



Year 11 Mock Exam Preparation

Name -

Form -

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In addition to what is included in this booklet resources can be found on the school website

www.williamellis.camden.sch.uk - Students / Year 11 / Revision Support

Music – school website

Preparing for **English language paper 1 GCSE mock** (Communicating Information & Ideas/ J351/01)

Our recommendations for home study to prepare for the December mock 2018

Read through the specially made guide to the OCR exams available on the school website under Year 11 (you have been given a printed copy too – Year 11 information evening).

Consult the English language **Checklist** too (single page, available on website)

Write a blog entry aimed at a peer group audience about how to deal with stressed parents. Aim for a blend of sound advice and kindly humour.

Do non-fiction reading on the subject of automation (one piece by E.H. Gombrich, one by Chuka Umunna): ask your English teacher for the two texts and then research Thomas Carlyle, a 19th century essayist, on the same topic.

Write a letter to your English teacher explaining what you would like to do or achieve in the near future, beyond GCSEs, describing your situation now and suggesting what s/he can do to help and what your plans are to secure your own success. Additional writing focus: links between paragraphs

Find and read two news articles on the 'Windrush Scandal', as it has been reported by journalists in 2017/2018. You might find Amelia Gentleman's reports and interviews for the *Guardian* especially interesting.

Write a guest article for a news website in which you celebrate the life of one of your grandparents (or another relation/ancestor). This can be done in-role (as in it needs to sound real/true, but does not actually have to be so). Additional writing focus: paragraph openers (strong and varied).

Read this account of a TV series: <https://www.theguardian.com/tv-and-radio/2018/oct/04/rich-house-poor-house-overly-reassuring-tale-haves-and-have-nots>

Look up and record the meanings of any unfamiliar words or terms in it. Write a proposal (in the form of a campaign pitch) for a TV programme or series that you think should be made to draw attention to an issue or circumstance in society. Aim for 5 paragraphs. Additional writing focus: check that every comma is correct and should not actually be replaced by a full stop, colon or semi-colon.

Ensure you are not a comma-splicer and prove it, at least in theory, by completing the exercises here: http://www.bristol.ac.uk/arts/exercises/grammar/grammar_tutorial/page_47.htm

Memorize these questions to ask of unseen texts:

1. What is the tone?
2. What kind of language is used to create this tone?
3. How does the text open? (always move chronologically through the text)
4. What are the most striking sentences or phrases?
5. Does the language or tone change?
6. Are any ideas, words, devices repeated?
7. How does the text end? Has the writer's view point changed from the beginning?

We also advise timed rewriting of previous exam responses. Keep reading non-fiction and doing small pieces of practice writing with attention to accuracy and styling choices.

William Ellis School
ENGLISH DEPARTMENT

Preparing for **English literature paper 1 GCSE mock** (Modern & Literary Heritage Texts)

Our recommendations for home study to prepare for the December mock 2018

Make a plot pathway of 'An Inspector Calls' using either an internet PDF as a plot reminder or own copy (we recommend purchasing a second-hand copy of this text for home use).

Watch the BBC version of 'An Inspector Calls' (paying attention to differences from the text):

<https://www.youtube.com/watch?v=Zz1GS5fufg4>

Re-read key chapters from 'Great Expectations' (you each have your own copy).

Complete the key quotations (basic start) page in the 'Great Expectations' revision guide given to each student and available on the website.

Complete or remake your 'An Inspector Calls' 5 Key Moments charts (using the teacher model as a pattern/your model). LEARN THEM PROPERLY.

Learn 5 new literature quotations a week: begin two wall charts in the third week of October.

Do this writing task: Charles Dickens and J.B. Priestley 'Penpals Across the Centuries':

Priestley should write to Dickens explaining the context of his play, the issues he is raising, and discussing what they both have in common (refer to 'GE')

Read the British Library articles on the world of 'Great Expectations'. Start with this one:

<https://www.bl.uk/romantics-and-victorians/articles/great-expectations-and-class>

Then read: <https://www.bl.uk/romantics-and-victorians/articles/the-gothic-in-great-expectations>

You all have specialist guides to the OCR exams on 'Great Expectations' and 'An Inspector Calls'. A link to PDF versions of these is also on the school website, under Yr 11. The most useful thing you can do is read these and ensure you understand them.

Ensure you are not a comma-splicer and prove it by successfully completing the exercises here:

http://www.bristol.ac.uk/arts/exercises/grammar/grammar_tutorial/page_47.htm

Do a timed rewriting of a minimum of one previous response on each text.

You can also use this link (<https://www.ocr.org.uk/Images/348009-the-little-book-of-spelling-punctuation-and-grammar-spag-.pdf>) to access OCR's very useful 'Little Book of Spelling, Punctuation and Grammar', with online exercises. This guide is actually better read online (because of the colours used) but we will provide a paper version for any student or parent/carer who asks for one.

Information about the Maths GCSE Mock Exam (Exam Board : Edexcel 1MA1)

There are 3 papers each 1 and 1/2 hours long (equally weighted). The first paper is a non-calculator paper and the second and third paper can use a calculator.

