The Holt School

# REVISION LIST FOR

# YEAR 10 PPEs
# For Summer Term 2020

# Subject List

**English Literature**

**Mathematics**

**Science (Biology, Chemistry, Physics)**

**Business**

**Child Development**

**Computer Science**

**Design & Technology (Core, Textiles, Resistant Materials, Graphics)**

**Drama**

**Economics**

**Food Preparation & Nutrition**

**French**

**Geography**

**German**

**Health & Social Care**

**History**

**Music**

**Physical Education**

**Spanish**

# English Literature

**An Inspector Calls: Personal Learning Checklist**

Rate your knowledge of the following areas to determine where to focus your revision.

- Green = I have a good understanding of this; I am confident that I remember it for the exam.
- Amber = I have some understanding but I could develop this; I may need to memorise this information.
- Red = I do not understand this; I need to focus my revision on this area.

Once you have rated your understanding, use the knowledge organisers, your notes and other revision resources to revise areas you have rated red or amber. Complete the PLC again or complete a practice paper to check your understanding.

| Main Topic | I am able to… | G | A | R |
|---|---|---|---|---|
| Context: social and historical | Define socialism and link it to the play | | | |
| | Define capitalism and link it to the play | | | |
| | Explain the significance and impact of the two World Wars on 'An Inspector Calls' | | | |
| | Explain what happened to the Titanic and why it is important to understand | | | |
| | Explain what the 'Great Depression' was and how it affected the UK | | | |
| | Confidently link this context to the play | | | |
| Context: the writer | Name the writer of the play | | | |
| | Recall key details about the writer's life | | | |
| | Explain the writer's key reasons behind writing the play | | | |
| | Recall when the play was set and when it was written | | | |
| | Confidently link this context to the play | | | |
| Plot | Recall where the play is set | | | |
| | Recall the key events and plot details of Act 1 | | | |
| | Recall the key events and plot details of Act 2 | | | |
| | Recall the key events and plot details of Act 3 | | | |
| Character: Mr Birling | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |
| Character: Mrs Birling | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |

| | | | | |
|---|---|---|---|---|
| Character: Sheila Birling | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |
| Character: Eric Birling | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |
| Character: Gerald Croft | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |
| Character: Inspector Goole | Explain how this character is presented | | | |
| | Use key vocabulary to describe the character | | | |
| | Recall quotations to support these ideas | | | |
| | Explain what each of these quotations means | | | |
| | Analyse devices used in each of these quotations | | | |
| | Link ideas about character to the key themes of the play | | | |
| Themes: Capitalism/ Socialism | Explain what this theme is/means | | | |
| | Explain where it is seen in the play | | | |
| | Recall relevant quotations to this theme | | | |
| | Explain why the writer has used this theme | | | |
| Themes: Social Responsibility | Explain what this theme is/means | | | |
| | Explain where it is seen in the play | | | |
| | Recall relevant quotations to this theme | | | |
| | Explain why the writer has used this theme | | | |
| Themes: Social Class | Explain what this theme is/means | | | |
| | Explain where it is seen in the play | | | |
| | Recall relevant quotations to this theme | | | |
| | Explain why the writer has used this theme | | | |
| Themes: Age/generation gap | Explain what this theme is/means | | | |
| | Explain where it is seen in the play | | | |
| | Recall relevant quotations to this theme | | | |
| | Explain why the writer has used this theme | | | |

| | | | | |
|---|---|---|---|---|
| Themes: Gender | Explain what this theme is/means | | | |
| | Explain where it is seen in the play | | | |
| | Recall relevant quotations to this theme | | | |
| | Explain why the writer has used this theme | | | |

Remember – this PLC is a guide, use it to help you but don't let it stop you from learning about other areas of the text. The fuller and deeper your understanding of the text is – the better!

# Mathematics

## Year 10 PPE Revision List: Mathematics (Foundation)

| | Foundation | Chapter |
|---|---|---|
| Number | Use place value when calculating with decimals; Order positive and negative integers and decimals using equal, not equal and inequality symbols; Round to a number of decimal places or significant figures; Add and subtract positive and negative integers and decimals; Multiply and divide positive and negative integers and decimals; Use BIDMAS in multi-stage calculations; | 1 |
| Number | Convert between terminating decimals and their corresponding fractions; Compare decimals and fractions using inequality symbols; Find fractions and percentages of amounts; Add and subtract simple fractions and mixed numbers; Multiply and divide simple fractions and mixed numbers; Convert between fractions, decimals and percentages; | 5 |
| Number | Round numbers and measures to an appropriate degree of accuracy; Use approximation to make estimates; Check calculations using approximation and estimation; Use standard units of length, mass, volume, capacity, time and area. | 9 (9.1, 9.2) |
| Number | Use mathematical language to describe factors, multiples and primes; Use Venn diagrams or factor trees to systematically list the prime factors of a number; Use prime factor decomposition to calculate the HCF and LCM of two or more numbers; Write the HCF and LCM using product notation; Calculate positive integer powers and their roots; Recognise powers of 2, 3, 4 and 5. | 13 |
| Geometry | Describe and apply the properties of angles at a point, on a line and at intersecting and parallel lines; Derive and use the sum of angles in a triangle; Derive and apply the properties and definitions of special types of quadrilaterals; Solve geometrical problems on coordinate axes; Deduce and use the angle sum in any polygon and derive properties of regular polygons. | 3 |
| Geometry | Know and apply formulae to calculate the area of rectangles, triangles, parallelograms and trapezia; Find areas of compound shapes; Identify, describe and construct reflections, rotations, translations and enlargements. | 7 (7.2, 7.3, 7.4) |
| Geometry | Calculate the volume and surface area of cuboids, and other prisms. | 15 (15.2, 15.3 part) |
| Geometry | Use Pythagoras to find the hypotenuse or a shorter side of a triangle, and the distance between two points. Know the Pythagorean triples 3, 4, 5 and 5, 12, 13; use these or multiples of them to find a missing side in a right-angled triangle. Use trigonometry to find a missing side or angle in a right-angled triangle. | 19 (19.1, 19.2, 19.3) |
| Algebra | Use algebraic notation; Substitute numbers into formulae and expressions; Use and understand the words expressions, equations, formulae, terms and factors; Collect like terms and simplify expressions involving sums, products and powers; Use the laws of indices; Multiply a single term over a bracket; Take out common factors in an expression; | 2 |
| Algebra | Substitute numerical values into formulae and expressions; Identify inequalities, equations, formulae and identities; | 6 (6.1, 6.3) |
| Algebra | Derive and solve simple linear equations; Solve linear inequalities in one variable and represent the solution on a number line; | 10 (10.1, 10.2, 10.5) |
| Algebra | Work with coordinates in all four quadrants; Plot straight-line graphs including diagonal, vertical and horizontal lines; Identify gradients and intercepts of straight lines graphically and algebraically; Use the form $y = mx + c$ to identify parallel lines; Use one point and the gradient of the line to find its equation; Use two points to find the equation of a line; Interpret the gradient of a straight line graph as a rate of | 14 |

| | | |
|---|---|---|
| | change; Plot and interpret graphs involving distance, speed and acceleration; | |
| Algebra | Generate a sequence by following a pattern or using a given rule; find the nth term of a linear sequence; decide if a number is a term in a sequence. | 21 (21.1, 21.2) |
| Ratio & Proportional Reasoning | Use fractions and percentages to describe a proportion; Use ratio notation and simplify ratios; Solve problems involving percentage increase or decrease; Calculate simple interest and VAT. | 12 |
| Ratio & Proportional Reasoning | Solve proportion problems involving recipes and best buy; solve problems involving direct and inverse proportion. | 22 (22.2, 22.3) |
| Statistics | Identify when a sample may be biased; Be able to describe sampling methods; Construct and interpret frequency tables and two-way tables; Construct and interpret pictograms, bar-line charts and bar charts; Interpret and construct pie charts and know their appropriate use; Compare distributions using median, mean, mode and range and identify outliers; | 4 |
| Statistics | Calculate the mean and median for frequency tables and estimate the mean for grouped data; Find the median and modal class for grouped data; Draw scatter graphs and add a line of best fit where appropriate; use the line of nest fit to predict results and understand when it is inappropriate to do this; identify correlation; Draw and interpret time series graphs | 16 |
| Probability | Use experimental data to estimate probabilities and expected frequencies; Calculate theoretical probabilities and expected frequencies using the idea of equally likely events; Compare theoretical probabilities with experimental probabilities; Recognise mutually exclusive events and exhaustive events and know that the probabilities of mutually exclusive exhaustive events sum to 1; | 8 |
| Probability | Understand set notation; Draw Venn diagrams and use them to find probabilities using them; Draw sample space diagrams and use them to find probabilities. | 20 (20.1, 20.2) |

# Year 10 PPE Revision List: Mathematics (Higher)

| | **Higher** | **Chapter** |
|---|---|---|
| Number | Order positive and negative integers and decimals; Round numbers to a given number of decimal places or significant figures; Use mental and written methods to add, subtract, multiply and divide with positive and negative integers and decimals; Use BIDMAS to complete calculations in the correct order; | 1 |
| Number | Find fractions and percentages of amounts; Add, subtract, multiply and divide with fractions and mixed numbers; Convert between fractions, decimals (including recurring decimals) and percentages; Order fractions, decimals and percentages; | 5 |
| Number | Use approximate values obtained by rounding to estimate calculations; Use an estimate to check an answer obtained using a calculator; Use and convert between, standard units of length, mass, capacity and other measures including compound measures; Solve problems involving compound measure such as speed and density; Find upper and lower bounds on the value of a quantity that has been rounded; Find upper and lower bounds on expressions that involve quantities that have been rounded; | 9 |
| Number | Know and use the language of prime numbers, factors and multiples; Write a number as a product of its prime factors; Find the HCF and LCM of a pair of integers; Estimate the square or cube root of an integer; Find square and cube roots of numbers and apply the laws of indices; Use zero, negative and fractional indices; Simplify expressions involving surds including rationalising fractions; | 13 |
| Geometry | Use angle facts including at a point, on a line, at an intersection and for parallel lines; Use bearings to specify directions; Identify types of triangle and quadrilateral and use their properties; Identify congruent shapes and use congruence to prove geometric results; Calculate the properties of polygons including interior and exterior angles for regular polygons; | 3 |

| | | |
|---|---|---|
| Geometry | Measure line segments and angles accurately; Use scale drawings and bearings; Calculate the areas of triangles, parallelograms, trapezia and composite shapes; Describe and transform shapes using reflections, rotations, translations (described as 2D vectors) and enlargements (including fractional and negative scale factors); Identify what changes and what is invariant under a combination of transformations; | 7 |
| Geometry | Find the area and circumference of a circle and composite shapes involving circles; Calculate arc lengths, angles and areas of sectors; Use standard ruler and compass constructions and solve problems involving loci; | 11 (11.1, 11.2, 11.4) |
| Geometry | Draw and interpret plans and elevations of 3D shapes; Calculate the volume of cuboids and right prisms; Calculate the surface area and volume of spheres, pyramids, cones and composite shapes; | 15 |
| Geometry | Use Pythagoras to find the hypotenuse or a shorter side of a triangle, and the distance between two points. Know the Pythagorean triples 3, 4, 5 and 5, 12, 13; use these or multiples of them to find a missing side in a right-angled triangle. Use trigonometry to find a missing side or angle in a right-angled triangle. | 19 (19.1,19.2, 19.3, 19.4) |
| Algebra | Use algebraic notation and simplify expressions by collecting like terms; Substitute numbers into formulae and expressions; Use the laws of indices; Multiply a single term over a bracket; Take out common factors in an expression; Simplify algebraic fractions and carry out arithmetic operations with algebraic fractions; | 2 |
| Algebra | Substitute values into formulae and rearrange formulae to change their subject; Use the terms expression, equation, formula, identity, inequality, term and factor; Construct proofs of simple statements using algebra; Expand brackets to get a quadratic expression and factorise quadratics into brackets | 6 (6.1, 6.3, 6.4) |
| Algebra | Solve linear equations including when the unknown appears on both sides; Solve quadratic equations using factorisation, completing the square and the quadratic formula; Solve a pair of linear or linear plus quadratic simultaneous equations; Solve inequalities and display your solution on a number line or graph | 10 (10.1, 10.2, 10.3, 10.5) |
| Algebra | Find and interpret the gradient and y-intercept of a line and relate these to the equation of the line in the form y=mx + c; Identify parallel and perpendicular lines using their equations; Draw linear, quadratic, cubic and reciprocal graphs; Solce related equations using the graphs; Identify roots, intercepts and turning points of quadratic curves using graphical and algebraic methods; Use graphs to solve problems involving distance, speed and acceleration; Draw graphs of circles. | 14 and 18.1, 18.5 |
| Ratio & Proportional Reasoning | Find fractions and percentages of amounts and express one number as a fraction or percentage of another; Divide a quantity in a given ratio and reduce a ratio to its simplest form; Use scale factors, scale diagrams and maps; Solve problems involving percentage change including finding the original amount after a percentage change; | 12 |
| Ratio & Proportional Reasoning | Use compound measures speed, density and pressure; find amounts after repeated percentage changes; find compound interest; solve growth and decay problems | 22 (22.1, 22.2, 22.5) |
| Statistics | Construct and interpret frequency tables, bar charts, pie charts, and stem-and-leaf diagrams; Calculate the mean, median and mode of a data set;; | 4 |
| Statistics | Draw frequency polygons; Calculate the mean and median for frequency tables and estimate the mean for grouped data; Find the median and modal class for grouped data; Use averages and measures of spread to compare data sets; Draw scatter graphs and add a line of best fit where appropriate; use the line of nest fit to predict results and understand when it is inappropriate to do this; identify correlation; Draw and interpret time series graphs; use trends on a time series to predict | 16 (16.2, 16.4, 16.5) |
| Probability | Use experimental data to estimate probabilities and expected frequencies; Use tables to represent the outcomes of probability experiments; Calculate theoretical probabilities and expected frequencies using the idea of equally likely events; Recognise mutually exclusive events and exhaustive events and know that the probabilities of mutually exclusive exhaustive events sum to 1; Compare theoretical probabilities with experimental probabilities; | 8 |
| Probability | Draw tree diagrams for independent and dependent events and use them to find probabilities; Understand set notation; Draw Venn diagrams and use them to find probabilities using them | 20 |

# Y10 Biology Summer Exam Revision list

## TRIPLES & COMBINED

Websites:
kerboodle for text book access and resources (https://www.kerboodle.com/users/login)
Frog – resources and text book answers (https://froglearn.holt.wokingham.sch.uk/app/os)
BBC bitesize (Triple: https://www.bbc.co.uk/bitesize/examspecs/z3dj82p
Combined: https://www.bbc.co.uk/bitesize/examspecs/z2dqqhv)

## B1 Cell – Level Systems

### Cell structures

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B1.1.1 Plant and animal cells | I can state the organelles (structures) present in a plant and animal cell. | ☐ | I can compare the organelles present in plant and animal cells. | ☐ | I can discuss the reasons for the presence or absence of organelles in different plant and animal cells. | ☐ |
| | I can state the function of each of the main organelles present in a plant and animal cell. | ☐ | I can explain the function of the organelles, relating the structure and molecules present to the function of the organelles. | ☐ | I can explain the roles of the molecules or structures within the organelles, such as the receptors in the cell membrane. | ☐ |
| | I can label the organelles in representational models of plant and animal cells. | ☐ | I can explain how a model cell is similar to, and different from, a real cell. | ☐ | I can discuss the benefits and drawbacks of using a representational model to help in explaining the structures and functions of cell organelles. | ☐ |
| B1.1.2 Bacterial cells | I can name some examples of prokaryotes. | ☐ | I can compare prokaryotic and eukaryotic cells. | ☐ | I can discuss the reasons for the presence or absence of organelles in different prokaryotic cells. | ☐ |
| | I can state the main organelles present in a prokaryotic cell. | ☐ | I can explain the function of the organelles, relating the structure to the function of the organelles. | ☐ | I can discuss how the organelles of the prokaryote can carry out all of the functions of the eukaryotic cell. | ☐ |
| | I can use a method, with some help to obtain results, working safely. | ☐ | I can use a method independently to obtain results, noting some major hazards. | ☐ | I can use a method independently to obtain results, justifying the steps to minimise risks. | ☐ |
| B1.1.3 Light microscopy | I can identify the components of the light microscope. | ☐ | I can explain the role of each part of the microscope. | ☐ | I can discuss why different lenses on the microscope are needed. | ☐ |
| | I can describe how to use a microscope to observe cells. | ☐ | I can explain why stains are used to highlight cell features. | ☐ | I can discuss why different stains might be required when viewing different cells or tissues. | ☐ |
| | I can use a microscope to observe and draw a cell. | ☐ | I can draw an accurate representation of a cell and calculate the magnification used to make the drawing. | ☐ | I can calculate specimen size, image size and magnification by substituting values into an equation, rearranging when necessary. | ☐ |
| B1.1.4 Electron microscopy | I can describe simply how a transmission electron microscope (TEM) works. | ☐ | I can explain how electron microscopy has increased understanding of subcellular structures. | ☐ | I can discuss how useful the electron microscope has been in medicine and biology. | ☐ |
| | I can state an advantage of using an electron microscope. | ☐ | I can describe the advantages of using the electron microscope compared with the light microscope. | ☐ | I can evaluate the relative advantages and disadvantages of using an electron microscope compared with a light microscope. | ☐ |
| | I can state the resolution achieved by an electron microscope in SI units using the correct order of magnitude. | ☐ | I can compare the increase in resolution, in standard form, of an electron microscope with that of a light microscope. | ☐ | I can calculate how many times greater the resolution of an electron microscope is compared with a light microscope. | ☐ |

## What happens in cells?

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B1.2.1 DNA | I can describe the structure of DNA. | ☐ | I can describe the structure of the nucleotide as the building block of DNA. | ☐ | I can explain what is meant by complementary base pairing. | ☐ |
| | I can state the role of DNA. | ☐ | I can describe the role of a gene. | ☐ | I can explain the relationship between DNA, genes, and chromosomes. | ☐ |
| | I can use the correct apparatus to follow a method with help. | ☐ | I can use a method to carry out an experiment appropriately and independently, having due regard for the correct manipulation of apparatus. | ☐ | I can use a method to carry out an experiment appropriately and independently, with due regard to the correct manipulation of apparatus and the accuracy of measurements. | ☐ |
| B1.2.2 Bacterial cells (H) | | | I can compare the difference in structure between mRNA and DNA. | ☐ | I can distinguish between the roles of mRNA and DNA in the process of protein synthesis. | ☐ |
| | | | I can describe the process of protein synthesis; to include transcription and translation. | ☐ | I can explain how the base sequence in the DNA molecule determines the amino acid sequence in the protein. | ☐ |
| | | | I can summarise and evaluate with accuracy and clear understanding. | ☐ | I can summarise and critically evaluate with detailed and perceptive understanding. | ☐ |
| B1.2.3 Enzymes | I can state what an enzyme is. | ☐ | I can describe the structure of an enzyme. | ☐ | I can explain what is meant by enzyme specificity. | ☐ |
| | I can describe simply how an enzyme works. | ☐ | I can explain how an enzyme works. | ☐ | I can explain in detail how an enzyme interacts with its substrate to catalyse a reaction. | ☐ |
| | I can describe how an enzyme works by communicating simply and with some clarity for the audience. | ☐ | I can illustrate how an enzyme works by communicating effectively, sustaining the audience's interest. | ☐ | I can interpret how an enzyme works by communicating, with impact and influence. | ☐ |
| B1.2.4 Enzyme reactions | I can state the factors that affect enzyme-controlled reactions. | ☐ | I can describe the effect of a factor on the rate of an enzyme-controlled reaction. | ☐ | I can explain how different factors affect the rate of an enzyme-controlled reaction. | ☐ |
| | I can state what is meant by denaturation. | ☐ | I can describe what happens when an enzyme is denatured. | ☐ | I can explain how denaturation affects the rate of an enzyme-controlled reaction. | ☐ |
| | I can record observations from an experimental procedure, using a range of apparatus. | ☐ | I can record measurements from an experimental procedure, and plot a simple graph having been given the axes. | ☐ | I can record accurate measurements from an experimental procedure, plotting an accurate rate graph. | ☐ |

## Respiration

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B1.3.1 Carbohydrates, proteins, and lipids | I can describe the components of carbohydrates, proteins, and lipids. | ☐ | I can explain how carbohydrates, proteins, and lipids are synthesised and broken down. | ☐ | I can distinguish between monomers and polymers in biological molecules. | ☐ |
| | I can state what is meant by metabolic rate. | ☐ | I can describe the relationship between metabolic rate, activity levels, and food intake. | ☐ | I can explain that metabolic reactions can be divided into different groups. | ☐ |
| | I can use scientific vocabulary, terminology, and definitions, with limited accuracy of spelling, punctuation, and grammar. | ☐ | I can use scientific vocabulary, terminology, and definitions accurately with occasional errors in spelling, punctuation, and grammar. | ☐ | I can use scientific vocabulary, terminology, and definitions accurately and error-free in spelling, punctuation, and grammar. | ☐ |
| B1.3.2 Aerobic respiration | I can state the word equation for respiration. | ☐ | I can state the chemical equation for respiration. | ☐ | I can discuss the use by the body of the energy transferred in respiration. | ☐ |
| | I can state that respiration transfers energy. | ☐ | I can describe the process of aerobic respiration as an exothermic reaction. | ☐ | I can explain how ATP is produced during aerobic respiration. | ☐ |
| | I can plot a graph of data from experiments. | ☐ | I can plot an appropriate line graph of two variables from experimental data. | ☐ | I can plot an appropriate accurate line graph of two variables from experimental data, and interpret the data to draw conclusions. | ☐ |
| B1.3.3 Anaerobic respiration | I can state the word equation for anaerobic respiration. | ☐ | I can state a chemical equation for anaerobic respiration. | ☐ | I can compare the processes of aerobic and anaerobic respiration in terms of energy yield. | ☐ |
| | I can state that there are different types of anaerobic respiration in different organisms. | ☐ | I can describe the different processes of anaerobic respiration and where they occur. | ☐ | I can explain the consequences of anaerobic respiration in muscles in terms of oxygen debt. | ☐ |
| | I can use the correct apparatus to follow a method with help. | ☐ | I can use a method to carry out an experiment appropriately and independently, having due regard to the correct manipulation of apparatus. | ☐ | I can use a method to carry out an experiment appropriately and independently, having due regard to the correct manipulation of apparatus and the accuracy of measurements. | ☐ |

