

Core Subjects Information Booklet

2023-24



Co-op Academy
Bebington



GCSE English

This year your child will complete their GCSEs in English Language and English Literature.

Your child will complete both of their GCSE courses at the end of Year 11. You will have the opportunity to discuss your child's progress in English during Year 11 Progress Meetings.

Government changes and legislation mean students will now receive a GCSE grade numbered 1-9. Grade 1 will be the lowest grade and roughly equivalent to GCSE G grade. Grades 8 and 9 will be the highest grades and roughly equivalent to GCSE A** grade.

GCSE English Curriculum

Students will cover all of the topics and texts listed below during the course of their two years of KS4.

GCSE English Language	GCSE English Literature
<p>Paper 1 Section A: Students read an extract from a Literature fiction text to consider how established writers use narrative and descriptive techniques to capture the interest of readers</p> <p>Paper 1 Section B: Students write their own creative text, inspired by the topic that they have responded to in section A to demonstrate their narrative and descriptive skills in response to a written prompt, scenario or visual image.</p> <p>Paper 2 Section A: Students read two linked sources from different time periods (19th - 21st century) and genres in order to consider how each presents a perspective or viewpoint to influence the reader</p> <p>Paper 2 Section B: Students produce a written text to a specified audience, purpose and form in which they give their own perspective on the theme that has been introduced to them in section A.</p>	<p>Paper 1 - <i>Macbeth</i></p> <p>Paper 1 - <i>A Christmas Carol</i></p> <p>Paper 2 - <i>An Inspector Calls</i></p> <p>Paper 2 - <i>Power and Conflict Poetry</i></p> <p>Paper 2 - <i>Unseen Poetry</i></p> <p>* All English Literature exams are <u>CLOSED BOOK</u> – meaning that students are NOT allowed copies of the texts in the exam but are still expected to make cross-text links.</p>

GCSE English Assessment

At the beginning of Year 10 students are provided with an aspirational grade based on their end of KS2 data and current FFT data.

These target grades are recorded on the front of student exercise books; at the beginning of a new topic of work students are required to set themselves two new attainment targets based on prior learning and teacher feedback. All students should know the grade they aspire to, and targets to improve their individual attainment.

As the exam board's band descriptors for the grades have been widened, meaning that students must demonstrate more technical and analytical skills in order to achieve their target grade, students are more rigorously assessed than ever before. Students are continually assessed and monitored by their classroom teacher and their progress is tracked by the Key Stage Coordinator.

Assessment takes place continually and in a range of various ways: students will complete a range of summative and formative assessments over the duration of their English Language and English Literature courses. In Y11 students will sit two sets of mock examinations to further prepare them for the examination environment, expectations of the papers and working in timed conditions.

The marking of assessment tasks and mock examinations are moderated by the Key Stage Coordinator and members of the department in-line with guidance from the Examination Board (AQA). All teachers have to record their marks on the KS4 tracking sheet which enables the Key Stage Coordinator to track progress across Y11 and identify strengths and weaknesses. Students of all abilities who are at risk of underachieving will be allocated a bespoke intervention package to improve a particular skill set.

GCSE English Language	GCSE English Literature
<p>TWO EXAMINATIONS:</p> <p>Paper 1: Fiction comprises of two sections and lasts for 1hr 45 min</p> <p>Paper 1: Non-fiction comprises of two sections and lasts for 1hr 45 min</p>	<p>TWO EXAMINATIONS:</p> <p>Paper 1: comprises of two questions on <i>Macbeth</i> and <i>A Christmas Carol</i> with marks awarded for SPAG</p> <p>Paper 2: comprises of four questions: <i>An Inspector Calls</i>, <i>Power and Conflict</i> Poetry and two shorter Unseen Poetry tasks with marks awarded for SPAG for <i>An Inspector Calls</i></p>

GCSE English Revision

Students must know the following acronyms as way to remember key English terms and be able to apply and evaluate their use in a range of literary texts and use them in their own creative writing.

GCSE English Language Paper 1	ASPERMOS and SQI
GCSE English Language Paper 2	DAFOREST/IPERSUADE and SQI
GCSE English Literature Paper 1	SQI / PETAL
GCSE English Literature Paper 2	SQI / PETAL and SMILE

How to revise:

Start revising now! Little and often is best, rather than cramming in the last few weeks before the exams.