Essential Equipment - Pen, Pencil, Ruler, Rubber, Sharpener, Angle Measurer, Compass and a Calculator

Useful Maths Websites

1. Corbettmaths - worksheets, past papers, helpful videos
2. Maths Genie - worksheets, past papers, helpful videos
3. Mymaths
4. Mathswatch
5. Hegarty Maths g
6. CIMT Plymouth maths

Revision Classes in William Ellis School Wednesday after school (3:20 to 4:30)

TOPICS IN THE FOUNDATION COURSE

Unit	Title
<u>1</u>	<u>a</u> Integers and place value
	<u>b</u> Decimals
	<u>c</u> Indices, powers and roots
	<u>d</u> Factors, multiples and primes
<u>2</u>	<u>a</u> Algebra: the basics
	<u>b</u> Expressions and substitution into formulae
<u>3</u>	<u>a</u> Tables, charts and graphs
	<u>b</u> Pie charts
	<u>c</u> Scatter graphs
<u>4</u>	<u>a</u> Fractions, decimals and percentages
	<u>b</u> Percentages
<u>5</u>	<u>a</u> Equations and inequalities
	<u>b</u> Sequences
<u>6</u>	<u>a</u> Properties of shapes, parallel lines and angle facts
	<u>b</u> Interior and exterior angles of polygons
<u>7</u>	Statistics, sampling and the averages
<u>8</u>	Perimeter, area and volume
<u>9</u>	<u>a</u> Real-life graphs
	<u>b</u> Straight-line graphs
<u>10</u>	Transformations
<u>11</u>	<u>a</u> Ratio
	<u>b</u> Proportion
<u>12</u>	Right-angled triangles: Pythagoras and trigonometry
<u>13</u>	Probability
<u>14</u>	Multiplicative reasoning
<u>15</u>	<u>a</u> Plans and elevations
	<u>b</u> Constructions, loci and bearings
<u>16</u>	<u>a</u> Quadratic equations: expanding and factorising

	<u>b</u>	Quadratic equations: graphs
<u>17</u>		Circles, cylinders, cones and spheres
<u>18</u>	<u>a</u>	Fractions and reciprocals
	<u>b</u>	Indices and standard form
<u>19</u>	<u>a</u>	Similarity and congruence in 2D
	<u>b</u>	Vectors
<u>20</u>		Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations

TOPICS IN THE HIGHER COURSE

Unit	Title
<u>1</u>	<u>a</u> Calculations, checking and rounding
	<u>b</u> Indices, roots, reciprocals and hierarchy of operations
	<u>c</u> Factors, multiples, primes, standard form and surds
<u>2</u>	<u>a</u> Algebra: the basics, setting up, rearranging and solving equations
	<u>b</u> Sequences
<u>3</u>	<u>a</u> Averages and range
	<u>b</u> Representing and interpreting data and scatter graphs
<u>4</u>	<u>a</u> Fractions and percentages
	<u>b</u> Ratio and proportion
<u>5</u>	<u>a</u> Polygons, angles and parallel lines
	<u>b</u> Pythagoras' Theorem and trigonometry
<u>6</u>	<u>a</u> Graphs: the basics and real-life graphs
	<u>b</u> Linear graphs and coordinate geometry
	<u>c</u> Quadratic, cubic and other graphs
<u>7</u>	<u>a</u> Perimeter, area and circles
	<u>b</u> 3D forms and volume, cylinders, cones and spheres
	<u>c</u> Accuracy and bounds
<u>8</u>	<u>a</u> Transformations
	<u>b</u> Constructions, loci and bearings
<u>9</u>	<u>a</u> Solving quadratic and simultaneous equations
	<u>b</u> Inequalities
<u>10</u>	Probability
<u>11</u>	Multiplicative reasoning
<u>12</u>	Similarity and congruence in 2D and 3D
<u>13</u>	<u>a</u> Graphs of trigonometric functions
	<u>b</u> Further trigonometry
<u>14</u>	<u>a</u> Collecting data
	<u>b</u> Cumulative frequency, box plots and histograms
<u>15</u>	Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics
<u>16</u>	<u>a</u> Circle theorems
	<u>b</u> Circle geometry
<u>17</u>	Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof
<u>18</u>	Vectors and geometric proof
<u>19</u>	<u>a</u> Reciprocal and exponential graphs; Gradient and area under graphs
	<u>b</u> Direct and inverse proportion

Biology (Triple and Trilogy) – resources on school website

Cell structure			
Label the major features of animal, plant and bacterial cells			
Describe differences between animal and plant cells			
Know the difference between Eukaryotic and Prokaryotic cells			
Describe the functions of all the parts – e.g. nucleus, ribosomes etc.			
Use Magnification=Image/Actual to calculate size of cells or magnification			
Use prefixes centi, milli, micro and nano and change numbers between units			
REQUIRED PRACTICAL – Describe how to use a light microscope to view cells			
Describe what is meant by ‘differentiation’ or specialisation			
Relate a cells specialised features to its function			
Describe how microscopy has developed over time and give advantages of the electron microscope over the light microscope			
BIOLOGY ONLY: Describe how to prepare an uncontaminated culture using aseptic technique			
BIOLOGY ONLY: Calculate cross sectional areas of colonies or clear areas around colonies using πr^2			
BIOLOGY ONLY: Calculate the number of bacteria in a population after a certain time if given the mean division time.			
BIOLOGY ONLY (HT): Express answers in standard form			
BIOLOGY ONLY REQUIRED PRACTICAL: Describe how to investigate the effect of antiseptics or antibiotics on bacterial growth using agar plates and measuring zones of inhibition			
Cell Division			
Describe the 3 main stages in the cell cycle			
Recognise & define mitosis and give examples of it may occur			
Define the term ‘stem cells’			
Name sources of stem cells and describe their use – adult, embryo and meristem			
Evaluate the use of stem cells in medical research and treatments			
Transport in cells			
Describe diffusion and the factors that can affect the rate			
Describe how organs and surfaces are specialised for effective diffusion – lungs, gills in fish, roots and leaves in plants			
Define the term osmosis and give examples of where it happens			
REQUIRED PRACTICAL: Describe how to investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue			
Define the term ‘Active Transport’ and explain why it is necessary			
Explain the differences between diffusion, osmosis and active transport			
Organisation			
Name the organs in the digestive system			
Use the ‘lock and key’ model to explain how enzymes work			