## Photosynthesis

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B1.4.1 Photosynthesis | I can state the word equation for photosynthesis. | ☐ | I can state the chemical equation for photosynthesis. | ☐ | I can discuss the fate of the products of photosynthesis. | ☐ |
| | I can state that sunlight energy is required for the process of photosynthesis. | ☐ | I can describe the process of photosynthesis as an endothermic reaction. | ☐ | I can explain that photosynthesis is a two stage process, and where those stages occur. | ☐ |
| | I can state basic facts (about photosynthesis), communicating simply and with some clarity. | ☐ | I can illustrate the process of photosynthesis using labelled diagrams that communicate effectively, making coherent statements. | ☐ | I can annotate diagrams to explain the process of photosynthesis in detail, communicating coherently and with impact. | ☐ |
| B1.4.2 Photosynthesis experiments | I can describe how to test a leaf for the presence of starch. | ☐ | I can explain how to use the starch test to investigate the factors that affect whether or not photosynthesis occurs. | ☐ | I can justify the use of each of the steps in the test for starch. | ☐ |
| | I can use the correct apparatus to follow a method with help, having due regard for some health and safety considerations. | ☐ | I can follow a method to carry out an experiment appropriately and independently, having due regard for most health and safety considerations. | ☐ | I can follow a method to carry out an experiment appropriately and independently, having due regard for the correct manipulation of apparatus and all health and safety considerations. | ☐ |
| | I can state a simple conclusion from a scientific observation. | ☐ | I can interpret experimental observations, drawing a valid conclusion. | ☐ | I can interpret fully all experimental observations, to provide a detailed conclusion. | ☐ |
| B1.4.3 Factors affecting | I can state the factors affecting the rate of photosynthesis. | ☐ | I can describe the effect of light intensity, carbon dioxide concentration, and temperature on the rate of photosynthesis. | ☐ | I can explain the effect of light intensity, carbon dioxide concentration, and temperature on the rate of photosynthesis. | ☐ |
| | I can record data from an experiment in the table provided. | ☐ | I can calculate a class average (mean) from data collected in an experiment. | ☐ | I can calculate the mean rate of photosynthesis from data collected in an experiment, and plot a rate graph as a line graph. | ☐ |
| photosynthesis | I can state any difficulties encountered carrying out this method. | ☐ | I can suggest how any difficulties have affected the repeatability of the results. | ☐ | I can evaluate the method, discussing the impact upon the validity of the results, and suggest improvements. | ☐ |
| B1.4.4 Interaction of limiting factors (H) | | | I can explain the concept of a limiting factor. | ☐ | I can explain how factors interact to limit the rate of photosynthesis. | ☐ |
| | | | I can calculate relative light intensity using the inverse square law. | ☐ | I can explain the relationship between light intensity and distance from a lamp. | ☐ |
| | | | I can describe how light intensity, carbon dioxide concentration, and temperature can be controlled. | ☐ | I can discuss how controlling the factors that affect the rate of photosynthesis can affect the yield of a plant crop. | ☐ |

# B2 – Scaling up

## Supplying the cell

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B2.1.1 Diffusion | I can state some examples of diffusion. | ☐ | I can describe the process of diffusion. | ☐ | I can explain fully at a molecular level the process of diffusion. | ☐ |
| | I can state factors that affect the rate of diffusion. | ☐ | I can describe the effect of factors on the rate of diffusion. | ☐ | I can explain the reasons for the effects of factors on the rate of diffusion. | ☐ |
| | I can describe by communicating simply, producing text with basic structure and familiar vocabulary. | ☐ | I can describe by communicating effectively, producing coherent text, which is well structured, and use some appropriate scientific vocabulary. | ☐ | I can describe by communicating with impact, producing effectively-structured texts, using a full range of precise scientific vocabulary. | ☐ |
| B2.1.2 Osmosis | I can state that osmosis is the movement of water molecules into or out of cells. | ☐ | I can describe the process of osmosis. | ☐ | I can explain the effect of osmosis on potato cells. | ☐ |
| | I can state that osmosis is a type of diffusion. | ☐ | I can explain why osmosis occurs. | ☐ | I can explain, in terms of water potential, why osmosis occurs. | ☐ |
| B2.1.3 Active transport | I can state some examples of active transport. | ☐ | I can describe examples of active transport in plants and animals. | ☐ | I can explain the importance of active transport in plants and animals. | ☐ |
| | I can state the differences between active transport and diffusion. | ☐ | I can describe how molecules move by active transport. | ☐ | I can explain how carrier proteins function in the process of active transport. | ☐ |
| | I can record measurements from an experimental method, and calculate a change in mass. | ☐ | I can record measurements from an experimental method, and calculate a percentage change in mass. | ☐ | I can record measurements from an experimental method, calculate a percentage change in mass, and plot the data to determine the concentration that is equal to the cell. | ☐ |
| B2.1.4 Mitosis | I can state the stages of the cell cycle. | ☐ | I can describe the key features of each stage of the cell cycle. | ☐ | I can explain the process of DNA replication in the cell cycle. | ☐ |
| | I can state the purpose of mitosis. | ☐ | I can describe the process of mitosis. | ☐ | I can explain the process of mitosis in terms of the movement of chromosomes. | ☐ |
| | I can use a model to illustrate the major steps in the cell cycle. | ☐ | I can use a representational model to describe the key events during the cell cycle. | ☐ | I can use a representational model to develop scientific explanations of all of the events during the cell cycle. | ☐ |
| B2.1.5 Cell differentiation | I can state what is meant by cell differentiation. | ☐ | I can explain why cells become differentiated. | ☐ | I can explain the need for cellular differentiation in multicellular organisms. | ☐ |
| | I can state some examples of specialised cells. | ☐ | I can describe the adaptations of a range of specialised cells. | ☐ | I can explain the link between the adaptation of each specialised cell and its function. | ☐ |
| | I can use text to be able to describe features with some accuracy. | ☐ | I can summarise text, with accuracy, to show clear understanding of cell features. | ☐ | I can summarise text showing detailed and perceptive understanding of cell features and functions. | ☐ |
| B2.1.6 Stem cells | I can state where stem cells are found. | ☐ | I can describe the difference between a stem cell and a differentiated cell. | ☐ | I can explain the difference between embryonic and adult stem cells. | ☐ |
| | I can state some uses of stem cells. | ☐ | I can describe the function of stem cells. | ☐ | I can evaluate the advantages and disadvantages of using stem cells in medicine. | ☐ |
| | I can use general references to scientific texts to support my comments and opinions. | ☐ | I can use appropriate references to scientific texts to support their understanding and opinions. | ☐ | I can justify my understanding and opinions with illuminating use of references to scientific texts. | ☐ |

### The challenges of size

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B2.2.1 Exchange and transport | I can state some examples of exchange surfaces and transport systems. | ☐ | I can describe the features of an efficient exchange surface. | ☐ | I can explain why multicellular organisms require adapted exchange surfaces. | ☐ |
| | I can calculate the surface area or volume of an object. | ☐ | I can calculate the surface area: volume ratio. | ☐ | I can compare the relationship between the surface area: volume ratio and the size of an organism/cell. | ☐ |
| | I can describe simple observations made during an experiment. | ☐ | I can interpret observations and data made during an experiment. | ☐ | I can interpret observations and data obtained during an experiment, identifying patterns and drawing conclusions. | ☐ |
| B2.2.2 Circulatory system | I can state the function of the circulatory system. | ☐ | I can describe the structure of the double circulatory system. | ☐ | I can explain the need for a double circulatory system in mammals. | ☐ |
| | I can the different types of blood vessels found in a circulatory system. | ☐ | I can describe the structure of the blood vessels. | ☐ | I can explain the link between the structure and function of the different types of blood vessels. | ☐ |
| | I can use familiar vocabulary to some effect to describe the circulatory system. | ☐ | I can use vocabulary appropriate to purpose and effect to describe the structure of the circulatory system. | ☐ | I can use a wide range of well-selected and precise vocabulary to enhance impact when explaining the functioning of the circulatory system. | ☐ |
| B2.2.3 Heart and blood | I can identify the components of the blood. | ☐ | I can describe the functions of the main components of the blood. | ☐ | I can explain the adaptations of the red blood cell that enable it to carry out its function. | ☐ |
| | I can identify the main structures in the heart. | ☐ | I can describe the flow of blood through the heart. | ☐ | I can explain how the thickness of the chambers of the heart are related to their function. | ☐ |
| | I can state the names of the major parts of the heart and blood. | ☐ | I can use the correct names of the parts of the heart and blood when describing their function. | ☐ | I can use an appropriate range of scientific vocabulary and terminology when explaining the functions of the blood and heart. | ☐ |
| B2.2.4 Plant transport systems | I can state the function of xylem. | ☐ | I can describe the function and distribution of xylem tissue. | ☐ | I can explain how the structure and distribution of xylem tissue is related to its function. | ☐ |
| | I can state the function of phloem. | ☐ | I can describe the function and distribution of phloem tissue. | ☐ | I can explain how the structure and distribution of phloem tissue is related to its function. | ☐ |
| | I can label diagrams using simple sentence structure and familiar vocabulary. | ☐ | I can annotate diagrams using varied sentence types and appropriate scientific vocabulary. | ☐ | I can annotate diagrams using a wide range of sentence types, including precise and appropriate scientific vocabulary. | ☐ |
| B2.2.5 Transpiration stream | I can state what is meant by transpiration. | ☐ | I can describe the transpiration stream. | ☐ | I can explain the mechanisms by which water is moved through the plant. | ☐ |
| | I can state the location of most stomata in a plant. | ☐ | I can describe the structure of a stoma. | ☐ | I can explain how stomata control water loss from leaves. | ☐ |
| | I can describe the observations made during each experiment. | ☐ | I can explain the observations made during each experiment. | ☐ | I can relate the findings of both experiments to one another, to explain how water is lost from the plant. | ☐ |
| B2.2.6 Factors affecting transpiration | I can state the factors that affect the rate of transpiration. | ☐ | I can describe the relationship between a given factor and the rate of transpiration. | ☐ | I can explain how environmental factors affect the rate of transpiration. | ☐ |
| | I can state what a potometer measures. | ☐ | I can describe how to use a potometer. | ☐ | I can explain how to calculate the rate of transpiration using a potometer. | ☐ |
| | I can state a limitation found with the method. | ☐ | I can discuss a range of limitations with this method, which might affect the results. | ☐ | I can discuss a range of limitations with this method, which might affect the results, suggesting a series of improvements. | ☐ |

## B3 – Organ Level Systems

### The nervous system

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B3.1.1 Nervous system | I can state the function of the nervous system. | ☐ | I can describe the pathway taken by an impulse in a nervous reaction. | ☐ | I can explain how the nervous system produces a coordinated response. | ☐ |
| | I can state the difference between a nerve and a neurone. | ☐ | I can describe the different types of neurone in the nervous system. | ☐ | I can explain the difference in function of sensory and motor neurones. | ☐ |
| | I can state that the reaction time measured is controlled by the nervous system. | ☐ | I can identify reasons for reaction times measured, by describing the pathway taken by the impulse. | ☐ | I can explain the reasons for different reaction times between dominant and non-dominant hands. | ☐ |
| B3.1.2 Reflexes | I can state what is meant by a reflex action. | ☐ | I can describe the pathway of the impulse in the reflex arc during a reflex action. | ☐ | I can explain how a specific example of a reflex action occurs. | ☐ |
| | I can list examples of reflex actions. | ☐ | I can describe the difference between a reflex action and a voluntary action. | ☐ | I can explain why a reflex action is faster than a voluntary action. | ☐ |
| | I can plan a simple experiment to make a basic observation of the iris reflex. | ☐ | I can plan a series of simple experiments to make observations of the iris reflex. . | ☐ | I can plan a systematic series of experiments to fully investigate the iris reflex. | ☐ |

## Triple content

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B3.1.3 The eye | I can identify the main structures of the eye. . | ☐ | I can describe the function of each of the main structures in the eye. | ☐ | I can explain how the eye focuses light on the retina. | ☐ |
| | I can name some defects of vision. | ☐ | I can describe some defects of vision. | ☐ | I can explain how common defects of vision can be corrected. | ☐ |
| | I can use a model to observe how light travels through the eye. | ☐ | I can use a model to describe how the structures of the eye focus light on the retina. | ☐ | I can use a model to explain how changes in the lens shape would result in accommodation of light rays. | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| B3.1.4 The brain | I can name the main structures in the brain. | ☐ | I can describe the location of the main structures of the brain. | ☐ | I can describe the function of the main structures in the brain. | ☐ |
| | | | I can describe some of the different techniques used to investigate brain function. (H) | ☐ | I can explain why it is difficult to investigate brain function. (H) | ☐ |
| | | | I can describe a range of practical and ethical concerns in scientific research. (H) | ☐ | I can justify decisions about the ethics of scientific research methods. (H) | ☐ |
| B3.1.5 Nervous system damage (H) | | | I can describe examples of damage to nervous tissue. | ☐ | I can explain how damage to nervous has an effect on the functioning of the body. | ☐ |
| | | | I can describe some methods used to treat damage to the nervous system. | ☐ | I can explain the difficulties in treating the nervous system. | ☐ |
| | | | I can describe some of the personal implications to the patient of treatments for damage to the nervous system. | ☐ | I can evaluate the personal implications to the patient of treatments for damage to the nervous system. | ☐ |

### The endocrine system

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B3.2.1 Hormones | I can name examples of endocrine glands and the hormones they release. | ☐ | I can describe how a hormone reaches its target organ. | ☐ | I can explain how a hormone acts as a chemical messenger. | ☐ |
| | I can state the function of a hormone. | ☐ | I can describe the specific roles of some hormones in the body. | ☐ | I can explain how named hormones bring about homeostatic regulation in the body. | ☐ |
| | I can use simple sentence types and familiar vocabulary, limited to scientific names, when producing texts. | ☐ | I can use a variety of sentence types and vocabulary appropriate to purpose when describing the actions of hormones. | ☐ | I can use a wide range of well-selected sentence types and precise vocabulary when explaining the action of hormones. | ☐ |
| B3.2.2 Negative feedback (H) | | | I can describe the role of thyroxine and adrenaline in the body. | ☐ | I can explain how the roles of thyroxine and adrenaline are brought about by a number of responses in the body. | ☐ |
| | | | I can describe how negative feedback occurs. | ☐ | I can explain the purpose of negative feedback. | ☐ |
| | | | I can use a model to describe how negative feedback occurs. | ☐ | I can use a model to explain how negative feedback brings about control. | ☐ |
| B3.2.3 The menstrual cycle | I can state the hormones involved in the menstrual cycle. | ☐ | I can describe how the levels of the hormones change during the menstrual cycle. | ☐ | I can explain how some hormones control the level of production of other hormones during the menstrual cycle. (H) | ☐ |
| | I can describe the main stages of the menstrual cycle. | ☐ | I can describe how hormones cause the changes that occur at the different stages of the menstrual cycle. | ☐ | I can explain how hormones interact to control the menstrual cycle. (H) | ☐ |
| | I can state simple factual statements based on data and observations from texts. | ☐ | I can use data and observations from texts to describe processes in detail. | ☐ | I can interpret data and observations from texts to explain how changes in the menstrual cycle are related to patterns in the hormone levels. | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| B3.2.4 Controlling reproduction | I can state some examples of contraception. | ☐ | I can describe how the different methods of contraception work. | ☐ | I can evaluate different methods of contraception. | ☐ |
| | I can name the different types of hormone-based contraception. | ☐ | I can explain how hormones are used in contraception. | ☐ | I can evaluate hormonal contraception methods compared with non-hormonal contraception. | ☐ |
| | I can state that applications of science have helped humans control their reproduction. | ☐ | I can discuss how knowledge of reproduction allowed scientists to develop applications to control reproduction. | ☐ | I can explain the need for scientists to evaluate reproductive applications of science, in order to inform the public. | ☐ |
| B3.2.5 Using hormones to treat infertility (H) | | | I can describe some causes of infertility. | ☐ | I can discuss issues surrounding fertility treatment. | ☐ |
| | | | I can describe the process of in vitro fertilisation (IVF). | ☐ | I can explain how hormones can be used to treat infertility. | ☐ |
| | | | I can use evidence to support or reject the use of IVF. | ☐ | I can justify decisions about the suitability of IVF based on an evaluation of the evidence and arguments about the technique. | ☐ |

## Triple content

| | | | | | | |
|---|---|---|---|---|---|---|
| B3.2.6 Plant hormones | I can name the process by which plants respond to light. | ☐ | I can describe the process of phototropism. | ☐ | I can explain the role of auxins on phototropism. | ☐ |
| | I can name the process by which plants respond to gravity. | ☐ | I can describe the process of gravitropism. | ☐ | I can explain the role of auxins in gravitropism. | ☐ |
| | I can use scientific facts to develop a method, given a hypothesis. | ☐ | I can use scientific theories to develop a hypothesis. | ☐ | I can use scientific theories to develop a hypothesis that clearly links a dependent and independent variable. | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| B3.2.7 Uses of plant hormones | I can give an example of a plant hormone. | ☐ | I can describe some of the effects of plant hormones on the plant. | ☐ | I can explain how plant hormones have their effects on plants. | ☐ |
| | I can state one advantage of the use of plant hormones. | ☐ | I can describe commercial uses of plant hormones. (H) | ☐ | I can explain the commercial advantages of using plant hormones. (H) | ☐ |
| | | | I can describe some impacts on society of the use of plant hormones. (H) | ☐ | I can evaluate the economic and other benefits to society of the commercial use of plant hormones. (H) | ☐ |

**Triple content**

## Maintaining internal environments

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| B3.3.1 Controlling body temperature | I can state some of the changes that occur in the skin at high or low temperatures. | ☐ | I can describe the function of the skin in controlling body temperature. | ☐ | I can explain in detail the body's responses to temperature change. (H) | ☐ |
| | I can state what is meant by homeostasis. | ☐ | I can describe how overheating or cooling can affect the body. (H) | ☐ | I can explain the importance of maintaining a constant internal environment. | ☐ |
| | I can make and record measurements from an experiment. | ☐ | I can make and record accurate measurements in a clear table. | ☐ | I can make and record accurate, repeated measurements systematically in a well-organised table with clear headings and units. | ☐ |
| B3.3.2 Controlling blood sugar | I can name a hormone involved in blood sugar control. | ☐ | I can explain the role of insulin in maintaining blood glucose levels. | ☐ | I can explain the role of glucagon and insulin in maintaining blood glucose levels. (H) | ☐ |
| | I can state why blood sugar levels change throughout the day. | ☐ | I can describe the main differences between type 1 and type 2 diabetes. | ☐ | I can explain the differences between the treatments for type 1 and type 2 diabetes. | ☐ |
| | I can state basic observations about blood sugar levels obtained in an experiment. | ☐ | I can interpret data, obtained in an experiment, to describe the changes in blood glucose levels. | ☐ | I can Interpret data, obtained in an experiment, to explain the changes in blood glucose levels and compare with other data. | ☐ |
| B3.3.3 Maintaining water balance | I can state the ways in which water enters and leaves the body. | ☐ | I can describe how the water level in the blood is maintained by the production of urine. | ☐ | I can explain how the body maintains water balance by varying urine concentration. | ☐ |
| | I can state that water moves into and out of a cell by osmosis. | ☐ | I can describe the effect of osmosis on cells. | ☐ | I can explain the movement of water into and out of cells down a water potential gradient. | ☐ |
| | I can use a model to make observations of osmosis in cells. | ☐ | I can use a model to describe the effect of osmosis on cells. | ☐ | I can use models to explain the significance of water potential gradients in scientific applications. | ☐ |
| B3.3.4 Inside the kidney | I can identify the structures present in the kidney. | ☐ | I can describe the function of the different regions of a nephron. | ☐ | I can explain ultrafiltration and selective reabsorption in the nephron. | ☐ |
| | I can state that the concentration of urine can change. | ☐ | I can describe how the kidney can produce varying amounts of urine depending upon the body's level of hydration. (H) | ☐ | I can explain how ADH determines the amount of water that is reabsorbed. (H) | ☐ |
| | I can use some scientific vocabulary when discussing the structure or function of the kidney. | ☐ | I can use appropriate scientific vocabulary when describing the function of the nephron. | ☐ | I can use a full range of scientific vocabulary and terminology to explain the functioning of the nephron. | ☐ |
| B3.3.5 Responding to osmotic challenges (H) | | | I can describe the effects of over- and under-hydration on the body. | ☐ | I can explain how the body responds to dehydration and over-hydration. | ☐ |
| | | | I can describe the constituents of different types of sports drinks. | ☐ | I can evaluate the effectiveness of sports drinks. | ☐ |
| | | | I can communicate findings from experiments and provide a basic conclusion. | ☐ | I can communicate findings and give a reasoned conclusion based on scientific understanding. | ☐ |

For this section combined need to learn the following:

- Be able to explain the importance of maintain a constant internal environment in response to internal and external change
- All of the controlling blood sugar section, to include a comparison of type I and type II diabetes
- Be able to describe the gross structure of the kidney and the structure of the kidney tubule.

Triples need to learn all of the statements in the grid.