Focus on the skills required to access each question on the exam papers as more often than not, the same skills will be used on several different questions.

Practise different questions with a range of texts to ensure that you are secure in your approaches to different papers and different questions.

Read and respond to staff feedback written in your exercise books and further feedback following mock exams.

Create flashcards about context, characters, themes and writer's intentions for English literature texts.

Watch a range of GCSE Pods and complete the quizzes to recap on key skills and texts, ensure you revisit the questions you have answered incorrectly to focus on this information.

Use the exam assessment objectives to sign off on the questions and skills you are secure on so you only spend time revising and practising the questions and skills considered a weakness.

Attend English Language Intervention and Miss Redmond's English Literature Masterclasses.

Complete all of your homework set to the best of your ability.

Complete revision set on Google Classroom in the lead up to mock exams.

Need more help?

Log in to GCSE Pod and work through the playlists www.gcsepod.com

Go to <https://www.bbc.com/bitesize>

Exam Questions and Textbook Exercises are also available (see order form in the back of the parent support booklet).

GCSE Mathematics

At Co-op Academy Bebington we follow the Edexcel Specification leading to the award of qualification GCSE (9-1) in Mathematics (1MA1)

Content

The examination will cover the following mathematical areas:

1. Number
2. Algebra
3. Ratio, proportion and rates of change
4. Geometry and measures
5. Probability
6. Statistics

Assessment

The qualification will be graded and certified on a nine-grade scale from 9 to 1 with 9 being the highest grade

Two tiers are available: Foundation and Higher

- Foundation Tier – grades awarded 1-5
- Higher Tier – grades awarded 4-9

The qualification consists of 3 equally weighted exam papers

- Each paper is 1 hour and 30 minutes long
- Each paper has 80 marks available
- Paper 1 is a non-calculator assessment
- Papers 2 and 3 are both calculator assessments

The content outlined for each tier will be assessed across all 3 papers

Each paper will have a range of question types; some questions will be set in both mathematical and non-mathematical contexts


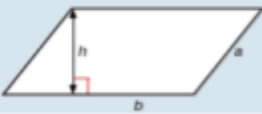
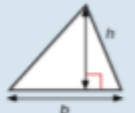
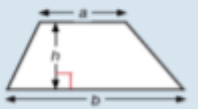
The topic area weightings for both the Foundation and Higher tiers are as follows:

Tier	Topic Area	Weighting
Foundation	Number	22 - 28%
	Algebra	17 - 23%
	Ratio, Proportion and Rates of change	22 - 28%
	Geometry and Measures	12 - 18%
	Statistics and Probability	12 - 18%
Higher	Number	12 - 18%
	Algebra	27 - 33%
	Ratio, Proportion and Rates of change	17 - 23%
	Geometry and Measures	17 - 23%
	Statistics and Probability	12 - 18%


Mathematical Formulae

Students need to memorise and know how to use the following formulae:



Areas

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2} (a + b)h$	

Circles

Circumference = $\pi \times \text{diameter}$, $C = \pi d$	
Circumference = $2 \times \pi \times \text{radius}$, $C = 2\pi r$	
Area of a circle = $\pi \times \text{radius squared}$ $A = \pi r^2$	

Pythagoras

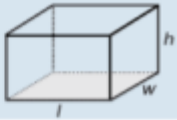
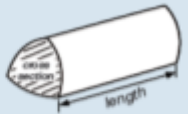


Pythagoras' Theorem For a right-angled triangle, $a^2 + b^2 = c^2$	
Trigonometric ratios (new to F) $\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$, $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$, $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$	

Quadratic equations




The Quadratic Equation

The solutions of $ax^2 + bx + c = 0$,
where $a \neq 0$, are given by $x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$

Volumes

Cuboid = $l \times w \times h$	
Prism = area of cross section \times length	
Cylinder = $\pi r^2 h$	
Volume of pyramid = $\frac{1}{3} \times \text{area of base} \times h$	

Compound measures

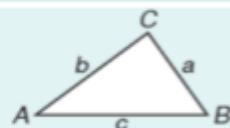
Speed $\text{speed} = \frac{\text{distance}}{\text{time}}$	
Density $\text{density} = \frac{\text{mass}}{\text{volume}}$	
Pressure $\text{pressure} = \frac{\text{force}}{\text{area}}$	