Name the three digestive enzymes, what they act on and what the products are			
Explain why digestion of food is necessary			
Explain the functions of bile and hydrochloric acid in digestion			
REQUIRED PRACTICAL: Describe the chemical tests for sugar, starch, fat and protein and their results			
REQUIRED PRACTICAL: Describe how to investigate the effect of pH on the rate of reaction of amylase enzyme			
Label a diagram of the major structures of the heart			
Label a diagram of the major structures of the lungs			
Describe how the heart rate is normally regulated and the use of artificial pacemakers			
Describe the features of arteries, veins and capillaries and relate structure to function			
Name and describe the functions of the four components of blood			
Describe what 'coronary heart disease' is, describe and evaluate treatment options			
Describe some of the diseases linked with lifestyle factors			
Describe the causes of cancer and what is meant by 'benign' and 'malignant' tumours			
Name the different plant tissues and describe how they are adapted for their function			
Explain how transpiration happens and describe factors that can affect the rate			
Explain what is meant by 'translocation'			
Infection & response			
Define the term 'pathogen'			
Describe the spread and symptoms of viral diseases such as measles, HIV and Tobacco Mosaic Virus (TMV)			
Describe the spread and symptoms of the bacterial infections Salmonella and Gonorrhoea			
Describe the symptoms, spread and treatment of the fungal disease rose black spot			
Describe the spread of and the prevention of malaria by protists			
Describe the main physical barriers humans have to infection			
Describe how white cells fight pathogens that do get into the body			
Explain how vaccinations prevent disease			
Explain the use of antibiotics and other medicines in treating diseases			
Describe the origins of many drugs and how new drugs are developed, including the use of placebos			
Explain the development of and uses for monoclonal antibodies, including in pregnancy testing			
Describe and explain the main defence mechanisms plants have to prevent disease			
<i>Describe the effects on plants of a lack of nitrate and magnesium in the soil</i>			
BIOLOGY ONLY (HT): Describe how monoclonal antibodies are produced			
BIOLOGY ONLY (HT): Describe some of the ways that monoclonal antibodies are used			
BIOLOGY ONLY (HT): Know how plant diseases can be detected and how identification can be made.			
BIOLOGY ONLY: Describe how plants can be damaged by ion deficiency			
BIOLOGY ONLY: Describe physical and chemical plant defence responses			

Bioenergetics			
Represent photosynthesis using an equation and state uses for the products			
Describe and explain how factors may affect the rate of photosynthesis and explain the idea of 'limiting factors'			
REQUIRED PRACTICAL: Describe how to investigate the effect of light intensity on the rate of photosynthesis using an aquatic organism such as pondweed			
Describe how a plant uses the glucose produced in photosynthesis			
Represent aerobic and anaerobic respiration using equations and compare them in terms of energy release and waste products			
Describe and explain changes in the body during exercise			
HT ONLY: Describe the oxygen debt			
Define metabolism and give examples of the reactions this includes			

Paper 1 checklist – Chemistry (Triple and Trilogy)

Atomic Structure and the Periodic table			
Define atom, element, compound, mixture			
Describe the processes of separation mixtures by filtering, distillation, fractional distillation, crystallisation and chromatography			
Describe the differences between the plum pudding and atomic model of the atoms			
Describe and explain the alpha particle scattering experiment and how this led to a change in the model of the atom			
Know the mass and charge of the 2 subatomic particles			
Calculate the numbers of protons, neutrons and electrons in an atom or ion.			
Calculate relative atomic mass of an element given percentage abundance			
Draw electronic structure for the first 20 elements on the periodic table			
Describe how the periodic table is arranged			
Describe the steps in the development of the periodic table			
Explain the difference between metals and non-metals based on their physical and chemical properties.			
Describe and explain properties of group 0 elements			
Describe and explain reactions and properties of group 1 elements			
Describe properties of group 7 elements			
CHEMISTRY ONLY: Describe the difference, compared with group 1 elements, in melting points, densities, strength, hardness and reactivity on transition metals			
Bonding, Structure and the properties of matter			
Explain ionic, covalent and metallic bonding in terms of electrostatic forces and the transfer or sharing of electrons			
Draw dot and cross diagrams for ionic and covalent compounds			
Work out the charge of metal and non-metal ions in ionic bonding			
Describe the properties of ionic compounds and link these its structure and bonding			
Describe the properties of covalent compounds and link these its structure and bonding			

Recognise dot and cross, ball and stick, two and three dimensional diagrams and describe the limitations of each			
Describe the three states of matter in terms of energy of their particles			
Use appropriate state symbols when writing chemical equations			
Recognise polymers from diagrams and describe their structure and bonding			
Explain why alloys are harder than pure metals			
Explain the properties of diamond in terms of its structure and bonding			
Explain the properties of graphite in terms of its structure and bonding			
Recognise graphene and fullerenes from diagrams and give examples of uses of both			
CHEMISTRY ONLY: Define the size of a nanoparticle and compare 'Nano' dimensions to typical dimensions of atoms and molecules			
CHEMISTRY ONLY: evaluate the use of nanoparticles			
Quantitative Chemistry			
Understand the law of conservation of mass			
Balance chemical equations			
Calculate relative formula mass			
HT ONLY: Understand what is meant by 'one mole' and Avogadro's constant			
HT ONLY: use relative formula mass to calculate the number of moles using $\text{moles} = \text{mass} / \text{relative formula mass}$			
HT ONLY: Calculate the masses of substances shown in balanced symbol equations			
HT ONLY: Explain the effect of limiting reactants			
Calculate the mass of solute in a given solution of known concentration using $\text{concentration} = \frac{\text{mass of solute}}{\text{volume}}$			
CHEMISTRY ONLY: Calculate percentage yield of a product using $\% \text{ yield} = \frac{\text{mass of product made}}{\text{theoretical mass of product}} \times 100$			
CHEMISTRY ONLY (HT): rearrange the equation to calculate theoretical mass			
CHEMISTRY ONLY: calculate atom economy of a reaction using $\frac{\text{Relative formula mass of desired product from equation}}{\text{Sum of relative formula masses of all reactants from equation}} \times 100$			
CHEMISTRY ONLY: Explain how the concentration of a solution in mol/dm ³ is related to the mass of the solute and the volume of the solution			
CHEMISTRY ONLY: calculate the volume of a gas at room temperature and pressure from its mass and relative formula mass using $\text{Moles of gas} = \frac{\text{volume}}{24}$			
Chemical Changes			
Explain reduction and oxidation			
Recall the reactivity series and describe reactions of metals			
Recall reactions of metals with water and acids. Write word and symbol equations for these			
Describe extraction of metals by reduction using carbon			
HT ONLY: Write ionic equations for displacement reactions			
HT ONLY: Identify in a given reaction which species are oxidised and reduced.			
Name the salt produced when using hydrochloric, sulfuric or nitric acid			