# Chemistry – Triples & Combined

Websites:
kerboodle for text book access and resources
(https://www.kerboodle.com/users/login)
Frog – resources and text book answers
(https://froglearn.holt.wokingham.sch.uk/app/os)
BBC bitesize (Triple: https://www.bbc.co.uk/bitesize/subjects/zs6hvcw
Combined: https://www.bbc.co.uk/bitesize/examspecs/z2dqqhv)

## C1 Particles

### The particle model

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C1.1.1 Introducing particles | I can draw diagrams to show the arrangements of particles in the three states of matter. | ☐ | I can describe the movement and arrangement of particles in the three states of matter, and give examples of three | ☐ | I can compare the movement and arrangement of particles in the three states of matter. | ☐ |
| | I can describe typical physical properties of a substance in a given state. | ☐ | I can compare the physical properties of a substance in its three states. | ☐ | I can use the particle model to explain the differences in physical properties of a substance in its three states. | ☐ |
| | I can state whether a given particle model is in two or three dimensions. | ☐ | I can compare the features of 2D and 3D models to represent particles. | ☐ | I can evaluate the advantages and disadvantages of given 2D and 3D models to represent particles. | ☐ |
| C1.1.2 Chemical and physical changes | I can make observations, and give examples of physical and chemical changes. | ☐ | I can state whether an observed change is physical or chemical. | ☐ | I can justify classifying a given observed change as physical or chemical. | ☐ |
| | I can state the definition of a physical change and a chemical changes. | ☐ | I can compare the features of physical and chemical changes. | ☐ | I can explain the differences between physical and chemical changes using the particle model. | ☐ |
| | I can compare reactants and products in a chemical reaction using particle diagrams or physical models. | ☐ | I can deduce whether a given change is physical or chemical by interpreting particle diagrams of reactants and products. | ☐ | I can draw particle diagrams of reactants and products to model a chemical reaction. | ☐ |
| C1.1.3 Limitations of the particle model | I can name the type of force that acts between particles. | ☐ | I can describe how the strength of the forces between particles changes with distance. | ☐ | I can explain why the strength of the forces between particles affects the properties of a substance. | ☐ |
| | I can compare the relative distances between particles in the three states of matter. | ☐ | I can state typical distances between particles in the gas state. | ☐ | I can calculate the ratio distance to diameter, the distance between particles in a gas state, and the sizes of objects in scale models. | ☐ |
| | I can describe one way in which the particle model is unlike the situation it represents. | ☐ | I can describe three limitations of the particle model. | ☐ | I can use mathematical ideas to explain some limitations of the particle model. | ☐ |

### Atomic structure

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C1.2.1 Atomic structure | I can list the subatomic particles in an atom. | ☐ | I can describe the subatomic particles in an atom. | ☐ | I can explain evidence for the structure of the atom. | ☐ |
| | I can qualitatively describe: the relative sizes of an atom, chemical bonds, and simple molecules. | ☐ | I can use standard form to describe the sizes of atoms, chemical bonds, and molecules. | ☐ | I can explain why a relative scale is used to compare subatomic particles. | ☐ |
| | I can state the size of a typical atom. | ☐ | I can use data to calculate the sizes, masses, and charges of subatomic particles. | ☐ | I can use data to calculate the relative sizes, masses, and charges of subatomic particles. | ☐ |
| C1.2.2 Isotopes | I can state definitions of the terms ion, atomic number, mass number, and isotope. | ☐ | I can use an example to describe the similarities and differences between isotopes in terms of subatomic particles. | ☐ | I can explain why isotopes of the same element may have different physical properties but identical chemical properties. | ☐ |
| | I can describe how an atom becomes an ion. | ☐ | I can use standard notation to represent an ion. | ☐ | I can use and interpret standard notation to represent atoms, ions, and isotopes. | ☐ |
| | I can state the number of protons, neutrons, and electrons from given values of atomic number and mass number. | ☐ | I can state the numbers of protons, neutrons, and electrons in an atom when a Periodic Table is supplied. | ☐ | I can state the number of protons, neutrons, and electrons for an ion when a Periodic Table is supplied. | ☐ |
| C1.2.3 Developing the atomic model | I can recall the main features of the plum-pudding model and the Bohr model. | ☐ | I can describe the development of the atomic model. | ☐ | I can explain why the atomic model has changed over time. | ☐ |
| | I can state the contribution Dalton, Thomson, Rutherford, Bohr, Geiger, and Marsden made to the atomic model. | ☐ | I can explain the contribution of Dalton, Thomson, Rutherford, Bohr, Geiger, and Marsden to the development of the atomic model. | ☐ | I can justify amendments to the model of the atom. | ☐ |
| | I can state what an atom is. | ☐ | | | | |

# C2 Elements, compounds and mixtures

## Purity and separating mixtures

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C2.1.1 Relative formula mass | I can state definitions of relative atomic mass, relative molecular mass, and relative formula mass. | ☐ | I can use data from the Periodic Table to compare the relative atomic masses of different elements. | ☐ | I can explain why relative formula mass is a useful measurement. | ☐ |
| | I can use the Periodic Table to find the chemical symbol for an element. | ☐ | I can interpret simple formulae to list the number of each type of atom present. | ☐ | I can interpret diagrams of molecular compounds to write chemical formulae. | ☐ |
| | I can use the Periodic Table to give the relative atomic mass of an element. | ☐ | I can calculate the relative formula mass or relative molecular mass of a simple substance when the relative atomic mass and formula are given. | ☐ | I can calculate the relative formula mass or relative molecular mass of substances from diagrams or formulae (including those with brackets). | ☐ |
| C2.1.2 Empirical formula | I can state a definition of empirical formula. | ☐ | I can use an example to explain how a molecular formula and an empirical formula can be the same. | ☐ | I can explain why ionic compounds are always referred to by their empirical formulae. | ☐ |
| | I can calculate the empirical formula for a simple covalent compound when the molecular formula is given. | ☐ | I can calculate the empirical formula for a compound from a diagram. | ☐ | I can calculate an empirical formula from a molecular formula that contains brackets. | ☐ |
| | I can use a balanced symbol equation to calculate the relative formula mass or relative molecular mass when the relative atomic masses are given. | ☐ | I can explain when the term relative molecular mass can be used. | ☐ | I can explain how the sum of the $M_r$ values of the reactants must equal the sum of the $M_r$ values of the products in a balanced symbol equation. | ☐ |
| C2.1.3 Pure and impure substances | I can state definitions of the terms pure and mixture. | ☐ | I can explain the different meanings of pure in everyday and scientific language. | ☐ | I can explain why a mixture is often more useful than a pure substance. | ☐ |
| | I can give an example of a pure substance and a mixture. | ☐ | I can identify a substance as either pure or a mixture. | ☐ | I can explain the effect on melting point of adding different substances to a pure substance. | ☐ |
| | I can safely determine the melting point of a substance. | ☐ | I can identify a substance from melting point data. | ☐ | I can evaluate the purity of a sample from its melting point data. | ☐ |
| C2.1.4 Filtration and crystallisation | I can safely separate a mixture to collect an insoluble substance from a liquid or solution. | ☐ | I can describe the process of filtering. | ☐ | I can explain how filtration separates an insoluble solid from a liquid or solution. | ☐ |
| | I can safely separate a solution to collect the solute. | ☐ | I can describe the process of crystallisation. | ☐ | I can explain how crystallisation separates the components of a solution. | ☐ |
| | I can identify the solute, solvent, residue, and filtrate in named solutions or suspensions that have been separated. | ☐ | I can suggest and describe a suitable technique to separate a named solution or suspension. | ☐ | I can evaluate different techniques for folding filter paper. | ☐ |
| C2.1.5 Distillation | I can list and recognise the key equipment used in a simple distillation. | ☐ | I can describe the process of simple distillation. | ☐ | I can explain how simple distillation separates a solution. | ☐ |
| | I can safely use distillation to separate two miscible liquids. | ☐ | I can describe the process of fractional distillation. | ☐ | I can explain how fractional distillation separates a mixture of liquids. | ☐ |
| | I can state the types of mixtures that can be separated by distillation. | ☐ | I can suggest and describe a suitable technique to separate a named solution. | ☐ | I can predict and justify the value shown on a thermometer in a distillation, given the mixture and relevant data. | ☐ |
| C2.1.6 Chromatography | I can state definitions for the stationary and mobile phases in chromatography. | ☐ | I can describe how to complete paper chromatography. | ☐ | I can explain how separation occurs in a chromatography experiment. | ☐ |
| | I can safely complete a paper chromatogram. | ☐ | I can describe how to complete thin-layer chromatography. | ☐ | I can explain how chromatograms for the same substances can be different when phases are changed. | ☐ |
| | I can recall the formula for the $R_f$ value. | ☐ | I can calculate $R_f$ values given a chromatogram. | ☐ | I can interpret a chromatogram. | ☐ |
| C2.1.7 Purification and checking purity | I can describe one purification technique to separate a simple mixture. | ☐ | I can suggest a multistep separation technique for a mixture. | ☐ | I can explain how a multistep method can be used to separate a given mixture. | ☐ |
| | I can describe the processes of paper, thin-layer, and gas chromatography. | ☐ | I can explain the processes of paper, thin-layer, and gas chromatography. | ☐ | I can evaluate the different types of chromatography. | ☐ |
| | I can use a chromatogram to classify a substance as pure or a mixture. | ☐ | I can explain how a chromatogram can be used to identify a pure substance or a mixure. | ☐ | I can justify the use of different purification techniques in different circumstances. | ☐ |

## Bonding

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C2.2.1 Metals and non-metals | I can list the physical properties of metals and non-metals. | ☐ | I can describe the differences between the chemical properties of metals and non-metals. | ☐ | I can predict the physical and chemical properties of an element based on its position in the Periodic Table. | ☐ |
| | I can state where metals and non-metals are found in the Periodic Table. | ☐ | I can describe an experiment to determine whether an element is a metal or a non-metal. | ☐ | I can evaluate an experiment designed to classify an element as a metal or a non-metal. | ☐ |
| | I can use the Periodic Table to classify an element as a metal or a non-metal. | ☐ | I can identify patterns in the Periodic Table for the physical properties of elements. | ☐ | I can identify and justify anomalous elements in the Periodic Table. | ☐ |
| C2.2.2 Electronic structures | I can state definitions of a group and a period in the Periodic Table. | ☐ | I can identify an element given the group and period number, and vice versa. | ☐ | I can determine the electronic structure of each of the first 20 elements given group number and period number. | ☐ |
| | I can state the maximum number of electrons in each of the first three shells. | ☐ | I can use simplified electronic structure notation to draw the electronic structure of the first 20 elements in the Periodic Table. | ☐ | I can interpret simplified electronic notation for the first 20 elements to determine group number, period number, and element. | ☐ |
| | I can draw the electronic structure of the first 20 elements given the number of electrons. | ☐ | I can draw the electronic structure of the first 20 elements using the Periodic Table to determine their number of electrons. | ☐ | I can justify the study of the electronic structures of only the first 20 elements. | ☐ |
| C2.2.3 Forming ions | I can state the definition of the term ion. | ☐ | I can use electron diagrams to explain how ions are formed. | ☐ | I can explain the charge on a given ion in terms of subatomic particles and electron transfer. | ☐ |
| | I can recognise an ion from its symbol. | ☐ | I can explain whether a given electron diagram represents an atom or an ion. | ☐ | I can explain how atoms and ions of different elements can have the same electronic structure. | ☐ |
| | I can draw or state the electronic structure of an ion given its charge and the electronic structure of the neutral atom. | ☐ | I can draw the electronic structure of an ion given its charge and the number of electrons in the neutral atom. | ☐ | I can predict the electronic structure of an ion given its position in the Periodic Table. | ☐ |
| C2.2.4 Ionic compounds | I can state that ionic compounds tend to form between a metal and a non-metal. | ☐ | I can explain the formation of ionic bonds in terms of electron transfer. | ☐ | I can justify the formation of ionic bonds in terms of the stability of the atoms and ions involved. | ☐ |
| | I can draw dot-and-cross diagrams to represent simple binary ionic compounds in which one electron per atom is transferred. | ☐ | I can draw dot-and-cross diagrams to represent ionic compounds in which more than one electron per atom is transferred. | ☐ | I can justify how a space-filling model for a given compound arises from its dot-and-cross diagram. | ☐ |
| | I can describe the structure and bonding in an ionic compound. | ☐ | I can explain how a given model represents an ionically bonded compound. | ☐ | I can evaluate different models to represent ionic compounds. | ☐ |
| C2.2.5 Simple molecules | I can state that covalent compounds form between non-metal atoms. | ☐ | I can describe the formation of covalent bonds in terms of electron sharing. | ☐ | I can explain how covalent bonds form between non-metal atoms. | ☐ |
| | I can recognise covalent bonding and identify substances as covalently bonded. | ☐ | I can describe structure and bonding in simple molecular substances. | ☐ | I can evaluate different models to represent covalent compounds. | ☐ |
| | I can draw dot-and-cross diagrams of simple covalent substances, limited to the first 20 elements and single bonds. | ☐ | I can draw displayed formulae or dot-and-cross diagrams of covalent compounds, limited to the first 20 elements with single and/or double bonds. | ☐ | I can suggest the displayed formula, space-filling, or dot-and-cross diagrams for covalent compounds, including those with multiple bonds. | ☐ |
| C2.2.6 Giant covalent structures | I can state that covalent compounds form between non-metal atoms. | ☐ | I can describe the formation of covalent bonds in terms of electron sharing. | ☐ | I can use examples to explain how covalent bonds hold together a giant covalent structure. | ☐ |
| | I can state examples of substances with giant covalent structures. | ☐ | I can describe the structure and bonding in giant covalent structures. | ☐ | I can evaluate different models to represent covalent compounds. | ☐ |
| | I can draw a 3D representation of a giant covalent structure. | ☐ | I can determine the empirical formula of a substance with a giant covalent structure. | ☐ | I can justify the use of empirical formulae to describe substances that have giant covalent structures. | ☐ |

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| C2.2.7 Polymer molecules | I can state definitions of the terms monomer and polymer and give examples of each. | ☐ | I can describe the formation of a polymer. | ☐ | I can explain how monomers join together to form an addition polymer. | ☐ |
| | I can describe the difference between the properties of thermosoftening and thermosetting polymers. | ☐ | I can describe an experiment to classify a polymer as thermosoftening or thermosetting. | ☐ | I can explain how the structures of thermosoftening and thermosetting polymers affect their properties. | ☐ |
| | I can identify a monomer and polymer in a model. | ☐ | I can explain a model to represent a polymer. | ☐ | I can evaluate different models to represent polymers. | ☐ |
| C2.2.8 Structure of metals | I can list examples of substances with metallic bonds. | ☐ | I can describe the formation of metallic bonds. | ☐ | I can explain how monomers join together to form an addition polymer. | ☐ |
| | I can describe the lattice structure of a metallic crystal. | ☐ | I can use a model to explain the lattice structure of a metallic crystal. | ☐ | I can explain how the structures of thermosoftening and thermosetting polymers affect their properties. | ☐ |
| | I can recognise a model of a metallic lattice. | ☐ | I can compare metallic bonds with covalent and ionic bonds. | ☐ | I can evaluate different models to represent polymers. | ☐ |
| C2.2.9 Developing the Periodic Table | I can describe how the elements are listed in the Periodic Table. | ☐ | I can explain how Mendeleev organised the elements in the Periodic Table. | ☐ | I can explain why the modern Periodic Table is not the same as Mendeleev's Periodic Table. | ☐ |
| | I can use the Periodic Table to determine the symbol, atomic number, and relative atomic mass of an element. | ☐ | I can explain why Mendeleev's Periodic Table was not adopted straight away. | ☐ | I can evaluate the Periodic Table as a method of displaying information about the elements. | ☐ |

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|---|---|---|---|---|---|---|
| C2.2.10 Atomic structure and the Periodic Table | I can state the number of electrons in the outer electron shells for the elements in Groups 1 and 8. | ☐ | I can use the Periodic Table to suggest the electronic structure for the first 20 elements. | ☐ | I can use the Periodic Table to suggest the number of outer-shell electrons and the number of electron shells for an element. | ☐ |
| | I can describe the trend in the reactions of the Group 1 elements with water. | ☐ | I can predict and explain the trend in reactivity of elements in Groups 2 and 6. | ☐ | I can explain, in terms of electronic structure, why noble gases are described as inert. | ☐ |
| | I can describe observations from displacement reactions. | ☐ | I can use the Periodic Table to make predictions about the chemical reactions of elements with oxygen. | ☐ | I can evaluate the versatility of the Periodic Table as new elements are discovered. | ☐ |

## Properties of materials

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C2.3.1 Carbon | I can describe the structure and bonding in graphite and diamond. | ☐ | I can explain how carbon can form different families of compounds. | ☐ | I can explain the uses of graphite and diamond in terms of their properties. | ☐ |
| | I can list the properties of graphite and diamond. | ☐ | I can explain the properties of graphite and diamond in terms of structure and bonding. | ☐ | I can predict the properties of carbon allotropes, given information about their structure and bonding. | ☐ |
| | I can name examples of carbon allotropes. | ☐ | I can explain the term allotrope using carbon to illustrate. | ☐ | I can predict the properties or structure of Group 4 elements. | ☐ |
| C2.3.2 Changing state | I can describe changes of state in terms of bonds and forces of attraction. | ☐ | I can explain changes of state in terms of bonds and interactions between particles. | ☐ | I can use an example to explain sublimation. | ☐ |
| | I can state what is meant by melting point and boiling point. | ☐ | I can use melting and boiling point data to determine the state of a substance at a given temperature. | ☐ | I can use melting and boiling point data to suggest the type of substance and/ or type of bonds present in a sample. | ☐ |
| | I can explain why the boiling point of a substance is always higher than its melting point. | ☐ | I can use melting and boiling point data to interpret the relative strengths of forces of attraction. | ☐ | I can explain how to use melting and boiling point data to interpret the relative strengths of forces of attraction. | ☐ |
| C2.3.3 Bulk properties of materials | I can state a definition of the term bulk properties. | ☐ | I can explain that individual atoms do not exhibit the bulk properties of a material. | ☐ | I can justify the choice of a material for a function based on its bulk properties. | ☐ |
| | I can list the main bulk properties of ionic compounds, simple molecules, giant covalent structures, polymers and metals. | ☐ | I can explain how structure and bonding cause the bulk properties of a material. | ☐ | I can predict the bulk properties of a material given information about its structure and bonding. | ☐ |
| | I can recognise models of ionic compounds, simple molecules, giant covalent structures, polymers and metals. | ☐ | I can use models of ionic compounds, simple molecules, giant covalent structures, polymers and metals to explain bulk properties. | ☐ | I can evaluate models of ionic compounds, simple molecules, giant covalent structures, polymers and metals used to explain bulk properties. | ☐ |

## Nanoparticles -TRIPLES ONLY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C2.3.4 Nanoparticles | I can state the relative size of nanoparticles and use this to classify substances. | ☐ | I can describe how the properties of nanoparticles relate to their uses. | ☐ | I can use standard form where appropriate, to describe the size of nanoparticles. | ☐ |
| | I can calculate the surface area of a cube given the formula. | ☐ | I can describe and explain how the surface-area-to-volume ratio affects properties. | ☐ | I can calculate the surface-area-to-volume ratio of a cube. | ☐ |
| | I can list some examples of the use of nanotechnology. | ☐ | I can list the advantages and disadvantages of nanotechnology. | ☐ | I can evaluate the use of nanotechnology. | ☐ |

# C3 Chemical Reactions

### Introducing chemical reactions

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C3.1.1 Formulae of elements and molecules | I can name the elements in a familiar simple covalent substance, given the formula. | ☐ | I can state the number of atoms of each element in an unfamiliar simple covalent substance, given the formula. | ☐ | I can explain why metal elements are described using empirical formula and noble gases using just the element symbol. | ☐ |
| | I can use the Periodic Table to find symbols for elements. | ☐ | I can write the molecular formula of a compound that exists as simple covalent molecules, given the name or the number of atoms of each element present. | ☐ | I can write the molecular formula for a simple covalent compound, given the structural formula. | ☐ |
| C3.1.2 Formulae of ionic compounds | I can state the charges on ions in Groups 1, 2, 6 (IUPAC 16), and 7 (IUPAC 17). | ☐ | I can determine the number and type of elements in unfamiliar ionic substances, given the formulae. | ☐ | I can explain how a compound can contain both covalent and ionic bonds. | ☐ |
| | I can state the ions in familiar ionic substances, given the formulae. | ☐ | I can write the formula of ionic compounds containing one metal and one non-metal, given the name. | ☐ | I can write the formulae of ionic compounds that include compound ions. | ☐ |
| | I can state that transition metals can make more than one type of ion. | ☐ | I can write the formula of a named ion, including using the Roman numeral convention. | ☐ | I can name ionic compounds that contain transition metals using the Roman numeral convention. | ☐ |
| C3.1.3 Conservation of mass | I can state the law of conservation of mass. | ☐ | I can use the particle model to explain the law of conservation of mass. | ☐ | I can explain why, in some chemical reactions performed in the laboratory, there appears to be a change in total mass. | ☐ |
| | I can predict the total mass of the products or reactants in a closed chemical system, given the total mass of the reactants or products. | ☐ | I can predict the total mass of the products or reactants in a non-enclosed chemical system, given the total mass of the reactants or products. | ☐ | I can calculate the mass of one substance from a balanced symbol equation, given the masses of the other substances. | ☐ |