Trigonometric formulae

Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle = $\frac{1}{2} ab \sin C$



Foundation tier formulae

Higher tier formulae

Higher Tier

The following formulae will be provided for students within the relevant exam questions:

Perimeter, area, surface area and volume formulae

Where r is the radius of the sphere or cone, l is the slant height of a cone and h is the perpendicular height of a cone:

$$\text{Curved surface area of a cone} = \pi r l$$

$$\text{Surface area of a sphere} = 4\pi r^2$$

$$\text{Volume of a sphere} = \frac{4}{3}\pi r^3$$

$$\text{Volume of a cone} = \frac{1}{3}\pi r^2 h$$

How to Revise Maths

Start revising now! Little and often is best, rather than cramming in the last few weeks before the exams

Students will be formally assessed on a regular basis over the next 7 months – be prepared!

Before each assessment, parents will be sent a text and students will be given a revision list and support material to work through

After each assessment a Personalised Plan will be sent home. This identifies which questions and topics were answered well and areas that need to be addressed

- From the Personalised Plan, identify which topics need to be revised
- Go to vle.mathswatch.co.uk and log in using your details. Watch the clip, make sure you have a pen and paper handy to complete the questions

Need more help?

Go to www.corbettmaths.com, click videos and search for your topic.
Exam Questions and Textbook Exercises are also available

Make sure you complete all homework and attend all Intervention and Revision Sessions!

Sample Personalised Plan

Summer 2023 Mock (Foundation Paper 2)			
Question	Skills Tested	11B1 Mathswatch Clip	Percentage
q1	Rounding	31	✓ 100
q2	Fractions to a whole	71	✓ 100
q3	Averages and Range	62	✓ 100
q4	Multiples	28	✓ 100
q5	Fractions, Decimals and %	85	✓ 100
q6	Comparing and ordering negatives	23	✓ 100
q7a	Identify 2D Shapes	10	✓ 100
q7b	Identify Parallel and Perpendicular Lines	9	✓ 100
q7c	Identify Parallel and Perpendicular Lines	9	✓ 100
q8a	Reading and Plotting Coordinates	8	✓ 100
q8b	Reading and Plotting Coordinates	8	✓ 100
q8c	Draw a Circle	116	✗ 0
q9a	Interpret Point Charts	153	✓ 100
q9b	Interpret Point Charts	153	✓ 100
q10	Instalment Payments	22b	✓ 100
q11	Angles in triangles	121	⚠ 67
q12a	Number machines	36	✓ 100
q12b	Number Machine Problems	36	✓ 100
q13	Two Way Tables	61	✓ 100
q14i	Comparing Fractions	70	✓ 100
q14ii	Four operations with negatives	68a, 68b	✓ 100
q15a	Total from Frequency Table	130a	✗ 0
q15b	Averages from Frequency Tables	130a	✗ 0
q16	Scales Diagrams	38	✓ 100
q17	Drawing Straight Line Graphs	96	✓ 100
q18	Mean from Total and Time Conversion	62	✗ 0
q19	Percentage Profit and Loss Problems	109	⚠ 40
q20a	Tree Diagrams	151	✓ 100
q20b	Tree Diagrams	151	✗ 0
q21a	Simple Index Form	34	✗ 0
q21b	Expand Brackets and Simplify	134a	✗ 0
q21c	Factorising Single Brackets	94	⚠ 50
q22	Describing Transformations	50	✗ 0
q23	Simple Bounds	132	✗ 0
q24a	Area and Division Problem	53	✓ 100
q24b	Metric Area and Volume Conversion	112	✗ 0
q25	Dividing a Line into a Ratio	8, 106	✗ 0
q26	Compound Interest and Depreciation	164	⚠ 33
q27	Exchange Rates	105	✓ 100
q28	Simultaneous Equations	162	✗ 0
Total Mark (Max 80)			47
Overall Percentage			59%

GCSE Science

There are 2 routes that can be followed which lead to qualifications which best suit the ability and interests of the students.

Triple Science Option

Students will study a range of topics in each of the 3 separate Biology, Chemistry and Physics specifications.

Combined Science (Synergy)

Students study topics from Biology, Chemistry and Physics but in a more combined manner where key ideas are linked throughout the 3 Sciences.