REQUIRED PRACTICAL: Describe how to make pure, dry samples of soluble salt from an insoluble oxide or carbonate using a Bunsen burner to heat dilute acid and a water bath of electric heater to evaporate the solution			
Describe the use of universal indicator to measure pH of solutions			
Use the pH scale to identify acidic or alkaline solutions			
Know the ionic equation for a neutralisation reaction as $\text{H}^+(\text{aq}) + \text{OH}^-(\text{aq}) \longrightarrow \text{H}_2\text{O}(\text{l})$			
CHEMISTRY ONLY: Describe how to carry out a titration using strong acids and strong alkalis			
CHEMISTRY ONLY (HT): calculate the concentration of one of the solutions from reacting volumes of known concentrations of the other solution			
HT ONLY: Explain the difference between dilute and concentrated and weak and strong acids			

Electrolysis			
Describe how to carry out electrolysis			
Predict the products made at the anode and cathode in different electrolysis reactions			
Explain how electrolysis is used to explain aluminium from aluminium oxide			
REQUIRED PRACTICAL: Describe how to investigate electrolysis of different aqueous solutions using electrodes.			
HT ONLY: Represent anode and cathode reactions as half equations			
Energy changes			
Describe what happens to temperature in exothermic and endothermic reactions			
Evaluate uses of exothermic and endothermic reactions			
REQUIRED PRACTICAL: Describe how to investigate the variables that affect temperature changes in reacting solutions			
Draw a reaction profile for an exothermic and endothermic reaction			
Explain the term 'activation energy'			
HT ONLY: Explain exothermic and endothermic reactions in terms of bond breaking and bond making			
HT ONLY: calculate the energy transferred in chemical reactions using supplied bond energies			
CHEMISTRY ONLY: Describe how a simple cell can be made			
CHEMISTRY ONLY: Describe how rechargeable and non-rechargeable batteries work			
CHEMISTRY ONLY: Know the overall reaction that happens in a hydrogen fuel cell			
CHEMISTRY ONLY: Evaluate the use of hydrogen fuel cells in comparison with rechargeable cells and batteries			
CHEMISTRY ONLY (HT): Write the half equations for the electrode reactions in the hydrogen fuel cell.			

Paper 1 checklist – Physics (Triple and Trilogy)

Energy			
Describe energy changes in systems			

Describe kinetic energy and calculate by recalling and applying the equation: kinetic energy = 0.5 × mass × (speed) ² $[E_k = \frac{1}{2} m v^2]$			
Describe elastic potential energy and calculate by applying the equation: elastic potential energy = 0.5 × spring constant × (extension) ² $[E_e = \frac{1}{2} k e^2]$			
Describe gravitational potential energy and calculate by recalling and applying the equation: g.p.e. = mass × gravitational field strength × height $[E_p = m g h]$			
Describe the specific heat capacity of a substance			
Calculate the amount of energy stored in or released from a system by applying the equation: change in thermal energy = mass × specific heat capacity × temperature change $[\Delta E = m c \Delta \theta]$			
REQUIRED PRACTICAL: Describe how to determine the specific heat capacity of one or more materials			
Define power			
Calculate power by recalling and using the equations: power = $\frac{\text{energy transferred}}{\text{time}}$ $[P = \frac{E}{t}]$ power = $\frac{\text{work done}}{\text{time}}$ $[P = \frac{W}{t}]$			
Describe the terms useful and wasted energy			
Explain ways of reducing unwanted energy transfers			
REQUIRED PRACTICAL: Describe how to investigate the effectiveness of different materials as thermal insulators			
Describe what is meant by 'energy efficiency' and calculate by recalling and using the equations: efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$ Efficiency may also be calculated using the equation: efficiency = $\frac{\text{useful power output}}{\text{total power input}}$			
HT ONLY: describe ways to increase efficiency of an energy transfer			
State the man energy resources available for use on Earth			
Describe the difference between renewable and non-renewable energy resources			
Compare uses of different energy resources			
Describe environmental impacts that arise from using different energy resources			
Electricity			
Know all the standard circuit diagram symbols and draw and interpret diagrams			

Define electrical charge and calculate it by recalling and using the equation: charge flow = current × time $[Q = It]$			
Define current, potential difference and resistance			
Recall and apply the equation: potential difference = current × resistance $[V = IR]$			
REQUIRED PRACTICAL: Describe how to investigate the factors affecting resistance of electrical circuits including length of a wire and resistors in series and parallel			
Recognise current-potential difference graphs for a resistor, filament lamp and diode.			
REQUIRED PRACTICAL: Describe how to investigate current-potential difference characteristic of a filament lamp, diode and resistor at constant temperature			
Describe what happens to current, potential difference and resistance in a series circuit			
Describe what happens to current, potential difference and resistance in a parallel circuit			
Draw series and parallel circuit diagrams			
Know that mains electricity supply has a frequency of 50Hz and is about 230V			
Explain the difference between direct and alternating potential difference			
Describe the inside make up of a three-pin plug and explain what each wire does.			
Relate power in a circuit to potential difference and current			
Recall and apply the equations: power = potential difference × current $[P = VI]$ power = (current) ² × resistance $[P = I^2 R]$			
Describe the energy transfers of different domestic appliances			
Recall and apply the equations: energy transferred = power × time $[E = Pt]$ energy transferred = charge flow × potential difference $[E = QV]$			
Explain how the national grid transfers electrical power			
PHYSICS ONLY: Describe how static electricity is created and transferred			
PHYSICS ONLY: Draw the electric field pattern for an isolated charged sphere.			
PHYSICS ONLY: Explain the concept of an electric field			
Particle model of matter			