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|---|---|---|---|---|---|---|---|
| C3.1.4 Chemical equations | I can write a word equation, given a statement naming the reactants and products. | ☐ | I can explain why a symbol equation must be balanced. | ☐ | I can write a balanced symbol equation, given a statement describing a familiar chemical reaction. | ☐ |
| | I can identify the reactants and products in a word or symbol equation. | ☐ | I can balance symbol equations with formulae that do not contain brackets. | ☐ | I can balance symbol equations with formulae that include brackets. | ☐ |
| | I can recognise state symbols for solids, liquids, and gases. | ☐ | I can add state symbols to balanced symbol equations and explain what they mean. | ☐ | I can evaluate the use of the terms equations, balanced symbol equations, and state symbols to describe a chemical system. | ☐ |
| C3.1.5 Half equations and ionic equations (H) | | | I can determine the ions in a compound, including those containing compound ions. | ☐ | I can write an ionic equation or half equations, given a description of a chemical reaction. | ☐ |
| | | | I can balance an ionic equation or half equation and explain what the equation shows. | ☐ | I can explain what spectator ions are, and determine them in a given example. | ☐ |
| | | | I can explain why precipitation reactions can be described by ionic equations. | ☐ | | |
| C3.1.6 The mole (H) | | | I can calculate the number of particles in a sample of a substance, given the amount in moles. | ☐ | I can explain the relationship between the mole and the Avogadro constant. | ☐ |
| | | | I can state the formula that links the amount in moles, mass, and molar mass. | ☐ | I can calculate the mass or amount in moles of a given sample of a substance. | ☐ |
| | | | I can use the Periodic Table to determine the molar mass of monatomic and polyatomic elements and compounds. | ☐ | I can use standard form in calculations involving amounts of substance. | ☐ |

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| C3.1.7 Mole calculations (H) | | I can define a limiting reactant. | ☐ | I can explain the effect of a limiting amount of a reactant. | ☐ |
| | | I can identify a limiting reactant, given the mole values for a reaction. | ☐ | I can use mass data to determine the stoichiometry and generate a balanced symbol equation for a reaction. | ☐ |
| | | I can calculate the number of moles of a substance used or produced in a chemical reaction, given the amounts of all of the other substances. | ☐ | I can calculate the mass of a substance used or produced in a chemical reaction, given the mass of the limiting reactant. | ☐ |

## Energetics

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C3.2.1 Exothermic and endothermic reactions | I can state definitions of the terms exothermic and endothermic. | ☐ | I can describe the observations that indicate whether a reaction is exothermic or endothermic. | ☐ | I can draw a line graph to calculate the maximum temperature change during a reaction, determine when the reaction stopped, and predict the temperature at different times during the reaction. | ☐ |
| | I can identify a reaction as exothermic or endothermic when the temperature change is given. | ☐ | I can describe an experiment to determine if a reaction is exothermic or endothermic. | ☐ | I can evaluate an experiment to classify a reaction as exothermic or endothermic. | ☐ |
| | I can state an example of an exothermic and an endothermic reaction. | ☐ | I can explain the use of endothermic and exothermic reactions for a stated function. | ☐ | I can compare endothermic and exothermic reactions. | ☐ |
| C3.2.2 Reaction profiles | I can state a definition of activation energy. | ☐ | I can describe activation energy using a reaction profile. | ☐ | I can explain, in terms of bonds, the need for activation energy. | ☐ |
| | I can identify a reaction as exothermic or endothermic from the reaction profile. | ☐ | I can sketch a general reaction profile for an exothermic and an endothermic reaction. | ☐ | I can sketch a specific reaction profile for a given reaction. | ☐ |
| | I can identify bond breaking as endothermic and bond making as exothermic. | ☐ | I can explain why bond breaking is endothermic and bond making is exothermic. | ☐ | I can use the particle model to model a chemical reaction in terms of bond breaking and bond making. | ☐ |
| C3.2.3 Calculating energy changes (H) | | | I can define the term bond energy. | ☐ | I can compare bond energies for different bonds, and suggest reasons for differences. | ☐ |
| | | | I can calculate the number and type of bonds in a molecule, given the displayed formula. | ☐ | I can draw displayed formulae of familiar covalent molecules. | ☐ |
| | | | I can use bond energy data to calculate the energy change in a given reaction. | ☐ | I can explain why the calculated energy change may not be the same as the actual value. | ☐ |

## Types of chemical reaction

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C3.3.1 Redox reactions | I can state definitions of reduction, oxidation, and redox. | ☐ | I can explain reduction, oxidation, and redox in terms of electrons. | ☐ | I can write balanced half equations to illustrate reduction and oxidation. | ☐ |
| | I can state an example of a redox reaction. | ☐ | I can balance half equations. | ☐ | I can explain why oxidation or reduction does not happen in isolation. | ☐ |
| | I can describe an oxidising agent and a reducing agent. | ☐ | I can identify substances as oxidising agents or reducing agents, given the balanced symbol equation. | ☐ | I can construct balanced symbol equations by combining half equations and adding spectator ions. | ☐ |
| C3.3.2 The pH scale | I can state definitions of an acid and an alkali and give examples. | ☐ | I can explain the terms acid and alkali in terms of ions. | ☐ | I can use ionic equations to explain how acids produce hydrogen ions and alkalis produce hydroxide ions in solution. | ☐ |
| | I can identify a solution as acidic or alkaline given its pH. | ☐ | I can describe a method to use universal indicator or a pH probe to determine the pH of a solution. | ☐ | I can evaluate the use of indicators or pH probes and dataloggers to determine the pH of a solution. | ☐ |
| | I can safely use an indicator to classify a substance as an acid or an alkali. | ☐ | I can explain the pH scale in terms of acidity and alkalinity. | ☐ | I can explain the difference between an alkali and a base. | ☐ |
| C3.3.3 Neutralisation | I can state a definition of neutralisation. | ☐ | I can describe neutralisation in terms of reactants, products, and reacting ions. | ☐ | I can write an ionic equation for the neutralisation of an alkali by an acid. | ☐ |
| | I can describe some uses of neutralisation. | ☐ | I can write a balanced symbol equation to describe a neutralisation reaction. | ☐ | I can write balanced symbol equations with state symbols for unfamiliar neutralisation reactions. | ☐ |
| | I can predict the name of a salt made from a named alkali and common strong acids. | ☐ | I can state the formula of the salt made from a given alkali and strong acid. | ☐ | I can use the particle model to explain how the products of neutralisation form. | ☐ |

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| C3.3.4 Reactions of acids | I can predict the names of the products of a reaction between a metal or a metal carbonate and an acid. | ☐ | I can predict the observations that might be made during a reaction between a metal or a metal carbonate and an acid. | ☐ | I can explain why the reaction between a metal or a metal carbonate and an acid is classified as a neutralisation reaction. | ☐ |
| | I can write a word equation to model a reaction between a metal or a metal carbonate and an acid. | ☐ | I can write a balanced symbol equation to model a reaction between a metal or a metal carbonate and an acid. | ☐ | I can write a balanced symbol equation, including state symbols, to model a reaction between a metal or a metal carbonate and an acid. | ☐ |
| | I can describe how to test and identify a gas made when a metal or a metal carbonate reacts with an acid. | ☐ | I can describe how to make and collect a dry sample of a named salt from a reaction between a metal or a metal carbonate and an acid. | ☐ | I can explain how the reactions of metals and metal carbonates with acids can be used to determine the reactivity of the metal. | ☐ |
| C3.3.5 Hydrogen ions and pH (H) | | | I can describe what is meant by a strong acid and a weak acid. | ☐ | I can explain the difference between a strong acid and a weak acid. | ☐ |
| | | | I can describe how an acid can be dilute or concentrated. | ☐ | I can explain the difference between a concentrated acid or alkali and a dilute acid or alkali. | ☐ |
| | | | I can collect data to plot a pH curve. | ☐ | I can interpret pH curves to determine the titre and the strength of reactants. | ☐ |

## Electrolysis

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| C3.4.1 Electrolysis of molten salts | I can explain why solid compounds of a metal with a non-metal do not conduct electricity. | ☐ | I can describe the components of an electrolysis circuit, and how to mobilise the ions in the electrolyte. | ☐ | I can explain why electrolysis provides evidence for the existence of ions. | ☐ |
| | I can state that electrolysis breaks ionic compounds down into their component elements. | ☐ | I can describe the process of electrolysis. | ☐ | I can explain the process of electrolysis in detail. | ☐ |
| | I can predict the products of electrolysis. | ☐ | I can predict the products at the anode and the cathode during the electrolysis of molten ionic compounds. | ☐ | I can write half equations for the reactions that occur at the anode and the cathode, and explain in terms of electron transfer why these are redox reactions. | ☐ |
| C3.4.2 Electrolysis of solutions | I can state that inert electrodes are made from unreactive metals or graphite. | ☐ | I can explain why inert electrodes are used for the electrolysis of water (and aqueous solutions) and state the products of this reaction. | ☐ | I can use half equations to explain the formation of the products at each electrode during the electrolysis of water. | ☐ |
| | I can name some products of the electrolysis of solutions. | ☐ | I can predict and describe the products at each electrode during the electrolysis of a solution. | ☐ | I can predict and explain the products at each electrode during the electrolysis of a solution. | ☐ |
| | I can set up an electrolysis circuit and collect/observe some products formed by the electrolysis of a solution. | ☐ | I can identify products formed by the electrolysis of a solution. | ☐ | I can collect and identify the products at each electrode during the electrolysis of a solution. | ☐ |
| C3.4.3 Electroplating | I can state that electrolysis can be used to electroplate metals. | ☐ | I can describe the process of electroplating. | ☐ | I can write half equations to show what happens at the anode and the cathode during electroplating. | ☐ |
| | I can describe some components of an electroplating circuit. | ☐ | I can suggest suitable substances for the anode, cathode, and electrolyte when electroplating. | ☐ | I can explain in detail the components of an electroplating circuit. | ☐ |

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| | I can explain that copper can be purified by electrolysis. | ☐ | I can explain how electrolysis is used to purify copper. | ☐ | I can write half equations to explain what happens at the anode and the cathode during the purification of copper using electrolysis. | ☐ |

# Y10 PPE Revision List – Physics 2019-20

Websites: kerboodle - https://www.kerboodle.com/users/login

## P1 Matter (Combined and Triple PPE)

## P1.1 The Particle Model

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P1.1.1 The model of the atom 1 | I can describe Dalton's and Thomson's atomic models. | ☐ | I can compare Dalton's and Thomson's atomic models. | ☐ | I can evaluate Thomson's atomic model given prior knowledge of the modern model of the atom. | ☐ |
| | I can describe Thomson's experiments with cathode rays. | ☐ | I can explain Thomson's evidence for electrons. | ☐ | I can explain how Thomson's observations led him to develop his atomic model. | ☐ |
| | I can state how Democritus developed his atomic model. | ☐ | I can explain why the atomic model did not develop between the times of Democritus and Dalton. | ☐ | I can explain how new technology helped Thomson to develop Dalton's atomic theory. | ☐ |
| P1.1.2 The model of the atom 2 | I can describe the observations of Rutherford, Geiger, and Marsden's experiment. | ☐ | I can explain why Rutherford's observations led him to reject Thomson's model. | ☐ | I can explain how Rutherford's observations led him to suggest that an atom has a nucleus. | ☐ |
| | I can name the subatomic particles in the modern (Bohr) model of the atom. | ☐ | I can describe in detail the structure of the Bohr atom. | ☐ | I can explain why Bohr's atomic model is better than Rutherford's model. | ☐ |
| | I can state the size of a typical atom. | ☐ | I can estimate the size of a molecule based on the size of an atom. | ☐ | I can calculate the relative sizes of atoms and nuclei in scale models. | ☐ |

## P1.1 Changes of State

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P1.2.1 Density | I can identify materials, and states of matter, with lower and higher densities. | ☐ | I can explain what density means. | ☐ | I can compare the meanings of density and mass. | ☐ |
| | I can calculate the volume of a cuboid. | ☐ | I can calculate the density of a material given its mass and the dimensions of a sample. | ☐ | I can calculate values for mass, volume, and density using the density equation. | ☐ |
| | I can describe the arrangement of particles in a substance in its solid, liquid and gas states. | ☐ | I can explain the differences in density of a substance in its different states using the particle model. | ☐ | I can explain differences in density between two substances in the same state using the particle model. | ☐ |
| P1.2.2 Energy and temperature | I can state what temperature is. | ☐ | I can compare the energy in different thermal stores. | ☐ | I can explain the difference between temperature and the energy in a thermal store using the particle model. | ☐ |
| | I can describe examples of physical and chemical changes. | ☐ | I can compare physical and chemical changes. | ☐ | I can explain the differences between physical and chemical changes using ideas about atoms. | ☐ |
| | I can record results in a supplied table. | ☐ | I can draw a suitable table to record results. | ☐ | I can plot two variables on a graph and draw a line of best fit. | ☐ |
| P1.2.3 Specific heat capacity | I can state the factors that determine the amount of energy needed to raise the temperature of an object. | ☐ | I can describe what specific heat capacity is. | ☐ | I can explain why it is useful to know the specific heat capacity of a material. | ☐ |
| | I can calculate the energy transferred on heating a material. | ☐ | I can calculate specific heat capacity by substituting values into an equation in which specific heat capacity is the subject. | ☐ | I can rearrange the specific heat capacity equation and use it in calculations. | ☐ |
| | I can compare results with other groups to check repeatability. | ☐ | I can compare the results with the accepted value for a material and suggest sources of error. | ☐ | I can calculate the percentage difference between a calculated value and the accepted value. | ☐ |
| P1.2.4 Specific latent heat | I can state the energy changes that occur in changes of state. | ☐ | I can describe what specific latent heat is in terms of energy changes that occur in changes of state. | ☐ | I can compare specific heat capacity and specific latent heat. | ☐ |
| | I can calculate the energy transferred in a change of state. | ☐ | I can calculate specific latent heat by substituting values into an equation in which specific latent heat is the subject. | ☐ | I can use the rearranged specific latent heat equation in calculations. | ☐ |
| | I can compare results with other groups stating if there is a spread in the results. | ☐ | I can compare results with other groups suggesting reasons for differences. | ☐ | I can evaluate results suggesting reasons for errors. | ☐ |

## P1.3 Pressure

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P1.3.1 Gas pressure and temperature | I can describe the motion of molecules in a gas. | ☐ | I can explain how a gas exerts a pressure. | ☐ | I can explain how the motion of molecules can affect gas pressure. | ☐ |
| | I can state the units of pressure. | ☐ | I can describe the relationship between temperature and pressure of a gas. | ☐ | I can explain the relationship between the temperature and pressure of a gas. | ☐ |
| | I can calculate the mean of recorded results. | ☐ | I can plot two variables on a graph and draw a line of best fit. | ☐ | I can describe the relationship between two variables based on the line of best fit. | ☐ |
| | I can describe the relationship between the pressure and volume of a gas at constant temperature. | ☐ | I can explain the relationship between the pressure and volume of a gas at constant temperature using ideas about the motion of particles. | ☐ | I can explain why pressure is inversely proportional to volume only if the temperature is kept constant. | ☐ |
| Triple Only<br>P1.3.2 Pressure and volume | I can describe how the product of pressure and volume is equal to a constant for a gas at constant temperature. | ☐ | I can use the equation for pressure and volume. | ☐ | I can apply the equation for pressure and volume and explain the effect of doing work on a gas. | ☐ |
| | I can describe the relationship between two variables from a graph. | ☐ | I can identify an inversely proportional relationship from a graph. | ☐ | I can plot a graph to prove an inversely proportional relationship. | ☐ |
| | I can describe a model of the Earth's atmosphere. | ☐ | I can use a model of the Earth's atmosphere to estimate pressure at different altitudes. | ☐ | I can evaluate a model of the Earth's atmosphere against real data. | ☐ |
| | I can state the cause of atmospheric pressure. | ☐ | I can describe what atmospheric pressure is and how it changes with height. | ☐ | I can explain why atmospheric pressure varies with height. | ☐ |
| Triple Only<br>P1.3.4 Liquid pressure | I can state two factors that affect the pressure in a liquid. | ☐ | I can calculate the pressure in a liquid at a particular depth. | ☐ | I can apply the pressure in a liquid equation to calculate depth or density. | ☐ |
| | I can use appropriate units in all answers. | ☐ | I can describe how pressure in a liquid changes with depth and density. | ☐ | I can explain why the pressure in a liquid varies with depth and density. | ☐ |
| | | | I can record calculated values with appropriate units and the number of significant figures asked for. | ☐ | I can suggest an appropriate number of significant figures and units for calculated answers. | ☐ |
| P1.3.5 Floating and sinking (H) | | | I can explain why there is an upwards force on a floating object. | ☐ | I can calculate the pressure differences acting on a floating object. | ☐ |
| | | | I can describe the forces acting on a floating object. | ☐ | I can explain why some objects float and others sink. | ☐ |
| | | | I can use results from experiments to find a relationship between upthrust and weight of fluid displaced. | ☐ | I can use results from experiments to conclude a relationship between upthrust and weight of fluid displaced. | ☐ |

## P2 Forces (Combined and Triple PPE)

## P2.1 Motion

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P2.1.1 Distance, time, and speed | I can measure simple distances and times. | ☐ | I can describe how to measure distance and time. | ☐ | I can explain the choice of instruments used to measure distance and time. | ☐ |
| | I can calculate the speed of an object. | ☐ | I can use the speed equation. | ☐ | I can calculate values for speed, distance, and time using the speed equation. | ☐ |
| | I can state some different units for speed. | ☐ | I can calculate speed by converting between miles per hour and metres per second. | ☐ | I can calculate speed by converting between everyday and scientific units. | ☐ |
| P2.1.2 Vectors and scalars | I can State some examples of scalar and vector quantities. | ☐ | I can explain the difference between a scalar and a vector. | ☐ | I can explain why it is difficult to combine vectors. | ☐ |
| | I can state that distance and speed are scalars, and that displacement and velocity are their vector equivalents. | ☐ | I can explain the difference between distance and displacement, and between speed and velocity. | ☐ | I can explain how an object can have zero displacement and non-zero distance, and how it can have constant speed and still accelerate. | ☐ |
| | I can label arrows to represent the size and direction of vectors. | ☐ | I can use positive and negative signs to show the direction of 1D vectors. | ☐ | I can explain how to combine vectors to find the resultant vector. | ☐ |
| P2.1.3 Acceleration | I can describe acceleration. | ☐ | I can explain what acceleration is. | ☐ | I can explain the difference between acceleration and velocity. | ☐ |
| | I can state the measurements needed to find acceleration. | ☐ | I can use the equation for acceleration to calculate acceleration. | ☐ | I can use the equation for acceleration to calculate acceleration, find velocity, initial velocity, or time. | ☐ |
| | I can identify anomalous measurements. | ☐ | I can identify sources of random and systematic error in the method. | ☐ | I can explain anomalous measurements and suggest improvements to the method to reduce the errors. | ☐ |

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|---|---|---|---|---|---|---|
| P2.1.4 Distance-time graphs | I can describe the motion of objects represented by simple distance-time graphs. | ☐ | I can interpret distance-time graphs and displacement-time graphs. | ☐ | I can sketch a displacement-time graph for a motion. | ☐ |
| | I can state that the gradient of a distance-time graph represents the speed. | ☐ | I can use a distance-time graph to calculate speed. | ☐ | I can describe the difference between distance-time and displacement-time graphs, and calculate velocity from a displacement-time graph. | ☐ |
| | I can measure distances and times to construct a distance-time graph. | ☐ | I can plan and collect measurements and draw a distance-time graph. | ☐ | I can plan, collect, and analyse a distance-time graph. | ☐ |
| P2.1.5 Velocity-time graphs | I can describe the motion of objects represented by simple speed-time graphs. | ☐ | I can interpret velocity-time graphs. | ☐ | I can sketch a velocity-time graph. | ☐ |
| | I can state how to calculate acceleration, velocity, and distance traveled, and whether they are vector or scalar quantities. | ☐ | I can use a velocity-time graph to calculate acceleration and distance travelled for an object with constant acceleration. | ☐ | I can use a velocity-time graph to calculate acceleration and distance travelled for a non-uniform motion. | ☐ |
| | I can calculate the area under a graph for zero accekeration. | ☐ | I can calculate the area under a graph representing constant acceleration. | ☐ | I can calculate the area under a curve by counting squares. | ☐ |
| P2.1.6 Equations of motion and kinetic energy | I can state the factors that affect kinetic energy. | ☐ | I can use the equation for kinetic energy. | ☐ | I can use the kinetic energy equation to find kinetic energy, mass, or velocity. | ☐ |
| | I can state the equation that links initial velocity, final velocity, acceleration, and distance travelled, and under what condition it can be used. | ☐ | I can use the equation that links initial velocity, final velocity, acceleration, and distance travelled. | ☐ | I can use the kinematics equation and rearrange to find initial velocity, final velocity, acceleration, or distance travelled. | ☐ |
| | I can state whether measurements are repeatable. | ☐ | I can explain whether measurements are repeatable. | ☐ | I can explain whether measurements are repeatable and identify possible sources of error. | ☐ |

# P2.2 Newton's Laws

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P2.2.1 Forces and interactions | I can describe the action of forces on objects. | ☐ | I can describe how forces arise. | ☐ | I can explain how forces arise. | ☐ |
| | I can state whether examples of forces are contact or non-contact forces. | ☐ | I can describe contact and non-contact forces. | ☐ | I can compare contact and non-contact forces. | ☐ |
| | I can state Newton's Third Law. | ☐ | I can describe the two forces in an interaction pair. | ☐ | I can apply Newton's Third Law. | ☐ |
| P2.2.2 Free body diagrams | I can identify the forces acting on a body. | ☐ | I can draw free body diagrams. | ☐ | I can draw and interpret free body diagrams. | ☐ |
| | I can calculate the resultant of two forces in one dimension. | ☐ | I can use vector diagrams to find the resultant of two forces acting at right angles to each other. | ☐ | I can use vector diagrams to show resolution of forces. | ☐ |
| | I can use a scale diagram to represent a single force. | ☐ | I can draw a scale diagram to represent two forces acting on an object. | ☐ | I can draw scale diagrams to resolve a force vector. | ☐ |
| P2.2.3 Newton's First Law | I can state Newton's First Law. | ☐ | I can explain why objects move with a steady speed. | ☐ | I can apply Newton's First Law to explain motion. | ☐ |
| | I can identify the forces acting on a body in equilibrium. | ☐ | I can draw a free body diagram for an object in equilibrium. | ☐ | I can use a free body diagram to explain the motion of a body in equilibrium. | ☐ |
| | | | I can define inertia. | ☐ | I can explain motion in terms of inertia. | ☐ |