Entry Level Certificate

A small minority of students, where GCSE Sciences are not appropriate, will study a range of topics relating to Biology, Chemistry and Physics but not to the detail or demand of a GCSE.

Tiers of Entry (GCSE) & Grades Awarded

There are two tiers of entry in Science, namely higher and foundation. Entry at higher level gives access to 4 – 9 grades whereas entry at foundation level allows grades 1 – 5 to be awarded. Tiers of entry in science will be decided on an individual basis. The teachers of each class will use continual assessment together with performance in key assessments and mock examinations, classwork and homework to identify the appropriate tier of entry for each pupil. Students will be awarded a combined double award grade worth 2 GCSE grades for the Synergy course. Students that take the triple Science option will be awarded a grade for each of the 3 Science disciplines.

Entry Level Certificate

Student who are studying for the Entry Level Certificate (ELC) will have their work continually assessed through an externally set, internally marked examination and by a teacher devised assessment which assesses the key skills that scientists use when carrying out investigations.

Examinations in GCSE Combined Science (Synergy)

All external examinations in Synergy will take the form of a written paper, 1 hour 45 minutes in length. Students will be assessed on the content for Synergy in 4 papers worth 25% each. Each paper assesses different units from the specification along with key skills from practical work and mathematical processing.

Paper 1 assesses Life and environmental Sciences including;

Unit 1: Building blocks
Unit 2: Transport over large distances
Unit 3: Interactions with the environment
Unit 4: Explaining change

Questions are more geared towards assessing student's knowledge and understanding (AO1) and Application of their knowledge and understanding (AO2) from the units taught. They are also assessed to a much lesser extent on their ability to analyse and evaluate (AO3) through the subject content.

Paper 2 assesses Life and environmental Sciences including;

Unit 1: Building blocks
Unit 2: Transport over large distances
Unit 3: Interactions with the environment
Unit 4: Explaining change

Questions are more geared towards assessing student's ability to analyse, evaluate and use mathematical processing (AO3) than on their knowledge and understanding (AO1) or applying their knowledge and understanding (AO3).

Most of the required practical investigations will be assessed from units 1-4 on this paper.

Paper 3 assesses the Physical Sciences;

Unit 5: Building blocks for understanding
Unit 6: Interactions over small and large distances
Unit 7: Movement and interactions
Unit 8: Guiding spaceship Earth towards a sustainable future

Questions are more geared towards assessing student's knowledge and understanding (AO1) and Application of their knowledge and understanding (AO2) from the units taught. They are also assessed to a much lesser extent on their ability to analyse and evaluate (AO3) through the subject content.

Paper 4 assesses the Physical Sciences;

Unit 5: Building blocks for understanding
Unit 6: Interactions over small and large distances
Unit 7: Movement and interactions
Unit 8: Guiding spaceship Earth towards a sustainable future

Questions are more geared towards assessing student's ability to analyse, evaluate and use mathematical processing (AO3) than on their knowledge and understanding (AO1) or applying their knowledge and understanding (AO3).

Most of the required practical investigations will be assessed from units 5-8 on this paper.

Mathematical requirements in examinations (Synergy)

It is important to note that 20% of the marks available on terminal examinations are related to maths and mathematical processing.

The new weighting requirements are:

- Combined science (Synergy): 20% (1:2:3 ratio for biology, chemistry and physics). So for each single mark attributed to maths in biology, there must be two marks in chemistry and three marks in physics.

Equations

Students must be familiar and learn the following equations

In solving quantitative problems, students should be able to recall and apply the following equations, using standard SI units.

Equations required for Higher Tier papers only are indicated by HT in the left-hand column.

Equation number	Word equation	Symbol equation
1	weight = mass \times gravitational field strength (g)	$W = m g$
2	work done = force \times distance (along the line of action of the force)	$W = F s$
3	force applied to a spring = spring constant \times extension	$F = k e$
4	distance travelled = speed \times time	$s = v t$
5	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
6	resultant force = mass \times acceleration	$F = m a$
7 HT	momentum = mass \times velocity	$p = m v$
8	kinetic energy = $0.5 \times \text{mass} \times (\text{speed})^2$	$E_k = \frac{1}{2} m v^2$
9	gravitational potential energy = mass \times gravitational field strength (g) \times height	$E_p = m g h$
10	power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
11	power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
12	efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
13	efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
14	wave speed = frequency \times wavelength	$v = f \lambda$
15	charge flow = current \times time	$Q = I t$
16	potential difference = current \times resistance	$V = I R$
17	power = potential difference \times current	$P = V I$
18	power = (current) $^2 \times$ resistance	$P = I^2 R$
19	energy transferred = power \times time	$E = P t$

Equation number	Word equation	Symbol equation
20	energy transferred = charge flow × potential difference	$E = Q V$
21	density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$

Students will be given the following equations in the examination but must be able to interpret and use these in answers to questions.