Define density and calculate it by recalling and applying the equation: $\text{density} = \frac{\text{mass}}{\text{volume}}$ $[\rho = \frac{m}{V}]$			
Draw simple diagrams to model a solid, liquid and gas and use these to explain the difference in density.			
REQUIRED PRACTICAL: Explain how to record the density of regular and irregular shaped objects.			
Describe the different changes of state			
Describe what is meant by internal energy			
Describe what is meant by specific latent heat and calculate by applying the below equation: $\text{energy for a change of state} = \text{mass} \times \text{specific latent heat}$ $[E = m L]$			
Interpret heating and cooling graphs for state changes			
Explain how changing the temperature of a gas can change its pressure			
PHYSICS ONLY: Explain how increasing the volume of a gas can decrease the pressure			
PHYSICS ONLY: Apply the equation: $\text{pressure} \times \text{volume} = \text{constant}$ $[p V = \text{constant}]$			
PHYSICS ONLY (HT): Explain how doing work on a gas leads to an increase in the temperature of the gas, in given situations			
Atomic Structure			
Describe the structure of an atom			
Define an isotope and state the differences in numbers of subatomic particles between isotopes and atoms.			
Describe and compare the plum pudding and atomic models of the atom			
Describe the alpha scattering experiment			
Describe properties of alpha, beta and gamma radiation			
Be able to complete nuclear equations of alpha and beta decay			
Define the term 'Half-life'			
Calculate the half-life of a radioactive isotope from graphs or given information			
HT ONLY: Calculate the net decline in emission after a certain number of half-lives, expressed as a ratio			
Describe the difference between contamination and irradiation			
Compare hazards with contamination and irradiation and suggest suitable precautions			
PHYSICS ONLY: Explain what is meant by background radiation and give some examples			
PHYSICS ONLY: describe and evaluate the use of radiation in medicine			
PHYSICS ONLY: Evaluate the risks of using radiation			
PHYSICS ONLY: Describe and explain nuclear fission			
PHYSICS ONLY: Describe and explain nuclear fusion			



HOW TO PREPARE FOR YOUR MFL EXAM OUTSIDE OF LESSONS:

To recap everything that you covered with your class teacher, please follow the links to the classroom resources that they shared with you!

For the speaking:

- Attend the correct intervention session every time.
- Get the FLA to record some answers and questions so as to hear the correct pronunciation at home.
- Practise with a peer during am registration.
- Learn and use different opinions and how to justify these

For the listening and reading:

- Learn and revise vocabulary each week.
 - 10,000 points (as a minimum) on memrise – they all have an account
 - Go back through previous vocabulary sheets (from the start of year 10 onwards) and actively revise the vocabulary
- Practise listening and reading tasks independently.
 - Log onto kerboodle.com (they all have their individual log-ins, the institution code for everyone is 'teh4')
 - Put 'interactive listening' and/or 'interactive reading' into the search engine. Do at least two tasks per week. Record any vocab that you didn't know. Look it up and learn it.
 - Use past papers for practice. (You do not need to do the entire paper in one go. Focus on tasks that you have got wrong. Try and improve them. Mark them. Go back over anything that you have got wrong).

For the writing:

- Practise key grammar points that you need to move to the next grade – e.g you know different opinions phrases and how to justify these, at least 10 common verbs with 'I' in the past, present and future / you know at least 6 different connectives / you know at least 3 examples of phrases which take the subjunctive with 2 or 3 irregular verbs which you could adapt to any topic etc.
 - www.languagesonline.org.uk has clear grammar tasks with corrections search for 'interactive grammar' on kerboodle and work through these tasks.

Miscellaneous:

- www.aqa.org.uk – for past papers
- the coursebook can be found on the kerboodle website (www.kerboodle.com)
- **Always do all homework set thoroughly.** Homework is set weekly by the class teacher.

For further details about the three topics, see the kerboodle website and the front of the course book.

Break Down of the Exam

Paper 1 Listening (25%) – taken in the summer of year 11

- 35 minutes (Foundation Tier), 45 minutes (Higher tier)
- 40 marks (Foundation Tier), 50 marks (Higher tier)
- (Each exam included 5 minutes of reading time to read the question before the audio is played).
- There are two parts to the exam:
 - i. Section A – questions in English (to be answered in English or non-verbally i.e. writing a letter)
 - ii. Section B – questions in French (to be answered in French or non-verbally)

Paper 2 Speaking (25%) – taken before the Easter holidays in year 11

- 7-9 minutes (Foundation Tier) + preparation time
- 10-12 minutes (Higher Tier) + preparation time
- 60 marks for both
- There are three parts to the exam:
 - i. Role-Play (15 marks, 2 minutes per tier)
 - ii. Photo card (15 marks, 2 minutes at Foundation and 3 minutes at Higher)
 - iii. General conversation (30 marks, 3-5 minutes at Foundation and 5-7 minutes at Higher)

Paper 3 Reading (25%) – taken in the summer of year 11

- 45 minutes (Foundation tier) and one hour (Higher tier)
- 60 marks for both papers
- There are three parts:
 - i. Section A – questions in English (to be answered in English or non-verbally)
 - ii. Section B - questions in French (to be answered in French or non-verbally)
 - iii. Section C – translation from French into English

Paper 4 Writing (25%) – taken in the summer of year 11

- one hour (Foundation) or one hour and fifteen minutes (Higher)
- 50 marks at foundation and 60 marks at higher
- Foundation tier:
 - i. Question 1 – respond to a photo (four sentences)
 - ii. Question 2 – 40 words responding to 4 bullet points
 - iii. Question 3 – translation from English into French
 - iv. Question 4 – 90 words responding to 4 bullet points. There will be a choice of two questions.
- Higher tier:
 - i. Question 1 - 90 words responding to 4 bullet points. There will be a choice of two questions.
 - ii. Question 2 – 150 words responding to 2 bullet points. There will be a choice of two questions.
 - iii. Question 3 – translation from English into French.