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|---|---|---|---|---|---|---|
| P2.2.4 Newton's Second Law | I can state Newton's Second Law. | ☐ | I can use Newton's Second Law to calculate the resultant force on an object. | ☐ | I can use Newton's Second Law to calculate the resultant force, mass, or acceleration of an object. | ☐ |
| | I can state whether the forces acting on an object are balanced or not using a free body diagram. | ☐ | I can use free body diagrams to analyse situations in which there is a resultant force on an object. | ☐ | I can use a free body diagram to explain why objects move in a circle. | ☐ |
| | I can write down a conclusion for an investigation into the relationship between acceleration and force. | ☐ | I can use investigation results to describe the relationship between acceleration and resultant force. | ☐ | I can explain the extent to which the investigation results support Newton's Second Law. | ☐ |
| P2.2.5 Everyday forces and their effects (H) | | | I can analyse the motion of skydivers and cars in terms of forces. | ☐ | I can explain the motion of skydivers and cars using Newton's Laws. | ☐ |
| | | | I can describe how the component of weight down the slope changes with increasing height. | ☐ | I can calculate the component of weight parallel to the slope. | ☐ |
| | | | I can design preliminary experiments to determine the range of the independent variable. | ☐ | I can design preliminary experiments to determine the range of the independent variable and control variables. | ☐ |
| P2.2.6 Momentum (H) | | | I can use the equation for momentum. | ☐ | I can use the equation for momentum to find momentum, mass, or velocity. | ☐ |
| | | | I can use the Law of Conservation of Momentum to explain motion during collisions and explosions. | ☐ | I can apply and use the Law of Conservation of Momentum for both collisions and explosions. | ☐ |
| | | | I can select apparatus and design a method to measure momentum. | ☐ | I can apply prior knowledge to design an investigation to measure momentum after an explosion. | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| P2.2.7 Work and power | I can state some examples of energy stores. | ☐ | I can describe in terms of energy what happens when you do work. | ☐ | I can explain what happens when you do work. | ☐ |
| | I can state definitions and units for work and power. | ☐ | I can use equations for work and power, and convert between newton-metres and joules. | ☐ | I can apply equations for work and power. | ☐ |
| | I can measure the correct quantities, following instructions, and use these to calculate personal power. | ☐ | I can measure quantities and calculate personal power. | ☐ | I can design activities and measurements needed to calculate personal power. | ☐ |

## P2.3 Forces in Action

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P2.3.1 Stretching in springs | I can describe how you can deform objects. | ☐ | I can describe the difference between plastic and elastic behaviour. | ☐ | I can explain the use of elastic and plastic behaviour in modern materials. | ☐ |
| | I can describe the relationship between force and extension for a spring. | ☐ | I can explain the shape of a force–extension graph for a spring and calculate the spring constant. | ☐ | I can explain what factors will affect the spring constant. | ☐ |
| | I can follow instructions and carry out a practical to investigate the extension of a spring. | ☐ | I can plan and carry out an investigation into the extension of a spring. | ☐ | I can evaluate the method used in an investigation of the extension of a spring. | ☐ |
| P2.3.2 Stretching materials and storing energy | I can state that different materials have different shapes of force−extension graph. | ☐ | I can describe the relationship between force and extension for materials such as rubber, copper, and glass. | ☐ | I can interpret force–extension graphs and identify materials and their properties. | ☐ |
| | I can state the factors that affect the work done when stretching. | ☐ | I can calculate the work done in stretching. | ☐ | I can calculate the work done in stretching from a force–extension graph. | ☐ |
| | I can describe the relationship between force and extension from a graph. | ☐ | I can describe linear and non-linear relationships from force–extension graphs. | ☐ | I can explain the difference between a linear and a non-linear relationship between force and extension. | ☐ |
| P2.3.3 Gravitational field and potential energy | I can state the gravitational field strength, g, and state the acceleration due to gravity on Earth, also called g. | ☐ | I can explain what is meant by a gravitational field, gravity force, and weight. | ☐ | I can explain why gravitational field strength, g, and acceleration due to gravity, g, have the same magnitude. | ☐ |
| | I can state the factors affecting gravity force. | ☐ | I can calculate gravity force and gravitational potential energy. | ☐ | I can apply the equations for gravity force and gravitational potential energy and see how they are inter-related. | ☐ |
| | I can state that g decreases with increasing distance from a planet. | ☐ | I can describe how g varies with distance from a planet. | ☐ | I can use the inverse square relationship to determine g at a distance. | ☐ |

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P2.3.4 Turning forces | I can describe how forces cause a rotation. | ☐ | I can calculate moments given perpendicular distance and force. | ☐ | I can calculate moments where the perpendicular distance has to be identified. | ☐ |
| | I can state that clockwise moments equal anticlockwise moments when an object is in equilibrium. | ☐ | I can use the principle of moments. | ☐ | I can apply the principle of moments to simple machines. | ☐ |
| | I can follow instructions and use the principle of moments to find an unknown mass. | ☐ | I can design a method and use calculations to find an unknown mass. | ☐ | I can design a method to find an unknown mass and compare it with the measured mass. | ☐ |
| P2.3.5 Simple machines | I can describe uses of levers and gears. | ☐ | I can explain how levers and gears work. | ☐ | I can explain how gears can be used to multiply force or distance. | ☐ |
| | I can calculate a ratio of two values. | ☐ | I can use ratios to calculate forces or distances involved. | ☐ | I can use identified ratios to calculate forces or distances involved. | ☐ |
| | I can state the definition of mechanical advantage. | ☐ | I can calculate the mechanical advantage of simple machines. | ☐ | I can suggest how to improve the mechanical advantage of a range of simple machines. | ☐ |
| P2.3.6 Hydraulics | I can describe how a fluid causes a force and what factors affect the size of the force. | ☐ | I can explain how a fluid causes a force, and calculate the force. | ☐ | I can use the pressure equation to find pressure, force, or area. | ☐ |
| | I can name examples of hydraulic machines. | ☐ | I can describe how hydraulic machines work. | ☐ | I can calculate how much a hydraulic machine multiplies a force. | ☐ |
| | I can calculate a ratio of two values. | ☐ | I can calculate a value using ratios. | ☐ | I can use identified ratios and fractions to solve problems. | ☐ |

# P3 Electricity (Combined and Triple PPE)

## P3.1 Static and Charge

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P3.1.1 Electrostatics | I can describe what charge is and how insulators can be charged. | ☐ | I can describe why the effects of charge are not normally seen and how insulators become positively or negatively charged. | ☐ | I can explain how the transfer of electrons causes objects to become positively or negatively charged. | ☐ |
| | I can describe evidence for the attraction or repulsion between charged objects. | ☐ | I can explain what an electric field is and how it can be used to explain the behaviour of charges. | ☐ | I can sketch electric fields and explain where the field strength is greatest and how this relates to force. | ☐ |
| | I can state examples of uses and dangers of static electricity. | ☐ | I can describe the uses and dangers of static electricity. | ☐ | I can explain the uses and dangers of static electricity. | ☐ |
| P3.1.2 Electric current | I can state a definition for current and the instrument used to measure it. | ☐ | I can describe what current is and how to measure it. | ☐ | I can use a model to explain current. | ☐ |
| | I can state the equation relating charge, current, and time. | ☐ | I can calculate charge, current, or time. | ☐ | I can calculate charge, current, time, or number of electrons. | ☐ |
| | I can use numbers written in standard form in a calculation. | ☐ | I can record answers in standard form to the number of significant figures asked for. | ☐ | I can record answers in standard form and decide on an appropriate number of significant figures. | ☐ |

## P3.2 Simple Circuits

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P3.2.1 Circuits and potential difference | I can state a definition for potential difference. | ☐ | I can explain what potential difference is. | ☐ | I can use a model to explain potential difference and how it relates to electric fields. | ☐ |
| | I can state the equation that links energy, potential difference, and charge. | ☐ | I can use the equation that links energy, potential difference, and charge to calculate charge. | ☐ | I can use the equation that links energy, potential difference, and charge. | ☐ |
| | I can state the instrument used to measure potential difference. | ☐ | I can describe how to measure potential difference across a component. | ☐ | I can explain why a voltmeter is connected in parallel. | ☐ |
| P3.2.2 Series and parallel circuits | I can state the definitions of series and parallel circuits. | ☐ | I can describe the differences between series and parallel circuits. | ☐ | I can explain the difference between series and parallel circuits. | ☐ |
| | I can describe what happens to current and potential difference in a series circuit. | ☐ | I can describe what happens to current and potential difference in series and parallel circuits. | ☐ | I can predict current and potential difference values in series and parallel circuits. | ☐ |
| | I can follow instructions and connect meters in series and parallel circuits. | ☐ | I can describe how to connect meters in series and parallel circuits to test hypotheses. | ☐ | I can connect meters in series and parallel circuits and explain the extent to which the results support the hypothesis. | ☐ |
| P3.2.3 Resistance | I can state a definition of resistance. | ☐ | I can describe the structure of a metal and how it relates to resistance. | ☐ | I can explain why resistance in a metal wire changes with length, cross-sectional area, and type of metal. | ☐ |
| | I can state that current depends on resistance and potential difference. | ☐ | I can use the equation for resistance. | ☐ | I can apply the equation for resistance to everyday situations. | ☐ |
| | I can follow instructions and carry out a fair test to investigate one independent variable. | ☐ | I can plan and carry out a series of fair tests to identify the factors that affect resistance in a wire. | ☐ | I can plan a series of fair tests to identify the factors that affect resistance in a wire, | ☐ |
| P3.2.4 Graphs of p.d. and current | I can draw a circuit diagram showing how to find the current through and potential difference across a component. | ☐ | I can describe how to take measurements to plot graphs of current and potential difference. | ☐ | I can design an investigation to take measurements to plot graphs of current and potential difference. | ☐ |
| | I can sketch characteristic graphs for wires, lamps, and diodes. | ☐ | I can interpret characteristic graphs for wires, lamps, and diodes. | ☐ | I can explain characteristic graphs for wires, lamps, and diodes. | ☐ |
| | I can plot results on a graph with prepared axes. | ☐ | I can plot a graph with positive and negative axes, choosing suitable scales. | ☐ | I can plot graphs, choosing suitable scales, and draw appropriate lines of best fit. | ☐ |
| P3.2.5 LDRs and thermistors | I can state that the resistance of a thermistor decreases with increasing temperature. | ☐ | I can interpret the graph of resistance against temperature for a thermistor. | ☐ | I can explain the graph of resistance against temperature for a thermistor. | ☐ |
| | I can state that the resistance of a light-dependent resistor (LDR) descreases with increasing light intensity. | ☐ | I can interpret the graph of resistance against light intensity for an LDR. | ☐ | I can explain the graph of resistance against light intensity for an LDR. | ☐ |
| | I can state one source of systematic error and one of random error. | ☐ | I can identify sources of random and systematic error in the investigation. | ☐ | I can identify sources of random and systematic error in the investigation and minimise their effects. | ☐ |
| P3.2.6 Net resistance and circuit calculations | I can describe the difference between resistance and net resistance. | ☐ | I can explain what net resistance is. | ☐ | I can explain what happens to net resistance in series and parallel circuits. | ☐ |
| | I can calculate current, potential difference, or resistance in a series circuit. | ☐ | I can calculate potential difference, current, and resistance in series and parallel circuits. | ☐ | I can design a calculation involving potential difference, current, and resistance in series and parallel circuits. | ☐ |
| | I can state the measurements needed to calculate resistance. | ☐ | I can describe how to take measurements to calculate resistance in series and parallel circuits. | ☐ | I can explain how to take measurements to determine net resistance and component resistance in series and parallel circuits. | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| P3.2.7 Sensing circuits | I can state examples of sensors used in circuits. | ☐ | I can explain how to use a circuit to monitor the environment. | ☐ | I can design a circuit to monitor the environment. | ☐ |
| | I can calculate the p.d. across a component given the current and resistance. | ☐ | I can calculate the output of a sensing circuit. | ☐ | I can calculate the output of a sensing circuit when conditions change. | ☐ |
| | I can describe how the p.d. is shared between two resistors in series. | ☐ | I can describe how the p.d. across each of two resistors in series is proportional to their resistance. | ☐ | I can explain that the p.d. across each of two resistors in series is proportional to their share of net resistance. | ☐ |
| P3.2.8 Electrical power | I can state a definition of power. | ☐ | I can explain what power means and how it relates to potential difference and current. | ☐ | I can apply knowledge of power and circuits to predict power output in series and parallel circuits. | ☐ |
| | I can state equations for electrical power. | ☐ | I can use equations for power. | ☐ | I can use and apply equations for power. | ☐ |
| | I can carry out an experiment to test a given hypothesis. | ☐ | I can design an experiment to test a hypothesis. | ☐ | I can design an experiment to test a hypothesis and explain the extent to which the results support the hypothesis. | ☐ |

# P4 Magnetism and Magnetic Fields (Combined and Triple PPE)

## P4.1 Magnets and Magnetic Fields

| Lesson | Aiming for 4 | | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|---|
| P4.1.1 Magnets and magnetic fields | I can state that magnets can attract or repel. | ☐ | I can describe how magnets behave and link this behaviour to magnetic field lines. | ☐ | I can explain the behaviour of a compass in terms of the Earth's magnetic field lines. | ☐ |
| | I can state examples of permanent and induced magnetism. | ☐ | I can describe the difference between permanent and induced magnetism. | ☐ | I can explain induced and permanent magnetism using the domain theory. | ☐ |
| | I can describe an experiment that allows magnetic field lines to be seen. | ☐ | I can draw 2D representations of magnetic field lines for a bar magnet and the Earth. | ☐ | I can draw 2D representations of magnetic field lines to explain attraction and repulsion. | ☐ |
| P4.1.2 Currents and fields | I can describe evidence for the magnetic field around a wire. | ☐ | I can describe the factors affecting the strength of the magnetic field around a wire. | ☐ | I can explain the factors affecting the strength of the magnetic field around a wire. | ☐ |
| | I can draw the pattern of the magnetic field around a wire. | ☐ | I can describe the direction of the magnetic field around a wire. | ☐ | I can explain why increasing the number of loops makes the magnetic field around a solenoid larger than that | ☐ |
| | I can follow instructions to measure the strength of an electromagnet. | ☐ | I can plan and carry out a method to measure the strength of an electromagnet. | ☐ | I can plan and carry out a method to collect continuous data to measure the strength of an electromagnet. | ☐ |

## P4.2 Uses of Magnetism

| Lesson | Aiming for 4 | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|
| P4.2.1 Currents and forces | | I can describe the force between a magnet and current-carrying conductor, and use Fleming's left-hand rule to work out its | ☐ | I can explain why there is a force on a current-carrying wire and between attracting magnets. | ☐ |
| | | I can calculate the force on a current-carrying wire. | ☐ | I can use the equation for force on a current-carrying wire to find force, current, length of conductor, or field | ☐ |
| | | I can draw the field lines for a current-carrying wire and between attracting magnets. | ☐ | I can use a drawing of combined field lines to explain direction of the force. | ☐ |
| P4.2.2 Motors | | I can describe how you can use a current-carrying wire and magnets to make a coil rotate. | ☐ | I can describe how a motor works. | ☐ |
| | | I can explain why the coil rotates in terms of magnetic fields. | ☐ | I can explain the factors that affect the speed of rotation in terms of magnetic fields. | ☐ |
| | | I can describe uses of motors in everyday life. | ☐ | I can explain how motors are designed for different applications. | ☐ |
| Triple Only<br>P4.2.3 Electromagnetic induction | | I can describe electromagnetic induction. | ☐ | I can explain how to increase the induced potential difference. | ☐ |
| | | I can describe the direction of the induced potential difference. | ☐ | I can explain the direction of the induced potential difference. | ☐ |
| | | I can calculate a value using ratios. | ☐ | I can use ratios to estimate the induced potential difference when one or more factors are changed. | ☐ |

Triple Only

| Lesson | Aiming for 4 | Aiming for 6 | | Aiming for 8 | |
|---|---|---|---|---|---|
| P4.2.4 Generators | | I can describe how electromagnetic induction is used to produce a.c. and d.c. | ☐ | I can explain how electromagnetic induction is used to produce a.c. and d.c. | ☐ |
| | | I can describe a.c. and d.c. | ☐ | Compare a.c. and d.c. generators. | ☐ |
| | | I can describe how the output of generators can be increased. | ☐ | I can explain how the output of generators can be increased. | ☐ |
| P4.2.5 Transformers | | I can explain the construction of a transformer. | ☐ | I can explain the construction of a transformer. | ☐ |
| | | I can calculate potential differences on the primary and secondary coils using ratios. | ☐ | I can calculate potential differences and numbers of turns on the primary and secondary coils using the transformer equation. | ☐ |
| | | I can describe the magnetic field around a wire carrying a.c. | ☐ | I can explain the forces between coils carrying a.c. current. | ☐ |
| P4.2.6 Microphones and loudspeakers | | I can describe the structure of a microphone. | ☐ | I can explain how a microphone works. | ☐ |
| | | I can describe the structure of a loudspeaker. | ☐ | I can explain how a loudspeaker works. | ☐ |
| | | I can compare loudspeakers and microphones. | ☐ | I can explain whether a loudspeaker can be used as a microphone. | ☐ |

## Equations that are NOT on the formula sheet and need to be memorized:

### EQUATION – Recall and Use

Word Equation: $Weight = Mass \times Gravity$

Symbol Equation: $W = m \times g$

Units:

Weight is measured in Newtons (N)

Mass is measured in Kilograms (kg)

Gravity is measured in N/kg

### EQUATION – Recall and Use

Word Equation: $Work\ Done = Force \times Distance$

Symbol Equation: $W = F \times d$

Units:

Work Done is measured in Joules (J)

Force is measured in Newtons (N)

Distance is measured in metres (m)

### EQUATION – Recall and Use

Word Equation: $Force = Spring\ Constant \times Extension$

Symbol Equation: $F = k \times e$

Units:

Force is measured in Newtons (N)

Spring Constant is measured in Newtons per metre (N/m)

extension is measured in metres (m)

### EQUATION – Recall and Use

Word Equation: $Pressure = Force/Area$

Symbol Equation: $P = F/A$

Units:

Pressure is measured in Pascals (Pa)

Force is measured in Newtons (N)

Area is measured in metres squared ($m^2$)

## EQUATION – Recall and Use

Word Equation:

$$distance = Velocity \times Time$$

Symbol Equation:

$$s = v \times t$$

Units:

Distance is measured in meters (m)

Velocity is measured in meters per second (m/s)

Time is measured in seconds (s)

## EQUATION – Recall and Use

Word Equation:

$$acceleration = \frac{change\ in\ velocity}{Time}$$

Symbol Equation:

$$a = \frac{\Delta v}{t}$$

Units:

Acceleration is measured in meters per second squared($m/s^2$)

Velocity is measured in meters per second (m/s)

Time is measured in seconds (s)

## EQUATION – Recall and Use

Word Equation:

$$Force = mass \times acceleration$$

Symbol Equation:

$$F = m \times a$$

Units:

Force is measured in Newtons (N)

Mass is measured in kilograms (kg)

Acceleration is measured in meters per second squared($m/s^2$)

## EQUATION – Recall and Use

Word Equation:

$$momentum = mass \times velocity$$

Symbol Equation:

$$P = m \times v$$

Units:

Momentum is measured in kg m/s

Mass is measured in kilograms (kg)

Velocity is measured in meters per second (m/s)

## EQUATION – Recall and Use

Word Equation:

$$K.E = \frac{1}{2} \times mass \times velocity^2$$

Symbol Equation:

$$E_K = \frac{1}{2} \times m \times v^2$$

Units:

Kinetic Energy is measured in Joules (J)

Mass is measured in Kilograms (kg)

Velocity/speed is measured in metres per second (m/s)

## EQUATION – Recall and Use

Word Equation:

$$G.P.E = mass \times gravity \times height$$

Symbol Equation:

$$E_P = m \times g \times h$$

Units:

Gravitational Potential is measured in Joules (J)

Mass is measured in Kilograms (kg)

Gravity is measured in N/kg

Height is measured in metres (m)

## EQUATION – Recall and Use

Word Equation:

$$Power = \frac{Energy}{time}$$

Symbol Equation:

$P = \frac{E}{t}$ Can be used with 2 sets of units.