Equation number	Word equation	Symbol equation
1	(final velocity) ² – (initial velocity) ² = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
2	elastic potential energy = 0.5 × spring constant × (extension) ²	$E_e = \frac{1}{2} k e^2$
3	change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = m c \Delta \theta$
4	period = $\frac{1}{\text{frequency}}$	
5 HT	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length	$F = B I l$
6	thermal energy for a change of state = mass × specific latent heat	$E = m L$
7 HT	potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil	$V_s I_s = V_p I_p$

Examinations in GCSE Separate Science

All external examinations in Biology, Chemistry and Physics will take the form of 2 written papers, 1 hour 45 minutes in length. Students will be assessed on the content for each of the Sciences in 2 papers worth 50% each. Each paper assesses different units from the specification along with key skills from practical work and mathematical processing.

Paper 1 Biology

Unit 1: Cell Biology
Unit 2: Organisation
Unit 3: Infection and response
Unit 4: Bioenergetics

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 1-4 will be assessed on this paper.

Paper 2 Biology

Unit 5: Homeostasis and response
Unit 6: Inheritance, variation and evolution
Unit 7: Ecology

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 5-7 will be assessed on this paper.

Paper 1 Chemistry

Unit 1: Atomic structure and the periodic table
Unit 2: Bonding, structure & properties of matter
Unit 3: Quantitative Chemistry
Unit 4: Chemical changes
Unit 5: Energy Changes

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 1-5 will be assessed on this paper.

Paper 2 Chemistry

Unit 6: Rate & extent of chemical changes
Unit 7: Organic Chemistry
Unit 8: Chemical analysis
Unit 9: Chemistry & the atmosphere
Unit 10: Using resources

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 6-10 will be assessed on this paper.

Paper 1 Physics

Unit 1: Energy

Unit 2: Electricity

Unit 3: Particle model of matter

Unit 4: Atomic Structure

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 1-4 will be assessed on this paper.

Paper 2 Physics

Unit 5: Forces

Unit 6: Waves

Unit 7: Magnetism and electromagnetism

Unit 8: Space Physics

Questions assess student's knowledge and understanding (AO1), Application of knowledge and understanding (AO2) and their ability to analyse, evaluate and use mathematical processing.

Required practical investigation from units 5-7 will be assessed on this paper.

Equations

Students must be familiar and learn the following equations.

Equation number	Word equation	Symbol equation
1	weight = mass \times gravitational field strength (g)	$W = m g$
2	work done = force \times distance (along the line of action of the force)	$W = F s$
3	force applied to a spring = spring constant \times extension	$F = k e$
4	moment of a force = force \times distance (normal to direction of force)	$M = F d$
5	pressure = $\frac{\text{force normal to a surface}}{\text{area of that surface}}$	$p = \frac{F}{A}$
6	distance travelled = speed \times time	$s = v t$
7	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
8	resultant force = mass \times acceleration	$F = m a$
9 HT	momentum = mass \times velocity	$p = m v$
10	kinetic energy = $0.5 \times \text{mass} \times (\text{speed})^2$	$E_k = \frac{1}{2} m v^2$
11	gravitational potential energy = mass \times gravitational field strength (g) \times height	$E_p = m g h$
12	power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
13	power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
14	efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
15	efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
16	wave speed = frequency \times wavelength	$v = f \lambda$
17	charge flow = current \times time	$Q = I t$
18	potential difference = current \times resistance	$V = I R$
19	power = potential difference \times current	$P = V I$
20	power = (current) $^2 \times$ resistance	$P = I^2 R$
21	energy transferred = power \times time	$E = P t$
22	energy transferred = charge flow \times potential difference	$E = Q V$
23	density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$

Students will be given the following equations in the examination but must be able to interpret and use these in answers to questions.