GCSE Geography Mock Revision List

Unit 1 - Physical environment

1.The changing UK landscape –

A.Coastal landscapes and processes –

The role of depositional processes in the development of landforms: bars, beaches and spits; Influence of geological structure (concordant/discordant, joints and faults) and rock type (hard/soft rock) and wave action (destructive and constructive waves) on landforms.

- Dorset coast (Bays & headlands)
- Norfolk coast (Blakeney Point spit / Sheringham management)

B.River landscapes and processes –

The physical processes at work in the river landscape weathering (mechanical, chemical and biological), mass movement (sliding and slumping), erosion (abrasion, hydraulic action, attrition and solution), transport (traction, saltation, suspension and solution) and deposition. The interaction of deposition and erosion processes in the development of landforms (meanders, oxbow lakes).

- River Tees & River Tillingbourne (River stages and features)
- Boscastle (Cornwall)
- Shrewsbury (River Severn) / Peterborough (River Nene)

C. Characteristics and distribution of the UK's main rock types-

- sedimentary (chalk, sandstone) igneous (basalt, granite), metamorphic (schists, slates).
- The role of geology and past tectonic processes in the development of upland (igneous and metamorphic rocks) and lowland (sedimentary rocks) landscapes.
- How distinctive landscapes result from human activity (agriculture, forestry, settlement) over time.

2.Weather hazards & Climate change –

The significance of the UK's geographic location in relation to its climate. Characteristics, frequency and geographical distribution of tropical cyclones and how these change over time.

A.Tropical storm impacts: Haiti/Cuba (LICs) v USA (HIC) (Social, economic & environmental impacts)

B.Tropical storm management: Haiti/Cuba (LICs) v USA (HIC) (Individual, organisation & government responses)

C.Drought impacts: Namibia (LIC) v USA (HIC) (On people & ecosystems)

D.Drought management: Namibia (LICs) v USA (HIC) (Individual, organisation & government responses)

3.Ecosystems & Biodiversity –

Biotic and abiotic characteristics of the tropical rainforest ecosystem (climate, soils, water, plants, animals and humans). Why rainforests have very high biodiversity and how plants (stratified layers, buttress roots, drip tips) and animals (strong limbs, modified wings and beaks, camouflage) are adapted to that environment.

A.Tropical rainforest sustainable management: Costa Rica (Commodities, ecotourism, governance, etc)

B.Deciduous woodland sustainable management: Wyre Forest (West Midlands, UK)

Unit 2 - The Human environment

1.Changing Cities -

A. a major HIC city (Bristol, UK) – site, location & connectivity; urban structure & main functions; urbanisation, suburbanisation, counter-urbanisation & reurbanisation history; impacts of international migration; population characteristics and reasons; causes of deindustrialisation; inequalities & quality of life variations; retail change impacts (CBD / out-of-town shopping centres / on-line shopping); urban sustainability strategies & quality of life improvements.

B. a major LIC city (Sao Paulo, Brazil) – site, location & connectivity; urban structure & main functions; reasons for population changes; reasons for inequalities & quality of life differences; impacts of rapid urbanisation; bottom up & top down approaches to reducing inequalities; government policies to improve quality of life;

Unit 3 – Geographical investigations

-Physical fieldwork: river Tillingbourne (Surrey).

quantitative fieldwork methods to measure river discharge; qualitative fieldwork method to record landforms that make up the river landscape; implications of river processes for people living in the catchment area; Secondary data sources

HISTORY

Norman England, c1066–c1100

Part one: The Normans: conquest and control

- Causes of Norman Conquest, including the death of Edward the Confessor, the claimants and claims.
- Military aspects: Battle of Stamford Bridge; Battle of Hastings; Anglo-Saxon and Norman tactics; military innovations, including cavalry and castles.
- Establishing and maintaining control: the Harrying of the North; revolts, 1067–1075; King William's leadership and government; William II and his inheritance.

Part two: Life under the Normans

- Feudalism and government: roles, rights, and responsibilities; landholding and lordship; land distribution; patronage; Anglo-Saxon and Norman government systems; the Anglo-Saxon and Norman aristocracies and societies; military service; justice and the legal system such as ordeals, 'murdrum'; inheritance; the Domesday Book.
- Economic and social changes and their consequences: Anglo-Saxon and Norman life, including towns, villages, buildings, work, food, roles and seasonal life; Forest law.

Part three: The Norman Church and monasticism

- The Church: the Anglo-Saxon Church before 1066; Archbishop Lanfranc and reform of the English Church, including the building of churches and cathedrals; Church organisation and courts; Church state relations; William II and the Church; the wealth of the Church; relations with the Papacy; the Investiture Controversy.

- Monasticism: the Norman reforms, including the building of abbeys and monasteries; monastic life; learning; schools and education; Latin usage and the vernacular.

Part four: The historic environment of Norman England: Pevensey Castle

The study of **the historic environment** focuses on a particular site in its historical context and should examine the relationship between **Pevensey Castle** and associated historical events and developments.