Units:

Power is measured in Watts (W) or kW

Energy is measured in Joules (J) or kWh

Time is measured in seconds (s) or h

## EQUATION – Recall and Use

Word Equation:

$$Wave\ speed = frequency \times wavelength$$

Symbol Equation:

$$v = f \times \lambda$$

Units:

Wave speed is measured in metres per second(m/s or $ms^{-1}$)

Frequency is measured in Hertz(Hz)

Wavelength is measured in metres(m)

## EQUATION – Recall and Use

Word Equation:

$$Current = \frac{Charge}{time}$$

Symbol Equation:

$$I = \frac{Q}{t}$$

Units:

Current is measured in Amps (A)

Charge is measured in Coulombs (C)

Time is measured in seconds (s)

## EQUATION – Recall and Use

Word Equation:

$$Voltage(p.d.) = Current \times Resistance$$

Symbol Equation:

$$V = I \times R$$

Units:

Voltage(p.d.) is measured in Volts (V)

Current is measured in Amps(A)

Resistance is measured in Ohms (Ω)

## EQUATION – Recall and Use

Word Equation:

$$Power = Voltage \times Current$$

Symbol Equation:

$$P = V \times I$$

Units:

Power is measured in Watts (W)

Voltage(p.d.) is measured in Volts (V)

Current is measured in Amps(A)

## EQUATION – Recall and Use

Word Equation:

$$Power = Current^2 \times Resistance$$

Symbol Equation:

$$P = I^2 \times R$$

Units:

Power is measured in Watts (W)

Current is measured in Amps (A)

Resistance is measured in Ohms (Ω)

## EQUATION – Recall and Use

Word Equation:

$$Energy = Power \times time$$

Symbol Equation:

$$E = P \times t$$

Units:

Energy is measured in Joules (J)

Power is measured in Watts (W)

Time is measured in Seconds (s)

## EQUATION – Recall and Use

Word Equation:

$$Voltage = \frac{Energy}{Charge}$$

Symbol Equation:

$$V = \frac{W}{Q}$$

Units:

Voltage is measured in Volts (V)

Energy is measured in Joules (J)

Charge is measured in Coulombs (C)

## EQUATION – Recall and Use

Word Equation:

$$Density = Mass \div Volume$$

Symbol Equation:

$$\rho = \frac{m}{V}$$

Units: Note: Two sets of units.

Density is measured in kilograms per metre$^3$ (kg/m$^3$) or (g/cm$^3$)

Mass is measured in Kilograms (kg) or (g)

Volume is measured in metres cubed (m$^3$) or (cm$^3$)

# AQA (9-1) GCSE Business – revision list year 10

### 3.1 The purpose and nature of businesses

| 3.1.1 The purpose and nature of businesses | |
|---|---|
| **Content** | **Additional information** |
| • Purpose of business<br>• Reasons for starting a business<br>• Basic functions and types of business<br>• Business enterprise and entrepreneurship<br>• Dynamic nature of business | • Understand what a business is and the reasons for starting a business<br>• Understand the difference between goods and services, needs and wants<br>• Understand the meaning of factors of production –<br>• Define opportunity cost<br>• Understand primary, secondary and tertiary<br>• Understand the terms enterprise and entrepreneur<br>• Outline the characteristics of an entrepreneur<br>• Outline the objectives of an entrepreneur,<br>• Understand that businesses face a constantly changing business environment |

| 3.1.2 Business ownership | |
|---|---|
| **Content** | **Additional information** |
| • Sole traders<br>• Partnerships<br>• Private limited companies (ltd)<br>• Public limited companies (plc)<br>• Not-for-profit organisations | • Understand the different legal structures that businesses adopt<br>• Analyse the benefits and drawbacks of each legal structure)<br>• Understand the concept of limited liability and which legal structures benefit from this<br>• Evaluate which legal structure would be most appropriate for a variety of business examples, including new start-up businesses and large established businesses. |

| 3.1.3 Setting business aims and objectives | |
|---|---|
| **Content** | **Additional information** |
| • What are business aims and objectives<br>• Purpose of setting objectives<br>• Role of objectives in running a business<br>• Changing objectives<br>• Use of objectives in judging success | • Understand the main aims and objectives for businesses:<br>• Understand the role of objectives in running a business<br>• Understand how and why the objectives set will differ between businesses<br>• Understand how and why the objectives set may change as businesses evolve<br>• Understand the success of a business can be measured in other ways than profit. |

| 3.1.4 Stakeholders | |
|---|---|
| **Content** | **Additional information** |
| • Main stakeholders of business<br>• Objectives of stakeholders<br>• Impact of business activity on stakeholders<br>• Impact and influence stakeholders have on businesses | • Understand what is meant by a stakeholder and who the main stakeholders of a business are<br>• Understand stakeholders' main objectives<br>• Understand the impact and influence stakeholders have on businesses and their objectives and how businesses may face conflict between stakeholders. |

| 3.1.5 Business location | |
|---|---|
| **Content** | **Additional information** |
| • Factors influencing the location decision of a business | • understand the factors that influence where a business is located |

| 3.1.6 Business planning | |
|---|---|
| **Content** | **Additional information** |
| • The purpose of business planning<br>• The main sections within a business plan<br>• Basic financial terms<br>• Basic financial calculations | • Understand the reasons why businesses create plans<br>• Understand the main sections of a business plan<br>• Analyse the benefits and drawbacks of business planning<br>• Understand the difference between variable costs, fixed costs and total costs<br>• Understand the concept of revenue, costs, profit and loss. |

| 3.1.7 Expanding a business | |
|---|---|
| **Content** | **Additional information** |
| • Methods of expansion<br>• Benefits and drawbacks of expansion<br>• Economies of scale<br>• Diseconomies of scale | • Discuss the advantages and disadvantages of methods of growth<br>• Understand the methods used by businesses when expanding<br>• Understand the benefits of growth and the drawbacks of growth<br>• Understand the meaning of purchasing and technical economies of scale<br>• Understand that with growth businesses increase the risk of diseconomies of scale occurring<br>• Calculate and interpret average unit costs. |

### 3.5 Marketing

| 3.5.1 identifying and understanding customers | |
|---|---|
| **Content** | **Additional information** |
| The importance of identifying and satisfying customer needs | the importance of identifying and satisfying customer needs, in order to:<br><br>• Provide a product or service that customers will buy<br>• Increase sales<br>• Select the correct marketing mix<br>• Avoid costly mistakes<br>• Be competitive |

| 3.5.2 segmentation | |
|---|---|
| **Content** | **Additional information** |
| Types of segmentation | understand how and why different businesses use segmentation to target customers, including:<br><br>• Gender<br>• Age<br>• Location<br>• Income |

| 3.5.3 The purpose and methods of market research | |
|---|---|
| **Content** | **Additional information** |
| Purpose of market research<br><br>Collect information about:<br><br>• Demand<br>• Competition<br>• Target market | • understand why businesses conduct market research, such as to identify market opportunities and to get a better insight into their customers and competitors. |
| Methods of market research to include primary and secondary:<br><br>• Questionnaires<br>• Surveys<br>• Interviews<br>• Focus groups<br>• Internet research<br>• Printed press eg newspapers | • identify the benefits and drawbacks for various market research techniques and select the best method for a given business. |
| Use of market research:<br><br>information that may help decision making | • interpret and use qualitative and quantitative market research findings to help make appropriate decisions for different types of business.<br>• manipulate and interpret data from tables and charts.<br>• identify market size and market share. |

| 3.5.4 The elements of the marketing mix: Price, Product. Promotion and Place (4Ps) | |
|---|---|
| **Content** | **Additional information** |
| Pricing methods, including:<br><br>• Price skimming<br>• Price penetration<br>• Competitive pricing<br>• Loss leader<br>• Cost-plus | • understand the main features of the pricing methods and the impact they will have on a business. |
| The factors that include pricing decisions, including:<br><br>• Costs<br>• Nature of the market<br>• Degree of competition<br>• Product life cycle | • recognise the factors, internal and external, which might influence the pricing decision, particularly as businesses grow and expand.<br>• evaluate these factors and use them to assess the suitability of pricing methods for a given business.<br>• understand the basic relationship between price and demand ie as prices rise demand is likely to fall. |
| Product | • benefits and risks of developing new products.<br>importance of product design, image and the needs of the target market when designing new products. |
| Product differentiation:<br><br>• Unique Selling Point (USP)<br>• Brand image | • significance of having a USP in a competitive market and the importance of a good brand image. |
| The product lifecycle:<br><br>• Research and development<br>• Introduction<br>• Growth<br>• Maturity<br>• Decline<br>• Extension strategies:<br>  • Updating package<br>  • Adding more or different features<br>  • Changing target market<br>  • Advertising<br>  • Price reduction | • understand the product life cycle and demonstrate how demand for a product or service might change over time.<br>• evaluate the effectiveness of extension strategies and when they would be suitable. |
| Product portfolio | • understand how and why businesses might broaden and balance their product portfolio using the Boston Matrix.<br>• identify and explain the four categories of the Boston Box. |
| Promotional methods<br><br>Advertising including:<br><br>• Newspapers<br>• Magazines<br>• Television<br>• Internet<br>• Billboards | • promotional methods which are likely to be used by a given business.<br>• benefits and drawbacks of promotional methods used by businesses.<br>• analyse factors influencing the selection of the promotion mix to assess their suitability for a given business. |

| | |
|---|---|
| PR:<br><br>• Sales promotion<br>• Point of sales displays<br>• 2 for 1 offers<br>• Free gifts<br>• Samples<br>• Coupons<br>• Competitions<br>• Sponsorship<br>• Social media<br><br>Factors influencing the selection of the promotional mix:<br><br>• Finance available<br>• Competitor actions<br>• The nature of the product or service<br>• The nature of the market<br>• Target market<br><br>Reasons for promotion:<br><br>• Inform/remind customers about the product<br>• Create or increase sales<br>• Create or change the image of the product<br>• Persuade customers to buy the product | |
| Place (the different channels of distribution used by businesses):<br><br>• Retailers<br>• Wholesalers<br>• Telesales | • different channels of distribution used by businesses to gain access to potential customers.<br><br>• analyse the appropriateness of each distribution method for a given scenario. |
| E-commerce and m-commerce | • analyse the growing importance of e-commerce and m-commerce and how it can extend the reach of businesses to include international markets.<br>• benefits and drawbacks of a business using e-commerce and m-commerce. |
| • Integrated nature of the marketing mix<br><br>• Using the marketing mix to inform and implement business decisions | • importance of the four elements and how they work together.<br>• recommend appropriate marketing activities for a given business.<br>• recognise how the marketing mix evolves over time and evaluate how businesses may react to this. |

### 3.6 Finance (year 10)

| 3.6.1 Sources of Finance | |
|---|---|
| **Content** | **Additional information** |
| • Methods businesses use to raise finance<br>• Appropriateness of sources of finance | • Understand the main internal and external sources of finance available (including family and friends, retained profit, a new share issue, obtaining a loan or mortgage, selling unwanted assets, overdrafts, trade credit, hire purchase and government grants)<br>• Analyse the advantages and disadvantages of each method for a given situation<br>• Evaluate the suitability of sources of finance for new and established businesses. |

| 3.6.2 Cash flow | |
|---|---|
| **Content** | **Additional information** |
| • Importance of cash to business<br>• Interpreting cash flow forecasts<br>• Difference between cash and profit | • Understand the consequences of cash flow problems and the effect of positive cash flow<br>• Understand how and why cash flow forecasts are constructed<br>• Complete and interpret sections of a cash flow forecast<br>• Evaluate possible solutions to cash flow problems |

| 3.6.3 | |
|---|---|
| **Content** | **Additional information** |
| • Basic financial terms<br>• Basic calculations<br>• Average rate of return<br>• Break-even | • Understand the difference between variable costs, fixed costs and total costs<br>• Understand the concept of revenue, costs, profit and loss<br>• Understand the main investment projects that businesses undertake and to be able to calculate the average rate of return for these projects<br>• Understand the meaning of the term break-even output and interpret break-even charts<br>• Identify the break-even level of output and margin of safety from a break-even chart<br>• Evaluate the value of using break-even analysis to a business. |

# Child Development

**Revision Check List**

**R018**

**Exam Technique:**

- Underline key words in the question with a different colour.
- Look to see how many marks the question is worth.
- Check for command words e.g. **List** means name them, **explain,** requires detailed descriptions, examples and advantages/disadvantage regarding that topic.
- Longer answer questions:

  6 mark questions require 4 detailed points and examples.

  8 mark questions require 6 detailed points and examples

## Topics to Revise: RO18

Learning Objective 1:

- Factors that affect the decision to have children
- Pre-conception Health
- Roles and responsibilities of parenthood
- Methods of contraception, their efficiency and reliability
- The structure and function of the male and female reproductive systems.

Learning Objective 2:

- The roles of the different health professionals supporting the pregnant mother.
- The importance of antenatal and parenting classes.
- Routine checks carried out at an antenatal clinic.
- Specialised diagnostic tests.
- The choices available for delivery.

- The stages of labour and the methods of delivery, including pain relief.

Learning Objective 3:

- The postnatal checks of the newborn baby.
- The specific needs of the pre-term (premature) baby.
- The postnatal provision available for the mother and baby, and the postnatal needs of the family.
- Conditions for development.

Learning Objective 4:


- How much immunity to disease and infection can be acquired.
- How to recognise and treat common childhood ailments and diseases.
- When to seek treatment by a doctor, and when emergency medical help should be sought.
- Diet-related illnesses.
- The needs of an ill child.
- How to prepare a child for a stay in hospital.

Learning Objective 5:

- How to create a safe, child-friendly environment.
- Safety labelling.
- To be aware of the most common childhood accidents.
- Social safety.

Lion Mark - Toy safety

# OCR GCSE Computer Science (J276)

Specification: http://www.ocr.org.uk/qualifications/gcse-computer-science-j276-from-2016/

You will have two exam papers, each lasting 1 hour 30 minutes:

- Computer systems (J276/01)
- Computational thinking, algorithms and programming (J276/02)

You will need to attempt all questions; each exam paper will be a whole new unseen paper which is being provided by OCR. The papers will include a mixture of short and long answer questions, some of which will require you to write pseudocode/algorithms.

**Remember you will not be allowed to use a calculator.**

You may find it useful to practice your programming skills – use https://www.codecademy.com/ and http://www.learnpython.org/ and https://snakify.org/en/

## To prepare for the PPEs you should:

- Refer to your colour coded specification
    - Start your revision using the red coloured sections , then do the orange ones, then the green ones
- Use your textbook – attempt end of chapter questions as well as using your own notes/previous exam papers
- Presentations and resources already on the N drive
- Past Papers and mark schemes for the old specification can be found here under the subheading past papers, mark schemes and reports: http://www.ocr.org.uk/qualifications/gcse-computing-j275-from-2012/

## Other useful resources:

**GCSE MOOC – you should have already registered as a learner -**
https://www.cambridgegcsecomputing.org/

## Teach-ict.com (Username – RG411EE, Password: binary9) :

http://www.teach-ict.com/2016/GCSE_Computing/OCR_J276/OCR_J276_home.html

## BBC Bitesize GCSE Computer Science: Although not specific to our course, there is a lot of useful information and quizzes to be used on there. http://www.bbc.co.uk/education/subjects/z34k7ty

**You should be keeping up to date with technology news:**
BBC Click: http://news.bbc.co.uk/1/hi/programmes/click_online/
BBC Technology news: http://www.bbc.co.uk/news/technology/
The Guardian Technology news: http://www.guardian.co.uk/technology
The Daily Telegraph technology news: http://www.telegraph.co.uk/technology/
How Stuff Works: http://electronics.howstuffworks.com/tech

**YouTube Playlists:**
**CraignDave** - https://youtu.be/t8H6-anK0t4?list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-

**Computer Science Tutor** -
https://www.youtube.com/playlist?list=PL04uZ7242_M60Z2F8qV7sId99cuwV_Z3T

# Design & Technology – Core

(This applies to all material areas)

| Key areas | I know this | Ask for support |
|---|---|---|
| The impact of new and emerging technologies | | |
| Evaluating new and emerging technologies to inform design decisions | | |
| Energy Generation, storage and choosing appropriate sources | | |
| Smart and composite materials and technical textiles | | |
| Mechanical devices used to produce movement – Levers and linkages | | |
| Papers and Boards | | |
| Polymers | | |
| Timbers | | |
| Textiles | | |
| Basic Maths | | |

# Design & Technology - Textiles

| Key areas | In particular | I know this | Ask for support |
|---|---|---|---|
| **Design and development**<br><br>The design process | Context<br>Analysis<br>Design Brief<br>Research<br>Specification<br>Designs<br>Development<br>Final Design<br>Planning<br>Making<br>Evaluating<br>Testing<br>Modification<br>Use of ICT in designing | | |
| **Sustainability** | The 6Rs<br>Social moral and cultural issues<br>Environmental issues<br>Globalisation | | |
| **Materials** | Fibres and their performance characteristics<br>Fabrics and their performance characteristics<br>Modern and Smart materials | | |
| **Processes and Construction methods** | Weaving<br>Knitting<br>Joining fabrics<br>Finishing<br>Decorative techniques<br>Printing techniques<br>Patterns and marking<br>Care labelling and symbols | | |
| **Industrial production** | Job, batch, mass, and JIT production<br>Dyeing and printing<br>Patterns grading and lay planning<br>Health and safety | | |

| | | | |
|---|---|---|---|
| | QA & QC<br>Use of ICT in production- CAD/CAM | | |
| ACCESSFM ME | Meaning of each of the words | | |
| Basic Maths | To apply to questions areas, use of basic formulas | | |
| There will be some long answer questions so please be prepared to write a few paragraphs, check spelling (sometimes the words you use are in the exam paper already so copy the correct spelling!), grammar and punctuation. | | | |

# Design & Technology – Product Design

| Key areas | In particular | I know this | Ask for support |
|---|---|---|---|
| Design Process | Key words – definitions and examples and reasons for each<br>Context<br>Analysis<br>Design Brief<br>Research<br>Specification<br>Designs<br>Development<br>Final Design<br>Planning<br>Making<br>Evaluating<br>Testing<br>Modification | | |
| Manufacturing processes | Plastic moulding techniques | | |
| Finishing methods | On different materials – especially polymers | | |
| Shaping materials | Polymers | | |
| Modelling techniques | Ways of making models including CAD / CAM modelling – Advantages and Disadvantages | | |
| Purpose of modelling | Why do designers produce models | | |
| Manufacturing systems | One off / batch / mass – costs JIT | Manufacturing systems | One off / batch / mass – costs JIT |
| Modelling materials | What materials are suitable for modelling – including smart and modern materials | | |
| Plastic processes | How plastics are formed into products – the different methods – injection moulding, extrusion, blow moulding, line bending, vacuum forming and methods of joining polymers | | |
| Plastic properties | Why certain plastics are used in certain situations | | |
| Product development | Improving designs. | | |
| ACCESSFM ME | Meaning of each of the words | | |
| Basic Maths | To apply to questions areas, use of basic formulas | | |
| There will be some long answer questions so please be prepared to write a few paragraphs, check spelling (sometimes the words you use are in the exam paper already so copy the correct spelling!), grammar and punctuation. | | | |

# Design & Technology – Graphics

| Key areas | In particular | I know this | Ask for support |
|---|---|---|---|
| Design Process | Key words – definitions and examples and reasons for each:<br>*Context*<br>*Analysis*<br>*Design Brief*<br>*Research*<br>*Specification*<br>*Designs*<br>*Development*<br>*Final Design*<br>*Planning*<br>*Making*<br>*Evaluating*<br>*Testing*<br>*Modification* | | |
| Packaging materials | Different materials used to package products – reasons – advantages and disadvantages | | |
| Book binding | All the types and processes | | |
| Materials - Paper and Board | Different types, their uses and properties | | |
| Joining methods | Plastics and board and card | | |
| Manufacturing systems | One off / batch / mass – costs JIT | | |
| Modelling materials | What materials are suitable for modelling – including smart and modern materials | | |
| Purpose of modelling | Why do designers produce models | | |
| Modelling techniques | Ways of making models including CAD / CAM modelling – Advantages and Disadvantages | | |
| ACCESSFM ME | Meaning of each of the words | | |
| Basic Maths | To apply to questions areas, use of basic formulas | | |
| There will be some long answer questions so please be prepared to write a few paragraphs, check spelling (sometimes the words you use are in the exam paper already so copy the correct spelling!), grammar and punctuation. | | | |

# How to be a successful AQA Drama GCSE Student.

The written exam is your chance to share your expertise with the examiner, showing your knowledge and understanding of the set text (The 39 Steps) as well as your analytical and evaluation skills in reviewing a live theatre production.

You will be provided with a clean copy of your set text, 'The 39 Steps' which you need, to answer questions in Section B.

