)</i> •<i>Black body radiation (T)</i>
<p style="text-align: center;">B7</p> <ul style="list-style-type: none"> •Communities •<i>Abiotic and Biotic</i> •<i>Adpatations</i> •<i>Levels of organisation</i> •<i>RP Species Distribution</i> •<i>Biodiversity</i> •<i>Waste management and land use</i> •<i>Deforestation</i> •<i>Global warming</i> •<i>Decomposition (T)</i> •<i>RP Decay (T)</i> •<i>Enviornmental Change (T)</i> •<i>Trophic Levels (T)</i> •<i>Biomass (T)</i> •<i>Food security, farming and fishing (T)</i> •<i>Biotechnology (T)</i> 	<p style="text-align: center;">C8</p> <ul style="list-style-type: none"> •Pure Substances •Formulations •Chromatography •RP Chromatography •Gas Tests •<i>Flame Tests (T)</i> •<i>Metal Hydroxides (T)</i> •<i>RP Ion Identification (T)</i> •<i>Flame emission spectroscopy (T)</i> 	<p style="text-align: center;">P7</p> <ul style="list-style-type: none"> •Poles of a magnet •Magnetic fields •Electromagnets •Left hand rule (HT) •Motors (HT) •Loudspeaker (T) (HT) •Uses of generator effect (T) (HT) •Microphones (T) (HT) •Transformers (T) (HT)
	<p style="text-align: center;">C9</p> <ul style="list-style-type: none"> •Earths Atmosphere •Changing atmosphere •Greenhouse gases •Climate change •Carbon footprint •Pollutants 	<p style="text-align: center;"><i>P8 – TRIPLE ONLY</i></p> <ul style="list-style-type: none"> •<i>Solar system</i> •<i>Life cycle of a star</i> •<i>Orbital motion</i> •<i>Red-shift</i>
	<p style="text-align: center;">C10</p> <ul style="list-style-type: none"> •Earths Resources •<i>Potable Water</i> •<i>RP Water Purification</i> •<i>Waste water treatment</i> •<i>Life cycle assessments</i> •<i>Corrosion (T)</i> •<i>Alloys (T)</i> •<i>Ceramic and composites (T)</i> •<i>Haber Process (T)</i> •<i>NPK Fertilisers (T)</i> 	

History

December Mocks			
Topic	1	2	3
Conflict and Tension 1919 – 1939			
Germany 1890 - 1945			
Elizabethan England 1568 - 1603			

Summer Examination			
Topic	1	2	3
Conflict and Tension 1919 – 1939			
Germany 1890 – 1945			
Elizabethan England 1568-1603			
Power and the People 1170 – Present day			

Geography

December Mocks			
Topic	1	2	3
UK landscapes (coasts and rivers)			
Weather hazards and climate change			
Global Development			
Changing Cities			
Coastal Fieldwork			

Summer Examination			
Topic	1	2	3
UK Landscapes (coasts and rivers)			
Weather Hazards and Climate Change			
Global Development			
Coasts Fieldwork			
Human Fieldwork			
Changing Cities			
Ecosystems and Biodiversity			
Resource Management			
UK Challenges			

French

December Mocks			
Topic	1	2	3
Self, family and friends			
Hobbies			
TV, cinema and music			
Technology and social media			
Festivals and celebrations			
Home and area			
Holidays			
School			
Past, present and future tense			
Forming questions for speaking exam			
General conversation questions			

Summer Examination			
Topic	1	2	3
Self, family and friends			
Hobbies			
TV, cinema and music			
Technology and social media			

Festivals and celebrations			
Home and area			
Holidays			
School			
Healthy living			
Jobs and future plans			
Environment			
Social issues (homelessness and poverty)			
Past, present, imperfect, future and conditional tenses			

D&T

December Mocks			
Topic	1	2	3
Identifying requirements			
Existing products			
Textiles			
User centred design			
Standard components			
Maths			
Metals			
Drawing methods			
Electronic systems			

Implications of wider issues			
Material finishes			
Lifecycle analysis			

Summer Examination			
Topic	1	2	3
Identifying requirements			
Existing products			
Implications of wider issues			
New & emerging technologies			
Design solutions			
User centred design			
Drawing methods			
Systems thinking			
Papers & boards			
Timbers			
Metals			
Polymers			
Textiles			
Modern & smart materials			
Physical & working properties			
Material finishes			
Lifecycle analysis			

Stock forms & standard components			
Controlled movement			
Electronic systems			
Joining methods CAD / CAM			
Scales of production			

Food & Nutrition

December Mocks			
Topic	1	2	3
Section A: 20 Multiple Choice Questions from the following 5 topics...			
Food choice			
Food science			
Functional and chemical properties of food			
Nutritional needs and health			
Food safety			
Section B:			
Specific Dietary Needs			
Sensory Testing			
Cheese Making Process			
Healthy Eating			
Food Sustainability			
Food Science (Fats and Carbohydrates)			
Recipe Faults			
Health and Safety and Food Poisoning			

Summer Examination			
Topic	1	2	3
Nutritional needs and health			
Macronutrients (protein, fats and carbohydrates) / micronutrients (vitamins and minerals)			
Energy Needs			
Healthy Eating/ Government guidelines			
Nutritional Analysis			
Food science			
Cooking of food and heat transfer			
Functional and chemical properties of food (Fats, Protein and Carbohydrates)			
Raising Agents			
Food safety			
Food spoilage and contamination			
The signs of food spoilage			
Microorganisms in food production			
Bacterial contamination			
Food choice			
Factors which influence food choice			
Food choice related to religion, culture, ethical and moral beliefs and medical conditions			
Food labelling and marketing influences			