The following aspects of the **Pevensey Castle** should be considered:

- location
- function
- the structure
- people connected with the site eg the designer, originator and occupants design
- how the design reflects the culture and values of the people at the time
- how important events/developments from the depth study are connected to the site.

Students will be expected to understand the ways in which key features and other aspects of the site are representative of the period studied. In order to do this, students will also need to be aware of how the key features and other aspects of the site have changed from earlier periods.

America, 1920–1973: Opportunity and inequality

This period study focuses on the development of the USA during a turbulent half century of change. It was a period of opportunity and inequality – when some Americans lived the American Dream' whilst others grappled with the nightmare of poverty, discrimination and prejudice. You will study the political, economic, social and cultural aspects of these two developments and the role ideas played in bringing about change. You will also look at the role of key individuals and groups in shaping change and the impact the developments had on them.

Part one: American people and the 'Boom'

- The 'Boom': benefits, advertising and the consumer society; hire purchase; mass production, including Ford and the motor industry; inequalities of wealth; Republican government policies; stock market boom.
- Social and cultural developments: entertainment, including cinema and jazz; the position of women in society, including flappers.
- Divided society: organised crime, prohibition and their impact on society; the causes of racial tension, the experiences of immigrants and the impact of immigration; the Ku Klux Klan; the Red Scare and the significance of the Sacco and Vanzetti case.

Part two: Bust – Americans' experiences of the Depression and New Deal

- American society during the Depression: unemployment; farmers; businessmen; Hoover's responses and unpopularity; Roosevelt's election as president.
- The effectiveness of the New Deal on different groups in society: successes and limitations including opposition towards the New Deal from Supreme Court, Republicans and Radical politicians; Roosevelt's contribution as president; popular culture.
- The impact of the Second World War: America's economic recovery; Lend Lease; exports; social developments, including experiences of African-Americans and women.

Part three: Post-war America

- Post-war American society and economy: consumerism and the causes of prosperity; the American Dream; McCarthyism; popular culture, including Rock and Roll and television.
- Racial tension and developments in the Civil Rights campaigns in the 1950s and 1960s: Segregation laws; Martin Luther King and peaceful protests; Malcolm X and the Black Power Movement; Civil Rights Acts of 1964 and 1968.
 - America and the 'Great Society': the social policies of Presidents Kennedy and Johnson relating to poverty, education and health; the development and impact of feminist movements in the 1960s and early 1970s, including the fight for equal pay; the National Organisation for Women, Roe v Wade (1973), the Supreme Court ruling on equal rights (1972) and opposition to Equal Rights Amendment.

Art - Together and Apart project checklist

Your mark for the exam is 75% based on what is in your sketchbook!!! You should have at least 30 pages to get a four.

1. *You should have a visual brainstorm with 30 or more words and 10 pictures on the theme 'together and apart'*
2. *At least 10 images of ICT research made into a collage, filling a page (h/w)*
3. *You should draw four of these using competent tone, blending, different Colour choices and media.*
4. *Four primary source drawings in different materials*
4. *Complete artist study on Hannah Hoch and a collage you have created. Explain the meaning you have made.*
5. *Completed artist study on Islamic art, and a print development.*
6. *You should complete two more artist studies from the exam paper or booklet (h/w)*
7. *Completed artist study and primary source drawing of objects about Vasco.*
8. *One more primary source study from real life. (h/w)*
9. *You should have five developments of previous images*
10. *Three design ideas for composition, with completed artist intention sheet.*
11. *A final design which links to an artist*
12. *Every page must be annotated to explain your work*

The remaining 25% is based on what you produce during the 10 hour exam

GCSE Objectives

- 1. Develop the theme**
- 2. Refine**
- 3. Record ideas**
- 4. Present final piece**

Drama Exam

Component 2: Performance in the spring term 20% of GCSE

Component 3: Written exam (90 minutes) in the summer 40% of the GCSE

Exam preparation

We will be dividing our time in lessons between three types of activity:

- 1: Practical exploration of “An Inspector Calls”
followed by practice written exam questions on “An Inspector Calls”
- 2: Discussion of live theatre performance
followed by practice written questions on live theatre performance
- 3: Rehearsal for performance

Exam Planner

Students receive a week-by-week outline of the lesson plans for the week ahead.

For Component 2, these will show how the rehearsal time needs to be used.

For Component 3, these will give precise details of extracts of text that we will be studying and exam questions that we will be discussing.

Preparation outside lessons/homework:

For Component 2 performance:

- students should be learning lines;
- rehearsals will take place outside lesson time and students must attend these.

For Component 3 written exam homework will be set every week and it will comprise one of the following:

- reading an extract from “An Inspector Calls” and preparing to take part in or lead a practical exploration of it;
- preparing, annotating script or making notes on an “An Inspector Calls” ready to write an exam answer;
- writing a practice exam question on “An Inspector Calls”;
- preparing for a live theatre evaluation lesson, followed by writing a practice exam answer;
- “green pen” exercise.

Revision guidance

With parental approval, students could set up a group on social media to share ideas and planning.

All the notes that are needed for preparation and revision will be provided by the teacher.