Equation number	Word equation	Symbol equation
1 HT	pressure due to a column of liquid = height of column \times density of liquid \times gravitational field strength (g)	$p = h \rho g$
2	(final velocity) ² – (initial velocity) ² = 2 \times acceleration \times distance	$v^2 - u^2 = 2 a s$
3 HT	force = $\frac{\text{change in momentum}}{\text{time taken}}$	$F = \frac{m \Delta v}{\Delta t}$
4	elastic potential energy = 0.5 \times spring constant \times (extension) ²	$E_e = \frac{1}{2} k e^2$
5	change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta \theta$
6	period = $\frac{1}{\text{frequency}}$	
7	magnification = $\frac{\text{image height}}{\text{object height}}$	
8 HT	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density \times current \times length	$F = B I l$
9	thermal energy for a change of state = mass \times specific latent heat	$E = m L$
10 HT	$\frac{\text{potential difference across primary coil}}{\text{potential difference across secondary coil}} = \frac{\text{number of turns in primary coil}}{\text{number of turns in secondary coil}}$	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
11 HT	potential difference across primary coil \times current in primary coil = potential difference across secondary coil \times current in secondary coil	$V_s I_s = V_p I_p$
12	For gases: pressure \times volume = constant	$p V = \text{constant}$

Controlled Assessment in GCSE Science

There is no longer any controlled assessment (coursework) content in Science.

Assessment in Entry Level Science (Single Award)

Entry Level Science students will complete 3 externally set assignments, 45 minutes in length. The externally set assignments contribute 57% towards the final grade awarded.

In addition, the ELC students will complete 3 teacher devised assignments as class based practical investigation projects. The teacher devised assignments contribute 43% towards the final grade.

Entry level students can be awarded Entry 1, Entry 2 or Entry 3. There is clear progression in terms of level of demand for the course with Entry 3 being the most demanding and therefore the highest grade awarded.

Examining Board

All students will be entered for Science qualifications awarded by the AQA examining board. Information for parents and students can be found on their website which contains specifications, past papers, schemes of work etc.

aqa.org.uk/subjects/science



Past papers and mark schemes

Students can access past papers for the subject they are studying although as the 9-1 GCSE course was only awarded for the first time in 2018, the number of papers are limited at the present time. Students can access past papers using the links below;

GCSE Double award (Synergy)

aqa.org.uk/subjects/science/gcse/combined-science-synergy-8465/assessment-resources

GCSE Biology

aqa.org.uk/subjects/science/gcse/biology-8461/assessment-resources

GCSE Chemistry

aqa.org.uk/subjects/science/gcse/chemistry-8462/assessment-resources

GCSE Physics

aqa.org.uk/subjects/science/gcse/physics-8463/assessment-resources

Entry Level Certificate (Single Award)

aqa.org.uk/subjects/science/elc/science-5960/assessment-resources

Entry Level Certificate (Double Award)

aqa.org.uk/subjects/science/elc/science-5960/assessment-resources

1. Combined Science (Synergy) 8465 Students

Students who follow this route will gain a double award GCSE Science qualification by the end of year 11. All students will sit their examinations at the end of year 11.

Combined Science (Synergy) 8465 Examinations: Summer Year 11	
Paper 1 (25%)	Paper 2 (25%)
Paper 3 (25%)	Paper 4 (25%)

2. Triple Science Students

Students studying all three science subjects at GCSE will complete their courses over 2 years leading to three separate qualifications in Biology, Chemistry and Physics. All 6 external examinations will be completed at the end of year 11.

Triple Science Examinations: Summer Year 11		
Biology 8461	Chemistry 8462	Physics 8463
Biology 1 (50%)	Chemistry 1 (50%)	Physics 1 (50%)
Biology 2 (50%)	Chemistry 2 (50%)	Physics 2 (50%)

3. Entry Level Science 5960 Students (Single/Double Award)

Students who follow this route will gain an Entry Level Science qualification.