The exam is 1 hour 45 minutes

**Section A: Theatre roles and terminology**

Multiple choice (4 Marks)

**Section B: Study of set play**

Four questions on a given extract from the set play chosen (44 marks)

**Section C: Live theatre production**

One question (from a choice) on the work of theatre makers in a single live theatre production (32 marks)

| **Create a flash card for each of the following topics** | |
|---|---|
| **Topic** | **Flashcard** |
| **Section A: Theatre roles and terminology** | |
| STAGE POSITIONING (E.G. STAGE RIGHT, DOWNSTAGE, ETC) | |
| STAGING CONFIGURATION: THEATRE IN THE ROUND | |
| STAGING CONFIGURATION: PROSCENIUM ARCH | |
| STAGING CONFIGURATION: THRUST STAGE | |
| STAGING CONFIGURATION: TRAVERSE | |
| STAGING CONFIGURATION: END ON | |
| STAGING CONFIGURATION: PROMENADE | |
| ROLE AND RESPONSIBILITY: PLAYWRIGHT | |
| ROLE AND RESPONSIBILITY:PERFORMER | |
| ROLE AND RESPONSIBILITY: UNDERSTUDY | |

| | |
|---|---|
| ROLE AND RESPONSIBILITY: LIGHTING DESIGNER | |
| ROLE AND RESPONSIBILITY: SOUND DESIGNER | |
| ROLE AND RESPONSIBILITY SET DESIGNER | |
| ROLE AND RESPONSIBILITY: COSTUME DESIGNER | |
| ROLE AND RESPONSIBILITY: PUPPET DESIGNER | |
| ROLE AND RESPONSIBILITY: TECHNICIAL | |
| ROLE AND RESPONSIBILITY: DIRECTOR | |
| ROLE AND RESPONSIBILITY: STAGE MANAGER | |
| ROLE AND RESPONSIBILITY: THEATRE MANAGER | |
| | |
| **Section B: Study of set play** | |
| SOCIAL CONTEXT | |
| CULTURAL CONTEXT<br>HISTORICAL CONTEXT | |
| PLOT: Act 1 | |
| PLOT: Act 2 | |
| CHARACTER INTERPRETATION : Hannay | |
| CHARACTER INTERPRETATION: Pamela | |
| CHARACTER INTERPRETATION: Professor Jordon | |
| CHARACTER INTERPRETATION: Margaret | |
| CHARACTER DEVELOPMENT: Hannay | |
| CHARACTER DEVELOPMENT: Pamela | |
| CHARACTER DEVELOPMENT: Professor Jordon | |
| CHARACTER DEVELOPMENT: Margaret | |
| LIGHTING: Act 1 | |
| LIGHTING: Act 2 | |
| SET: Act 1 | |
| SET: Act 2 | |
| SOUND: Act 1 | |
| SOUND: Act 2 | |

| | |
|---|---|
| **Section C: Live theatre production** | |
| GENERAL NOTES (TITLE, VENUE, SYNOPSIS, ETC) | |
| PERFORMER 1 (INCLUDING KEY QUOTES) | |
| PERFORMER 2 (INCLUDING KEY QUOTES) | |
| PERFORMER 3 (INCLUDING KEY QUOTES) | |
| SET DESIGN NOTES | |
| COSTUME DESIGN NOTES | |
| LIGHTING DESIGN NOTES | |
| SOUND DESIGN NOTES | |

| **Revision Task to prepare for the written exam** | |
|---|---|
| **Task** | **Completed** |
| **Section B: Set text** | |
| Re-read the play | |
| Character interpretation | |
| Character development | |
| Make notes on the context: 1930s fashion, furniture, Alfred Hitchcock, John Buchan | |
| **Section C: Live Theatre Review** | |
| Watch a performance on Digital Theatre | |
| How to answer, using the Describe Analyse Evaluate structure | |
| Analysing two moments from the play looking at Vocal and physical skills | |
| Read the 'Frantic Assembly' resource pack on FROG to further your understanding of interpretations. | |
| Read theatre reviews on the performance to further your knowledge of the play. | |
| Research photographs of the performance you have watched, study the pictures to remember key scenes where actors' physicality, facial expressions, costumes, use of set or lighting communicated mood. | |

# ECONOMICS GCSE - OCR

| **1. Introduction to Economics** | |
|---|---|
| *Topic* | *Learners should be able to* |
| 1.1 Main economic groups and factors of production | • explain the role of the main economic groups: **consumers**, **producers** and the **government**, including their interdependence<br>• explain the **factors of production**: land, labour, capital and enterprise, including how they might be combined |

| **2. The role of markets and money** | |
|---|---|
| *Topic* | *Learners should be able to* |
| 2.1 The role of markets | • explain what is meant by a **market**<br>• explain the features of the **primary**, **secondary** and **tertiary sectors,** including the difference between the production of **goods** and **services**<br>• explain the difference between **factor** and **product markets**, including their interdependence<br>• evaluate the costs and benefits of **specialisation** and **exchange** in **markets** including for producers, workers, regions and countries |
| 2.2 Demand | • explain what is meant by **demand**<br>• draw and explain a **demand curve** using data, including individual and market demand<br>• draw shifts of, and movements along, the demand curve<br>• analyse the causes and consequences for consumers and producers, of shifts of, and movements along, the demand curve<br>• explain **price elasticity of demand**<br>• draw demand curves of different elasticity<br>• evaluate the importance of price elasticity of demand for consumers and producers |
| 2.3 Supply | • explain what is meant by **supply**<br>• draw and explain a **supply curve** using data, including individual and market supply<br>• draw shifts of, and movements along, the supply curve<br>• analyse the causes and consequences for consumers and producers, of shifts of, and movements along, the supply curve<br>• explain **price elasticity of supply**<br>• draw supply curves of different elasticity<br>• evaluate the importance of price elasticity of supply for consumers and producers |
| 2.4 Price | • explain **price** as a reflection of worth and its role in determining an efficient distribution of resources<br>• explain what is meant by **equilibrium price** and **quantity**<br>• draw and analyse the interaction of demand and supply<br>• explain the role of markets in the **determination of price** and the **allocation of resources**<br>• analyse how the **market forces** of demand and supply affect **equilibrium price** and **quantity** |

| | |
|---|---|
| 2.5 Competition | • explain **competition** between producers in a **market economy**, including the reasons why producers compete<br>• analyse how competition affects price<br>• evaluate the economic impact of competition on producers and consumers<br>• explain the meaning of **monopoly** and **oligopoly** and how they differ from **competitive markets** |
| 2.6 Production | • explain the role of producers, including individuals, firms and the government<br>• evaluate the importance of **production** and **productivity** for the economy<br>• calculate and explain **total cost**, **average cost**, **total revenue**, **average revenue**, **profit** and **loss**<br>• evaluate the importance of **cost**, **revenue, profit** and **loss** for producers, including how costs and revenues affect profit and supply<br>• explain what is meant by **economies of scale** |
| 2.7 The labour market | • explain the role and operation of the **labour market**, including the interaction between workers and employers<br>• analyse the determination of wages through supply and demand, including factors affecting the supply and demand of labour<br>• explain and calculate **gross** and **net pay**, including deductions through **income tax**, **national insurance** and **pension** contributions |
| 2.8 The role of money and financial markets | • explain the role of **money** as a **medium of exchange**<br>• explain the role of the **financial sector** for the economy, including financial institutions such as **banks**, **building societies** and **insurance** companies<br>• evaluate the importance of the financial sector for consumers, producers and government<br>• analyse how different **interest rates** affect the levels of **saving**, **borrowing** and **investment**<br>• calculate the effect on savings and borrowings of changes in the rate of interest. |

# Food, Preparation and Nutrition

## KEY AREAS FOR YOU TO FOCUS ON:

| | | | |
|---|---|---|---|
| 1 | **The relationship between diet and health** | A balanced diet to provide the correct combination of food and nutrients for good health | ✓ The importance of a healthy diet<br>✓ How to use the major commodity groups to make a balanced food choice |
| | | The government's guidelines for a healthy diet and the inclusion of new regulations as they are issued | ✓ The application of the eight tips for healthy eating |
| | | Major diet-related health issues | ✓ Diet-related diseases and conditions: obesity (weight loss and gain), cardiovascular, coronary heart disease (CHD), diabetes, diverticulitis, bone health (osteoporosis), dental health, anaemia and high blood pressure |
| 2 | **Nutritional and dietary needs of different groups of people** | Dietary needs for different stages of life | ✓ Balanced combinations of food, nutrients and correct portion sizes for babies, toddlers, pre-school children, school-aged children, adolescents, adults, older people, pregnant and lactating women |
| | | Food allergies and intolerances | ✓ Foods that may cause an allergic reaction<br>✓ Food intolerance: lactose and gluten (coeliacs) |
| | | The dietary reference values (DRVs)<br>Macronutrients and micronutrients<br>Calculation of nutritional values | ✓ Recommended daily amounts of macro and micro nutrients and energy<br>✓ Plan recipes, meals and diets based on nutritional analysis |
| 3 | **Nutritional needs when selecting recipes for different groups of people** | Modifying recipes and meals to follow current dietary guidelines | ✓ Altering or substituting ingredients, changing the method of cooking or process and changing the portion size |

| | | | |
|---|---|---|---|
| 4 | **Energy balance** | The relationship between food intake and physical activity and how to maintain a healthy body weight throughout life | ✓ Basal metabolic rate (BMR) and physical activity level (PAL) and their importance in determining energy requirements |
| | | How to calculate energy values and the main sources of energy in the diet | ✓ Recommended percentage of daily energy intake<br>✓ Sources of energy: protein, fat, carbohydrate and alcohol<br>✓ Units (kcal and kJ) for measuring energy |
| | | The main factors that influence an individual's energy requirements | ✓ Gender, life stage, pregnancy/lactation, size/body weight, genetics, occupation and lifestyle<br>✓ Deficiency and excess |
| 5 | **Protein** (Macronutrient) | Types and functions | ✓ Types and structure: High biological value (HBV) and low biological value (LBV)<br>✓ Functions and deficiency |
| | | Sources | ✓ Animal and vegetable |
| 6 | **Fat** (Macronutrient) | Types and functions | ✓ Types and structure: fats and oils (saturated, unsaturated and polyunsaturated)<br>✓ Functions and deficiency |
| | | Sources | ✓ Animal and vegetable: visible and invisible |
| 7 | **Carbohydrate** (Macronutrient) | Types and functions | ✓ Sugar: monosaccharides, disaccharides, starch: complex carbohydrates and fibre<br>✓ Functions and deficiency |
| | | Sources | ✓ Sugar, starch and fibre |
| 8 | **Vitamins** (Micronutrients) | Types and functions | ✓ Fat soluble vitamins: A (retinol and carotene), D, E, K<br>✓ Water soluble vitamins: B1 (thiamine), B2 (riboflavin), B3 (niacin), B9 (Folate/Folic acid), B12 (cobalamin), C (ascorbic acid)<br>✓ Functions and deficiency |
| | | Sources | ✓ Food sources of vitamins |
| 9 | **Minerals** (Micronutrients) | Types and functions | ✓ Calcium, iron, sodium, fluoride, iodine, phosphorus<br>✓ Functions and deficiency |
| | | Sources | ✓ Foods that supply minerals |
| 10 | **Water** | Importance of water | ✓ Functions and deficiency<br>✓ Recommended guidelines for daily intake of water |
| | | Sources | ✓ Sources and foods that give us water |
| 11 | **Nutritional content of the main commodity groups** | Bread, rice, potatoes, pasta and other starchy foods<br>Fruit and vegetables<br>Milk and dairy foods<br>Meat, fish, eggs, beans and other non-dairy sources of protein<br>Foods and drinks high in fat and/or sugar | ✓ Nutritional content of each commodity group |

- You will also need to look through all the practical dishes that we have made this year, you need to read through the nutritional section on the evaluations to see how you have applied your knowledge

You will also need to know how to basically make the dishes that you have made. You will not need to learn all the recipe's off by heart but you will need to know basic methods (e.g. cake making methods) and the ratios of ingredients (e.g. pastry)

# French

Year 10 French students will be doing Reading, Listening and Writing papers during the PPE period in May. All students will be sitting the higher paper, unless informed otherwise by their teacher.

The exams will cover the entire specification including the units we have covered so far as well as the units we will study in year 11. This is because we will use a real GCSE paper so that we can get the most accurate grade for the students.

To help students, we will provide a vocabulary help sheet for both reading and listening papers.

Students are reminded to revise their tenses as well as the vocabulary, how the tenses are formed (verb endings), and their meaning for the writing paper.

## GCSE French Rubrics / Instructions for the examination

| | |
|---|---|
| Coche ( ✔ ) les [deux/trois/quatre …] bonnes cases. | Tick ( ✔ ) the [two/three/four …] correct boxes. |
| Coche ( ✔ ) les [deux/trois/quatre …] phrases correctes. | Tick ( ✔ ) the [two/three/four …] correct sentences. |
| Complète le paragraphe. | Complete the paragraph. |
| Complète la phrase. | Complete the sentence. |
| Écris la bonne lettre dans la case. | Write the correct letter in the box. |
| Écris les [deux/trois/quatre…..] bonnes lettres dans les boîtes. | Write the [two/three/four…..] correct letters in the boxes. |
| Écris la bonne lettre pour décrire….. | Write the correct letter to describe….. |
| Lis ce dépliant… | Read this leaflet. |
| Lis cet email….. | Read this email. |
| Lis ce poster….. | Read this poster. |
| Lis ce sms de [name]. | Read [name's] text message? |
| Lis ces gros titres dans un journal. | Read these headlines from a newspaper. |
| Lis cette annonce dans un magazine pour les jeunes. | Read this advert from a magazine for young people. |
| Lis cette petite annonce. | Read this advert. |
| Relie avec les images et écris les [deux/trois/quatre …] bonnes lettres dans les boîtes. | Match with the pictures and write the [two/three/four …] correct letters in the boxes |
| Relie les phrases et les images pour compléter les ….. | Match the sentences and the pictures to complete the ….. |
| Trouve les bonnes paires et complète les phrases. | Match the pairs to complete the sentences |
| Utilise les mots dans la boîte. | Use the words in the box. |
| Utilise les mots dans la boîte et écris la bonne lettre. | Use the words in the box and write the correct letter. |

## French - Year 10 Revision for Higher Writing PPE

This exam will involve-

- one 90 word essay on 4 bullet points
- one 150 word essay on 2 bullet points
- translation from English to French

You should do general revision on the topics we have covered so far in the course and grammar structures. Use FIT and feedback from your teachers to help you.

**Remember:** Ensure that you can give a range of opinions and explain your views in detail.

Revise how to connect your sentences effectively.

Check that you can include examples of a range of tenses (even if the question does not explicitly request them).

Prepare to make use of a wide range of vocabulary and structures in your work.

**YEAR 10 French GCSE PPE 2020 HIGHER LISTENING VOCAB**

As part of your revision, fill in the English meanings.

| **Section A** | |
|---|---|
| l'incendie | |
| Voler | |
| En grève | |
| La pluie | |
| La commande | |
| Sauf | |
| Les pistes cyclables | |
| Les embouteillages | |
| (les voitures)Rouler | |
| Moins | |
| Furieux | |
| Plus d'emplois | |
| Enfermer | |
| Couteuse | |
| N'assure pas | |
| Télécharger | |
| Le grand écran | |
| À voix haute | |
| Même si | |
| Ne compter pas | |
| Un baccalauréat | |
| Rendre intéressant | |
| La bijouterie | |
| Attirer | |
| Abondantes | |

| | |
|---|---|
| Les produits locaux | |
| Propre | |
| L’eau du robinet | |
| **Section B** | |
| Né | |
| Essayer | |
| rejoindre | |
| Rêver | |
| Quelque chose | |
| Un bout de papier | |
| Le sommeil | |
| Trop tard | |
| Trop tot | |
| La fatigue | |

**YEAR 10 French GCSE PPE 2020 HIGHER READING VOCAB**

As part of your revision, fill in the English meanings.

| **Section A** | |
|---|---|
| en avoir marre | |
| vol | |
| l'hôtesse | |
| louer | |
| le trajet | |
| quant | |
| construire | |
| réussir | |
| inquiet | |
| égal | |
| une telle chose | |
| gestes | |
| rémunéré | |
| compter | |
| ne … aucune | |
| faculté | |
| loyer | |
| chômage | |
| essayer | |
| aussitôt | |
| licenciée | |
| se sentir | |
| coupable | |
| pire | |

| | |
|---|---|
| laisser tomber | |
| endroit | |
| en colère | |
| se conseiller | |
| fauteuil | |
| perte de temps | |
| espérait | |
| m’ennuie | |
| bijou | |
| au milieu | |
| tort | |
| sauf | |
| pleurer | |
| se détendre | |
| semble | |
| la circulation | |
| gaz d’échappement | |
| malgré | |
| sans-abris | |
| puisque | |

# Year 10 Geography PPE Revision Check List

## Natural Hazards

| Key Ideas | Specification Content |
|---|---|
| Natural hazards pose major risks to people and property. | Definition of a natural hazard.<br>Types of natural hazard.<br>Factors affecting hazard risk. |
| Earthquakes and volcanic eruptions are the result of physical processes. | Plate tectonics theory.<br>Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins.<br>Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity. |
| The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth. | Primary and secondary effects of a tectonic hazard.<br>Immediate and long-term responses to a tectonic hazard.<br>Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth. |
| Management can reduce the effects of a tectonic hazard. | Reasons why people continue to live in areas at risk from a tectonic hazard.<br>How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard. |
| Global atmospheric circulation helps to determine patterns of weather and climate. | General atmospheric circulation model: pressure belts and surface winds. |
| Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions. | Global distribution of tropical storms (hurricanes, cyclones, typhoons).<br>An understanding of the relationship between tropical storms and general atmospheric circulation.<br>Causes of tropical storms and the sequence of their formation and development.<br>The structure and features of a tropical storm.<br>How climate change might affect the distribution, frequency and intensity of tropical storms. |
| Tropical storms have significant effects on people and the environment. | Primary and secondary effects of tropical storms.<br>Immediate and long-term responses to tropical storms.<br>Use a named example of a tropical storm to show its effects and responses.<br>How monitoring, prediction, protection and planning can reduce the effects of tropical storms. |
| The UK is affected by a number of weather hazards. | An overview of types of weather hazard experienced in the UK. |
| Extreme weather events in the UK have impacts on human activity. | An example of a recent extreme weather event in the UK to illustrate:<br>•• causes<br>•• social, economic and environmental impacts<br>•• how management strategies can reduce risk.<br>Evidence that weather is becoming more extreme in the UK. |
| Climate change is the result of natural and human factors, | Evidence for climate change from the beginning of the Quaternary period to the present day. |

| | |
|---|---|
| and has a range of effects. | Possible causes of climate change:<br>•• natural factors – orbital changes, volcanic activity and solar output<br>•• human factors – use of fossil fuels, agriculture and deforestation.<br>Overview of the effects of climate change on people and the environment. |
| Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change). | Managing climate change:<br>•• mitigation – alternative energy production, carbon capture, planting trees, international agreements<br>•• adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels. |

# The Living World

| Key Ideas | Specification Content |
|---|---|
| Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components. | An example of a small scale UK ecosystem to illustrate the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling.<br>The balance between components. The impact on the ecosystem of changing one component.<br>An overview of the distribution and characteristics of large scale natural global ecosystems. |
| Tropical rainforest ecosystems have a range of distinctive characteristics. | The physical characteristics of a tropical rainforest.<br>The interdependence of climate, water, soils, plants, animals and people.<br>How plants and animals adapt to the physical conditions.<br>Issues related to biodiversity. |
| Deforestation has economic and environmental impacts. | Changing rates of deforestation.<br>A case study of a tropical rainforest to illustrate:<br>•• causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth<br>•• impacts of deforestation – economic development, soil erosion, contribution to climate change. |
| Tropical rainforests need to be managed to be sustainable. | Value of tropical rainforests to people and the environment.<br>Strategies used to manage the rainforest sustainably – selective logging and replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction. |
| Hot desert ecosystems have a range of distinctive characteristics. | The physical characteristics of a hot desert.<br>The interdependence of climate, water, soils, plants, animals and people.<br>How plants and animals adapt to the physical conditions.<br>Issues related to biodiversity. |
| Development of hot desert environments creates opportunities and challenges. | A case study of a hot desert to illustrate:<br>•• development opportunities in hot desert environments: mineral extraction, energy, farming, tourism<br>•• challenges of developing hot desert environments: extreme temperatures, water supply, inaccessibility. |
| Areas on the fringe of hot deserts are at risk of desertification. | Causes of desertification – climate change, population growth, removal of fuel wood, overgrazing, over-cultivation and soil erosion.<br>Strategies used to reduce the risk of desertification – water and soil management, tree planting and use of appropriate technology. |

# Urban Issues and Challenges

| Key Ideas | Specification Content |
|---|---|
| A growing percentage of the world's population lives in urban areas. | The global pattern of urban change.<br>Urban trends in different parts of the world including HICs and LICs.<br>Factors affecting the rate of urbanisation – migration (push–pull theory), natural increase.<br>The emergence of megacities. |
| Urban growth creates opportunities and challenges for cities in LICs and NEEs. | A case study of a major city in an LIC or NEE to illustrate:<br>•• the location and importance of the city, regionally, nationally and internationally<br>•• causes of growth: natural increase and migration<br>•• how urban growth has created opportunities:<br>•• social: access to services – health and education; access to resources – water supply, energy<br>•• economic: how urban industrial areas can be a stimulus for economic development<br>•• how urban growth has created challenges:<br>•• managing urban growth – slums, squatter settlements<br>•• providing clean water, sanitation systems and energy<br>•• providing access to services – health and education<br>•• reducing unemployment and crime<br>•• managing environmental issues – waste disposal, air and water pollution, traffic congestion.<br>An example of how urban planning is improving the quality of life for the urban poor. |
| Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges. | Overview of the distribution of population and the major cities in the UK.<br>A case study of a major city in the UK to illustrate:<br>•• the location and importance of the city in the UK and the wider world<br>•• impacts of national and international migration on the growth and character of the city<br>•• how urban change has created opportunities:<br>•• social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems<br>•• environmental: urban greening<br>•• how urban change has created challenges:<br>•• social and economic: urban deprivation, inequalities in housing, education, health and employment<br>•• environmental: dereliction, building on brownfield and greenfield sites, waste disposal<br>•• the impact of urban sprawl on the rural–urban fringe, and the growth of commuter settlements.<br>An example of an urban regeneration project to show:<br>•• reasons why the area needed regeneration<br>•• the main features of the project. |
| Urban sustainability requires management of resources and transport. | Features of sustainable urban living:<br>•• water and energy conservation<br>•• waste recycling<br>•• creating green space.<br>How urban transport strategies |

# German

**There will be three papers (Reading, Listening and Writing) sat at Foundation level. This will be the same for <u>all</u> classes and is not an indication of which paper you will be sitting at the end of the course.**

Attached are the vocabulary lists to be revised for the **Listening** and **Reading** papers. **The vocab sets can also be found in your class folder on Quizlet.**

For the **Writing** you should revise from your oral notes booklet and from any pieces of writing you have completed so far this year. Remember to revise word order rules and that you will need to use at least 3 tenses (present, perfect and future) in your writing to access the highest marks.