Students may buy the revision guides and workbook provided by Edexcel but this is not necessary as we will be creating our own resources

Details of how to order:

Revise Edexcel GCSE (9-1) Drama Revision Guide: (with free online edition) (REVISE Edexcel GCSE Drama) Paperback – 30 Nov 2017

by [John Johnson](#) (Author), [William Reed](#) (Author)

PE Exam Checklist

PAPER 1 Checklist	😊	😐	😞
Skeleton			
Identify the bones in the body – <i>Cranium, vertebrae, scapula, humerus, ribs, sternum, radius, ulna, pelvis, femur, tibia, fibula and talus</i>			
Joints – <i>how movement occurs, different types of movement</i>			
Type of bones allow for different type of moment – <i>Flat, short, long</i>			
How bones and muscles work together			
Functions of skeleton – <i>support, protection, movement, shape, mineral storage, blood cell production</i>			
Muscles			
Identify the muscles in the body – <i>latissimus dorsi, deltoid, rotator cuffs, pectorals, bicep, tricep, abdominals, hip flexors, gluteals, hamstring group, quadriceps, gastrocnemius, tibialis anterior (tendons)</i>			
Structure of synovial joint – <i>membrane, synovial fluid, joint capsule, bursae, cartilage, ligaments</i>			
Types of joints – <i>hinge joint, ball and socket</i>			
Movement at joint – <i>flexion/extension, abduction/adduction, plantar flexion/dorsiflexion</i>			
How the muscles work together – <i>agonists/antagonist, isometrically/isotonically, concentric/eccentric</i>			
Cardio-respiratory system			
Understand the pathway of air – <i>nose/mouth, trachea, bronchi, bronchioles, lungs, alveoli</i>			
Topic	😊	😐	😞
Gaseous exchange			
Blood vessels and their functions– <i>arteries, capillaries and veins (size/diameter, wall thickness and valves)</i>			
Structure of the heart – <i>Atria, ventricles</i>			
Cardiac cycle and the pathway of the blood			
Cardiac output, stroke volume and heart rate			
Breathing – <i>inhaling and exhaling</i>			
Spirometer trace – <i>tidal volume, expiratory, inspiratory, residual</i>			
Anaerobic and aerobic exercise			
Understand aerobic and anaerobic – <i>and equations</i>			
EPOC (Oxygen debt)			
Recovery process of vigorous exercise – <i>cool down, ice baths, massages, diet</i>			

Short and long term effects of exercise			
Immediate effects of exercise			
Topic	😊	😐	😞
Short term effects of exercise – <i>nausea, fatigue, light headed, DOMS</i>			
Long term effects of exercise – <i>body shape, improved fitness, muscles strength, increase in size of heart etc</i>			
Movement Analysis			
First, second and third class levers – <i>fulcrum, load, effort</i>			
Mechanical advantage = <i>effort arm / weight arm</i>			
Analysis of basic movements in sporting examples			
Planes and axes of movement			
Planes – <i>frontal, transverse, sagittal</i> Axes – <i>Longitudinal, transverse, sagittal</i>			
Physical Training			
Definitions of health and fitness and relationship between them			
Components of fitness – <i>agility, balance, CVE, coordination, flexibility, muscular endurance, power (explosive strength), reaction time, strength (maximal ,static, dynamic and explosive), speed</i>			
Measuring the components of fitness			
Reasons for and limitations of fitness tests			
Topic	😊	😐	😞
Qualitative and quantitative			
Principles of training – <i>SPORT (frequency, intensity, time and type)</i>			
Types of training – <i>circuit, continuous, fartlek, interval, static stretching, weight training, plyometric</i>			
Training zones/training thresholds/Maximum heart rate			
Considerations to prevent injury			
Altitude Training			
Training seasons – <i>preseason/preparation, competition season, post-season</i>			
Warming up and cooling down			

Paper 2 Checklist	😊	😐	😞
Classification of Skills			
Definitions of skill and ability			
Classification of skill basic/complex, open/closed self-paced/externally paced, gross/fine			
Definitions of goals – Performance goals and outcome goals			
SMART targets – Specific, measurable, accepted, realistic, time bound			
Basic information processing model – input, decision making, output, feedback			
Guidance and feedback on performance			
Types of feedback - Visual, verbal, manual and mechanical			
Effects of feedback			
Positive and negative feedback			
Knowledge of results and knowledge of performance			
Extrinsic and intrinsic feedback			
Mental preparation for performance			
Definition of Arousal			
Understanding of the inverted-U Theory			
Link arousal (high and low) to sporting actions (gross and fine skills)			
Techniques to control arousal – Deep breathing, mental rehearsal, positive self talk.			
Understand direct and indirect aggression			
Characteristics of an introvert – shy/quiet, thoughtful, enjoy being on their own – play individual sports			
Characteristics of an extrovert – Sociable, enthusiastic/talkative, prone to boredom – Play team sports			
Definition of intrinsic and extrinsic motivation			
Different social groups and how it effects participation in sport			
5 main social groups – gender, ethnicity, age, family/friends, disability			
Commercialisation of physical activity and sport			
Definition of commercialisation			
Different types of sponsorship – Financial, clothing/equipment, facilities			
Types of media – Television, radio, press, internet, social media			
Positive and negative impact of sponsorship and the media – impact on the performer, sport, official, audience/spectator and sponsor			
Positive and negative impacts of technology - impact on the performer, sport, official,			

audience/spectator and sponsor			
Definition of the following – etiquette, sportsmanship, gamesmanship and contract to compete			
Prohibited substances – Stimulants, narcotics, anabolic agents, peptide hormones, diuretics			
Prohibited methods – Blood Doping			
Drugs that are subject to certain restrictions – Beta Blockers			
Which types of performer may use different types of performance enhancing drugs (PEDs) and the advantages and disadvantages			
Positive and negative effects of spectator behaviour			
Reasons for hooliganism – Rivalries, hype, alcohol/drugs, gang culture, frustration, display of masculinity			
Strategies to combat hooliganism – Early kick offs, all-seater stadiums, security etc			
Health, fitness and Well-being			
Understand the difference between – physical, mental, social health and well-being			
Definition of sedentary lifestyle and the possible consequences			
Definition of obesity			
Different somatotypes – Endomorph, mesomorph, ectomorph			
Energy use, diet, nutrition and hydration			
Understand how energy is used and measured in calories			
The reasons for having a balanced diet			
The role of the different nutrients – carbohydrates, fat, protein and vitamins and minerals			
Definition of dehydration and what it can cause			