Entry Level Science 5960 (Single / Double Award)		
External Set Assignments Single Award		
Biology ESA 1	Chemistry ESA 1	Physics ESA 1
Teacher-devised Assignments Single Award		
Biology TDA 1	Chemistry TDA 1	Physics TDA 1
External Set Assignments Double Award (in addition to single award units above)		
Biology ESA 2	Chemistry ESA 2	Physics ESA 2
Teacher-devised Assignments Double Award		
Biology TDA 2	Chemistry TDA 2	Physics TDA 2

Further information and support for students

Maths and equations in Science

- Students must gain competence in recalling and using the key equations including re-arranging (changing the subject)
- Students must also be familiar with correct SI units and be able to convert between non-SI to SI units.
- The level of maths required is not less than;
 - KS3 for foundation tier students
 - Foundation tier maths for higher tier students

Equations

- Students are given some equations on a data sheet to use.
- However, most equations used in the Sciences, students must learn and be able to use.
- Students must also be able to recall and use the correct units particularly where multi-step calculations are concerned.

Independent learning and revision

Students have access to a wealth of revision resources that are made available to them through google classroom. These include revision checklists, knowledge organisers, focus elearning portal, sciencewatch and revision workbooks.

Sciencewatch is a Coop Academy Bebington produced resources that provides hyperlinks to online helps, resources, videos, animations and even full lessons to support their examination preparation and intervention. This includes access to playlists through GCSEpod for the examinations, a list of the required practicals with video hyperlinks as well as access to virtual practicals that students need to have an understanding of for the exam. Sciencewatch is in a pdf format, there is no username or password to access these resources. It will be available to students as an attachment in their google classroom and/or classcharts

In addition, students have access to Kerboodle.com. This online platform has an online copy of the textbooks used in lessons. (www.kerboodle.com)

Students will also be given a question level analysis following their mock exams. This will enable them to identify for themselves where they have gaps in their knowledge and understanding. (Example copy below) This QLA also identifies the Sciencewatch numbers the students should access for the hyperlinks as additional help and support.

Name: _____

Class: _____

Life & Environmental Mock Exam (F) Paper 1

Foundation November 2021

Answer **all** the questions

Read each question carefully.

Question	Marks available	Mark achieved	Areas to Improve (tick if needing improvement)	Science Watch Number
1.	8		<input type="checkbox"/> Atomic structure <input type="checkbox"/> Sub-Atomic Particles <input type="checkbox"/> Electronic Configurations <input type="checkbox"/> Electromagnetic Radiation <input type="checkbox"/> Ultra Violet Radiation	9, 10, 12, 23, 24, 28, 29
2.	9		<input type="checkbox"/> Animal and Plant Cells <input type="checkbox"/> Magnification Equation <input type="checkbox"/> Specialised Plant Cells	13, 14, 15, 44, 45
3.	8		<input type="checkbox"/> Communicable diseases <input type="checkbox"/> Body protections from pathogens <input type="checkbox"/> Chemicals used to kill pests <input type="checkbox"/> Cell division <input type="checkbox"/> Genetic modification <input type="checkbox"/> Biological control	20, 76, 77, 80, 81, 83, 84, 104
4.	12		<input type="checkbox"/> Specialised Cells <input type="checkbox"/> Blood components <input type="checkbox"/> Protection from diseases <input type="checkbox"/> Inheritance in action <input type="checkbox"/> Genetic diseases <input type="checkbox"/> Producing new drugs	14, 34, 22, 77, 79, 80, 81, 82, 83, 109, 118, 110
5.	14		<input type="checkbox"/> Movement of substances <input type="checkbox"/> Diffusion <input type="checkbox"/> Active Transport <input type="checkbox"/> Osmosis required practical	16, 17, 18, 19, 223
6.	17		<input type="checkbox"/> The Electromagnetic Spectrum <input type="checkbox"/> Heat & Energy Transfer Required Practical <input type="checkbox"/> Resolution and Accuracy <input type="checkbox"/> The Wavelength Equation	248, 25, 24
7.	8		<input type="checkbox"/> Pathogens <input type="checkbox"/> Calculating Percentage Increase <input type="checkbox"/> Antibiotic Resistance <input type="checkbox"/> Vaccines	76, 79, 80, 82
8.	9		<input type="checkbox"/> The particle model <input type="checkbox"/> Purity and impure substances <input type="checkbox"/> Changing State	1, 8, 4,
9.	15		<input type="checkbox"/> Food tests <input type="checkbox"/> Products of digestion <input type="checkbox"/> Calculating energy <input type="checkbox"/> Renewable and Non-renewable fuels	38, 39, 91, 92, 220

Total Score; /100

% Mark _____

Page 1

Grade: _____