Computer Science

December Mocks			
Topic	1	2	3
<u>Paper 1</u>			
Topic 1: Computational thinking – understanding of what algorithms are, what they are used for and how they work; ability to follow, amend and write algorithms; ability to construct truth tables.			
Topic 2: Data – understanding of binary, data representation, data storage and compression.			
Topic 3: Computers – understanding of hardware and software components of computer systems and characteristics of programming languages.			
Topic 4: Networks – understanding of computer networks and network security.			
Topic 5: Issues and impact – awareness of emerging trends in computing technologies, and the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues.			
<u>Paper 2 – Coding Paper on computer</u> This paper is your Python programming paper, practicing your coding will be the best thing you can do for revision.			
Topic 6: Problem solving with programming. The main focus of this paper is:			
understanding what algorithms are, what they are used for and how they work in relation to creating programs.			
understanding how to decompose and analyse problems.			
ability to read, write, refine and evaluate programs.			

Summer Examination			
Topic	1	2	3
<u>Paper 1</u>			
Topic 1: Computational thinking – understanding of what algorithms are, what they are used for and how they work; ability to follow, amend and write algorithms; ability to construct truth tables.			
Topic 2: Data – understanding of binary, data representation, data storage and compression.			
Topic 3: Computers – understanding of hardware and software components of computer systems and characteristics of programming languages.			
Topic 4: Networks – understanding of computer networks and network security.			
Topic 5: Issues and impact – awareness of emerging trends in computing technologies, and the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues.			
<u>Paper 2 – Coding Paper on computer</u> This paper is your Python programming paper, practicing your coding will be the best thing you can do for revision.			
Topic 6: Problem solving with programming. The main focus of this paper is:			
understanding what algorithms are, what they are used for and how they work in relation to creating programs.			
understanding how to decompose and analyse problems.			
ability to read, write, refine and evaluate programs.			

Health and Social Care

December Mocks			
Topic	1	2	3
N/A- Focus is on PSA 2			

Summer Examination			
Topic	1	2	3
Factors			
Physiological Indicators			
Lifestyle Indicators			
Person Centred Approach			
Actions to improve health			
Sources of support to improve health			

Music

December Mocks			
Topic	1	2	3
Rhythm and Metre			
Harmony and Tonality			
Melody			
Texture			
Instrument			
Melodic Dictation			
Piano Music			

Folk Music			
Minimalism			
Music for Gaming			
Baroque			
Latin			
Orchestral Music			
Mozart Clarinet Concerto			
Diamonds on the soles of her Shoes			

Summer Examination			
Topic	1	2	3
Rhythm and Metre			
Harmony and Tonality			
Melody			
Texture			
Instrument			
Melodic Dictation			
WCT 1650 – 1910			
Popular Music			
Traditional Music			
WCT 1910 –			

RE

December Mocks			
Topic	1	2	3
Christian beliefs			
Jewish beliefs			
Relationships and families			
Religion and Life			

Summer Examination			
Topic	1	2	3
Christianity – Beliefs and Practices			
Judaism – Beliefs and Practices			
Themes – Religion and Life			
Themes- Relationships and families			
Themes- Crime and Punishment			
Themes- Religion Peace and Conflict			

GCSE PE

December Mocks			
Topic	1	2	3
Component 01: Physical factors affecting Performance			
1.1 Applied anatomy and physiology			
1.2 Physical training			
Component 02: Socio-cultural issues and sports psychology			
2.1 Socio-cultural influences			

2.2 Sports psychology			
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Summer Examination			
Topic	1	2	3
Component 01: Physical factors affecting Performance			
1.1 Applied anatomy and physiology			
1.2 Physical training			
Component 02: Socio-cultural issues and sports psychology			
2.1 Socio-cultural influences			
2.2 Sports psychology			
2.3 Health, fitness and well-being.			

Business Studies

December Mocks			
Topic	1	2	3
Starting a business & entrepreneurs			
Sole traders, Partnerships, Private & Public limited companies			
Market segmentation & Market research			
Aims & Objectives			
Revenue, costs, profit & cashflow			
The marketing mix			

Business location			
Business plans			
Stakeholders, law and the economy			
Technology & E-commerce			

Summer Examination			
Topic	1	2	3
Business Growth			
Globalisation, ethics & the environment			
Product life cycle & the design mix			
Job, batch & flow production			
Stock control (bar gate stock graphs)			
Procurement & Logistics			
Quality and quality control			
Interpreting financial data, NPM & GPM			
Organisational structures			
Recruitment, training & motivation			

General Revision Strategies

- Practice Papers
- Planning Answers
- Timed practice
- Mind-maps
- Flashcards
- GCSE Pod
- Quizzes

Useful Websites

- Tassomai
- GCSE Pod
- BBC Bitesize
- YouTube (specific subject content)
- MathsWatch
- Internetgeography.net
- Revisionworld.com
- Coolgeography.co.uk
- Portal.focusonsound.com
- Businessed.co.uk
- Seneca
- Timelines TV
- Brainyquote.com
- Sentence builders
- Language-gym.com