The following websites are examples of useful sites that you could use for grammar, vocab and exam skill revision:

- ✓ Languagenut (grammar, vocabulary, practice exam questions)
- ✓ Quizlet (vocabulary learning tool)
- ✓ Kerboodle (online textbook and support materials)
- ✓ Seneca (vocabulary lists and practice exercises)
- ✓ Linguascope (intermediate section)
- ✓ GUT (Years 10 section for vocabulary, grammar, reading/listening tasks)
- ✓ www.languagesonline.org.uk (vocabulary, grammar, reading and listening tasks)
- ✓ Google 'Fun with languages' (GCSE section)
- ✓ Lyrics training (listening and reading practice using target language music)

## 3.5.1 Rubrics and instructions

The following is a guide to the sort of rubrics and instructions which will be used in Section B of the Listening and Reading exams. The list is indicative, not exclusive.

| German | English |
|---|---|
| **Achtung!** Du kannst die Buchstaben mehr als ein Mal benutzen. | **N.B.** You can use the same letter more than once. |
| Beantworte **die beiden Teile der Frage.** | Answer **both parts of the question.** |
| Beantworte die Fragen auf **Deutsch**. | Answer the questions in **German.** |
| Beantworte diese Fragen. | Answer these questions. |
| Ergänze ... auf **Deutsch**. | Complete... in **German**. |
| Ergänze den folgenden Text mit jeweils **einem** Wort von der Liste unten. | Complete the following gap-text with **one** word for each gap from the list below. |
| Ergänze die Lücken. | Fill in the gaps/blanks. |
| Ergänze die Tabelle auf **Deutsch**. | Complete the table in **German**. |
| Erwähne einen postiven Aspekt/einen Vorteil/einen negativen Aspekt/einen Nachteil. | Mention one positive aspect/one advantage/one negative aspect/one disadvantage. |
| Es ist welche Person? Schreibe den Namen ins Kästchen. | Which person is it? Write the name in the box. |
| Füll die Tabelle auf **Deutsch** aus. | Complete the table in **German**. |

| German | English |
| --- | --- |
| Für eine negative Meinung, schreib **N**, für eine positive Meinung, schreib **P**, für eine positive und negative Meinung, schreib **P + N.** | For a negative opinion, write **N**, for a positive opinion, write **P**, for a positive and negative opinion, write **P + N.** |
| Gib (zwei) Details. | Give (two) details. |
| Hör das folgende Gespräch/die folgende Diskussion/das folgende Interview/den folgenden Bericht. | Listen to the following conversation/discussion/interview/report. |
| Lies ... | Read... |
| Schreib den richtigen Buchstaben ins Kästchen. | Write the correct letter in the box. |
| Schreib **R**, wenn die Aussage richtig ist, **F**, wenn die Aussage falsch ist, **NT**, wenn die Aussage nicht im Text ist. | Write **(R),** if the statement is correct, **(F),** if the statement is false and **(NT)**, if the statement is not mentioned. |
| Vollständige Sätze sind **nicht** nötig. | It is not necessary to write in full sentences. |
| Wähle die richtige Aktivität und schreib den Buchstaben ins Kästchen. | Choose the correct activity and write the correct letter in the box. |
| Welche **(sechs)** Aussagen sind richtig? | Which **(six)** statements are correct? |
| Welche Antwort ist richtig? | Which answer is correct? |

The following is a guide to the sort of rubrics and instructions which will be used in the Writing exam. The list is indicative, not exclusive.

| German | English |
| --- | --- |
| Beschreib... | Describe... |
| Du musst ungefähr **40** Wörter auf **Deutsch** schreiben. | You must write approximately **40** words in **German**. |
| Du musst ungefähr **90** Wörter auf **Deutsch** schreiben. Scheib etwas über alle Punkte der Aufgabe. | You must write approximately **90** words in **German**. Write something about each bullet point. |
| Du musst ungefähr **150** Wörter auf **Deutsch** schreiben. Schreib etwas über beide Punkte der Aufgabe. | You must write approximately **150** words in **German**. Write something about both bullet points. |
| Schreib… | Write… |
| Schreib etwas über… | Write something about… |
| Schreib **vier** Sätze auf **Deutsch** über das Foto. | Write **four** sentences in **German** about the photo. |
| Vergleich... | Compare... |

## Reading German GCSE

| | |
|---|---|
| triff | meet |
| um halb acht | Half past 7 |
| vor | Infront of |
| Bahnhof | Station |
| Tante | Aunty |
| jedes | Every |
| Komödien | Comedies |
| gar nicht | Not at all |
| herunterladen | To download |
| auf die Nerven gehen | To get on (my) nerves |
| anrufen | To call up |
| Mailbox | Voicemail |
| zusammen | Together |
| lieber | Prefer |
| Eltern | Parents |
| Sportschuhe | Trainers |
| Arbeitslosigkeit | Unemployment |
| Armut | Poverty |
| obdachlos | Homeless |
| nachts | At night |
| Stadtpark | Town park |
| schlafen | To sleep |
| versuchen | To try |
| freiwillig | Voluntary |
| Suppenküchen | Soup kitchen |
| reden | To chat |
| meist | Most |
| höflich | Polite |
| Oma | grandma |
| Altenheim | Old people's home |
| am liebsten | Like the best |
| Trompete | Trumpet |
| üben | To practice |
| bis spät | Until late |
| nervig | Annoying |
| Anderen | Others |
| Abend | Evening |
| das Zimmer | Room |
| Senioren | OAPs |
| Chor | Choir |
| bekommen | To get |
| gute Noten | Good grades |
| unbedingt | Definitely |
| die Oberstufe | 6th form |
| etwas Anderes | Something differen |
| ich will | I want |
| eine Lehre | Apprenticeship |

| | |
|---|---|
| Ausbildungsplatz | Apprentice place |
| Feuerwehr | Fire service |
| obwohl | Although |
| Beruf | Job |
| schwierig | Difficult |
| gut bezahlt | Well paid |
| Ahnung | Idea |
| vielleicht | maybe |
| im Ausland | Abroad |
| Fremdsprachen | Foreign languages |
| zuhören | To listen to |
| jetzt | Now |
| fleissig | Hard working |
| Grundschule | Primary school |
| AGs | Clubs |
| teilnehmen | To take part |
| Klavier | Piano |
| einfach | Easy |
| leider | Unfortunately |
| noch | Still |
| schicken | To send |
| später | Later |
| Büro | Office |
| sonst | Otherwise |
| Wetterbericht | Weather report |
| ganz Glücklich | Quite happy |
| ankommen | To arrive |
| da | There |
| nervös | Nervous |
| bald | Soon |
| versuchen | To try |
| warten | To wait |
| beschliessen | To end |
| schliesslich | Finally |
| Glück haben | To be lucky |
| launisch | Moody |
| sie lacht nie | She never smiles |
| Zwillingschwester | Twin sister |
| jüngere | Younger |
| bei uns | At ours |
| Mitte | Middle |
| mit der Bahn | With the train |
| trocken | Dry |
| im Hafen | In the port |
| fragen | To ask |
| die Fahrt | The journey |
| mit der Fähre | With the ferry |
| dauert | Lasts |
| eine Viertelstunde | 15 minutes |
| besonders | Especially |
| Erdbeeren | Strawberries |

| | |
|---|---|
| er freut sich | He is happy |
| Venedig | Venice |
| Zeit | Time |
| Bildschirm | Screen |
| süchtig | addictive |
| ausserdem | Apart from that |
| Nachbarschaft | Neighbourhood |
| deshalb | Therefore |
| isoliert | Isolated |
| aus aller Welt | From around the world |
| sich langweilen | To get bored |
| seit | since |
| geschieden | Divorced |
| Fabrik | Factory |
| Ehemann | husband |
| gar nicht | Not at all |
| jemand | Someone |
| treffen | To meet |
| sich verstehen | To get on |
| Liebe auf den ersten Blick | Love at first sight |
| zuerst | First |
| kennenlernen | To get to know |
| neulich | Recently |
| umgezogen | Moved |
| getrennt | Separated |
| Gesundheit | health |
| stundenlang | Hours long |
| frischen Luft | Fresh air |
| Mitglied | Member |
| Segelklubs | Sailing club |
| gesund | Healthy |
| Lebenstil | Lifestyle |
| vor kurzem | Recently |
| endlich | Finally |
| rauchen | To smoke |
| laufen | To run |
| während | During |
| süβ | Sweet |
| meistens | Mostly |
| Schnellimbisss | Fast food shop |

## Listening German GCSE

| | |
|---|---|
| der Bahnhof | The station |
| die Bäckerei | The bakery |
| die Apotheke | The pharmacy |
| neben | Next to |
| die Blockflöte | Flute |
| die Klarinette | Clarinet |
| gern | like |
| einfach | easy |
| vergessen | To forget |
| nichts für mich | Not for me |
| zu viel | Too many |
| da | There/ so |
| gesund | healthy |
| der Zucker | sugar |
| der Körper | body |
| der Kuchen | cake |
| die Kekse | biscuits |
| das Fleisch | Meat |
| voller Vitamine | Full of vitamins |
| die Einwohner | population |
| faul | Lazy |
| die Abfalleimer | Rubbish bins |
| benutzen | To use |
| werfen | To throw |
| der Müll | Rubbish |
| ekelhaft | Disgusting |
| die Angst | fear |
| das Meer | The sea |
| verschmutzt | To pollute |
| früher | Earlier/ before |
| jede Stunde | Every hour |
| die Fahrkarten | Tickets (for travel) |
| teuer | Expensive |
| heiraten | To get married |
| eine Familie gründen | To start a family |
| genug | Enough |
| die Hochzeit | Wedding |
| bezahlen | To pay |
| eine Stelle | A job |
| die Fabrik | Factory |
| tun | To do |
| arbeitlos | Unemployed |
| Einen anderen | Someone else |
| verlassen | To leave |
| schon | Already |
| wieder | Again |
| kaputt | Broken |
| die Beziehung | The relationship |

| | |
|---|---|
| je | Every |
| vor | Ago/ infront |
| geheiratet | Married |
| jetzt | Now |
| mieten | To rent |
| die Wohnung | The flat |
| in der Innenstadt | In the town centre |
| ein eigenes Haus | Own house |
| unmöglich | Impossible |
| brauchen | To need |
| der Lohn | The salary |
| die Armut | Poverty |
| später | Later |
| die Sorgen | Worries |
| der Urlaub | Holiday |
| bleiben | To stay |
| zu Hause | At home |
| glücklich | Happy |
| die Erdkunde | Geography |
| die Geschichte | History |
| das Hemd | Shirt |

# Health and Social Care

## Year 10 PPE Revision list

### Learning Aim A:
**Factors that affect health and wellbeing**

## A1: Factors affecting health and wellbeing

- Physical and lifestyle factors
- Social, emotional and cultural
- Economic factors
- Environmental factors
- The impact of life events relating to relationship changes and changes in life circumstances

- Revision guide

https://www.pearsonschoolsandfecolleges.co.uk/FEAndVocational/HealthAndSocialCare/BTEC/BTECTechAwardHealthandSocialCare/ISBN/revise-revision-resources/ReviseBTECTechAwardHealthandSocialCareRevisionGuide.aspx?gclid=EAIaIQobChMInoTs_Kzq5wIVAbDtCh0bAg4uEAQYASABEgKgUPD_BwE

# History

The History PPE will consist of 1 examination lasting two hours. There will be two sections each worth 40 marks. They will consist of the following question types:

Section 1: 2x 4 mark questions and 1x 8 mark question on two interpretations. A 4 mark question, and 8 mark question, and a 12 mark question.

Section 2: 1x 4 mark source question and 1 x12 mark 'how useful' source question. An 8 mark question, and a 16 mark question.

## Topics to revise for section 1: America 1920-73

1. Mass Production and the motor industry
2. Other reasons for the boom e.g. hire purchase, tariffs, consumerism
3. Who did and did not benefit from the boom
4. Entertainment and Jazz
5. Women in the 20's
6. Organised crime, prohibition and its effect on society
7. Causes of racial tension/immigration
8. KKK and the Red Scare
9. The Great depression: unemployment, farmers and businessmen
10. Hoover's response to the depression and his unpopularity
11. Roosevelt's election as President
12. Successes and limitations of the New Deal
13. Opposition to the New Deal and the Supreme Court
14. Was the New Deal successful or not?
15. Culture in the 1930s (literature, movies and music)
16. The impact of the Second World War on the economy
17. Women and Black Americans during World War two
18. The American Dream and economic growth
19. McCarthyism
20. Popular culture, Rock and Roll and television
21. The Civil Rights Movement in the 60s
22. Martin Luther King and the Civil Rights movement
23. Malcolm X and Black Power movement
24. The Civil Rights Acts of 1964 and 1968
25. Social Policies of Presidents Kennedy and Johnson
26. Feminism in the 60s

## Topics to revise for section 2: Conflict and Tension 1918-39

1. Aims of the Big Three
2. Why the Big Three disagreed
3. Terms of the Treaty of Versailles
4. Allied reaction to the Treaty
5. Judging who got the most from the Treaty
6. German reaction to the Treaty
7. Was the Treaty fair?
8. Structure and aims of the League of Nations
9. Weaknesses of the League of Nations
10. How the League helped people
11. Successes and failures of the League in the 1920s
12. Locarno Treaty and the Kellogg-Briand Pact
13. Why Japan invaded Manchuria
14. How the League reacted to the Japanese invasion of Manchuria
15. Why Italy invaded Abyssinia
16. How the League reacted to the Italian invasion of Abyssinia
17. Hitler's aims and how other countries reacted
18. Hitler's early policies): Disarmament conference, Dolfuss Affair, Rearmament

Hitler's early policies b): Saar, Stresa Front, Anglo-German naval Agreement

19. The remilitarisation of the Rhineland
20. Anschluss with Austria
21. Reasons for and against appeasement
22. The Sudetenland crisis
23. The Munich agreement
24. The Collapse of Czechoslovakia
25. The Nazi Soviet Pact

# Music

The exam will be 1 hour 45 minutes long and will consist of:

- **6 listening questions** on set works
- **1 listening question** on an unknown piece**.**
- **1 long answer question** comparing a set work to an unknown piece (which you will hear)
- **1 melodic and rhythmic dictation question.**

You will need to revise **all** of the set works that you have studied so far which will include:

- Queen- Killer Queen
- Purcell- Music for a While
- J Williams- Star Wars
- Schwartz- Defying Gravity

For each set work you will need to be familiar with the key features such as:

- Structure
- Harmony/tonality
- Dynamics
- Texture
- Instrumentation
- Rhythm
- Tempo/metre

It is also a good idea to listen to the other set works that we **haven't** yet studied in detail as there will be one **general** listening question on one of these.

**Top tips for music revision:**

- **Categorise your revision notes** into the different musical features above- make sure you know at least a few features for each set work in each category.
- **Active listening** to the set works is the key. Don't just have them on in the background as you do other revision. Listen carefully to different features each time you play the set work, e.g. focus on the texture one time, instruments another time etc.
- **Listen to small chunks** of the music. In the exam you will only hear a 30 second extract of the music. Practice writing down the features to 30 second sections. **Remember**- musical features are not always the same all the way through so the features may change depending on which section of the set work you listen to.

# Physical Education

Website resources: **https://www.bbc.co.uk/bitesize/examspecs/zxbg39q**

**1.17** Anaerobic and aerobic exercise

**3.1** Health, fitness and exercise

**3.2** The components of fitness and fitness testing

**3.3** Onwards – All components of fitness: Cardiovascular fitness, strength, muscular endurance, flexibility, body composition, agility, balance, coordination, reaction time, speed, power

**3.14** Onwards – Principles of training: Individual needs, specificity, progressive overload, overtraining, reversibility

**3.20 to 3.24** Methods of training

**3.26** PAR-Q

**3.27** How to optimise training and avoid injury

**3.28** Sporting Injuries

**3.29** Performance Enhancing Drugs

**3.30** Warm ups and cool downs

**4.1** Onwards… Lifestyle choices, balanced diet, optimum weight, maintaining an optimum weight

**5.4** Setting SMART targets

Remember that marks come from the application and the analysis of the topics.

You must develop all statements and make LINKS TO PERFORMANCE.

# Spanish

## Spanish: Vocabulary for Foundation Listening PPE

| | |
|---|---|
| Llave | |
| principal | |
| La caja fuerte | |
| La ropa de cama | |
| Sacar fotos | |
| Chatear | |
| Descargar | |
| Navegar por internet | |
| Bombero | |
| valiente | |
| periodista | |
| Casarse | |
| preocuparse | |
| La lluvia | |
| bañarse | |
| Ducharse | |
| encender | |
| El aire acondicionado | |
| El papel | |
| La lata | |
| Hacer falta de | |
| ancianos | |
| Los mayores | |
| recuerdos | |
| Las instalaciones | |
| decepcionado | |
| Un palacio | |
| Un castillo | |
| La pizzara | |
| En cuanto a | |
| Hace viento | |

**Learn the vocabulary for:**

- ✓ different types of food and drinks
- ✓ different types of film and TV programme
- ✓ sports and freetime activities
- ✓ opinion vocabulary

## Spanish: Vocabulary for Higher Listening PPE

**As for foundation with this additional vocabulary**…

| | |
|---|---|
| Un asiento | |
| Aficionados | |
| Los partidos | |
| El Gordo | |
| repartir | |
| El premio | |
| Días festivos | |
| extranjeros | |
| Fumar porros | |
| emboracharse | |
| Desde entonces | |
| La empresa | |
| Subirse el sueldo | |
| pedir | |
| aconsejar | |
| Tener ganas de | |
| conductor | |
| apagar | |
| Vale la pena | |
| huérfano | |
| todavía | |
| egoísta | |
| agradecer | |
| lograr | |
| olvidar | |
| incierto | |
| orgulloso | |
| Volver a empezar | |
| Tal vez | |
| dejar | |
| Una marca | |
| La juventud | |
| fabricar | |
| algodón | |
| Pieles de animales | |
| Fibras sintéticas | |
| Estar equivocado | |
| amenazar | |
| mezclar | |
| prendas | |
| sobrina | |
| Sacar buenas notas | |
| La enseñanza | |
| concurrido | |
| Me fastidia que | |
| Los almacenes | |

| | |
|---|---|
| Organizaciones benéficas | |
| El AVE | |
| EL andén | |
| vía | |
| volar | |
| Tener confianza con | |
| comportarse | |
| El cariño | |

## Spanish: Vocabulary for Year 10 Foundation Reading PPE

**Revise: sports, family members, healthy living, rooms of the house and furniture, Film & TV programmes, jobs**

| | |
|---|---|
| Las afueras | |
| Compañeros de clase | |
| Un partido | |
| Un parque temático | |
| climatizada | |
| La cocina | |
| Consejos | |
| alimentos | |
| La tentación | |
| Acostarse | |
| Los marineros | |
| El paisaje | |
| parar | |
| hermoso | |
| El oro | |
| pobre | |
| ¡Qué raro! | |
| Las reglas | |
| Las instalaciones | |
| Hacer falta | |
| El recreo | |
| La ventana | |
| retratos | |
| fuera | |
| La Guerra civil | |
| Los ricos | |
| La pobreza | |
| El hambre | |
| jubilarse | |
| Trabajar a tiempo parcial | |
| Hacerse socio de | |
| El rio | |
| El bosque | |

| | |
|---|---|
| El vestido | |
| La batería | |
| Las noticias | |
| Un taller | |
| mascotas | |
| raciones | |
| Un novio/una novia | |
| Un torero | |
| Una fecha | |
| Un polideportivo | |
| mandar | |
| encontrar | |

# Spanish: Vocabulary for Year 10 Higher Reading PPE

**As for Foundation paper plus …**

| | |
|---|---|
| Las redes sociales | |
| Estar equivocado | |
| buscar | |
| quejarse | |
| aprovechar | |
| Ser cuidadoso | |
| El muro | |
| Unas faltas | |
| probar | |
| Un sueldo | |
| Ser decepcionado | |
| romper | |
| Disfrutar de | |
| Darse cuenta de | |
| jovencita | |
| cargar | |
| camiones | |
| fastidiarse | |
| ganar | |
| Hacer huelga | |
| El alquiler | |
| mudarse | |
| Echar de menos | |
| Sin techo | |
| festejar | |
| Tener lugar | |
| quemar | |
| La tristeza | |
| La alegría | |
| sucio | |
| cerrar | |
| abrir | |
| Una sonrisa | |
| parda | |
| Los cristales | |
| lejana | |
| sola | |
| La liga | |
| tonto | |
| comportarse | |

# Spanish: Year 10 Foundation Writing PPE

You will be expected to write:

1) 4 statements describing a picture
2) Approximately 40 words on the topic of free time.
3) Translate 5 short statements into Spanish
   (key words- ducharse: to have a shower, menos:less)
4) Approximately 90 words about either:
   School and future plans, a recent celebration
   Or
   Holidays (recent and future)

# Spanish: Year 10 Higher Writing PPE

You will be expected to write:

1) Approximately 90 words about either:
   School and future plans, a recent celebration
   Or
   Holidays (recent and future)
2) Approximately 150 words about either:
   Being happy and healthy
   Or
   Being a good friend and future plans
3) Translate a short passage of approximately 60 words into Spanish

# Spanish

## 3.5.1 Rubrics and instructions

The following is a guide to the sort of rubrics and instructions which will be used in Section B of the Listening and Reading exams. The list is indicative, not exclusive.

| Spanish | English |
|---|---|
| Completa/Rellena la tabla/el texto/el espacio blanco en **español**. | Complete/Fill in the table/the text/the blank space in **Spanish**. |
| Completa la frase/las frases… | Complete the phrase(s)/sentence(s)... |
| Contesta a las preguntas en **español**. | Answer the questions in **Spanish**. |
| Da (dos) detalles... | Give (two) details... |
| Empareja… | Match… |
| Escribe la(s) letra(s) correcta(s) en cada casilla. | Write the correct letter(s) in each box. |
| Escribe la letra correcta/el número correcto en la casilla. | Write the correct letter/number in the box. |
| Escribe todos los detalles. | Write all the details/Give full details. |
| Escoge... | Choose… |
| Escucha la descripción/la opinión/la entrevista/ las noticias… | Listen to the description/the opinion/the interview/the news… |
| Indica… | Indicate… |
| Indica las…frases verdaderas. | Indicate the …true phrases/sentences. |
| Lee el texto / el artículo / la lista de actividades / la lista de instrucciones / la información. | Read the text/the article/the list of activities/the list of instructions/the information. |
| Lee lo que dicen… | Read what they say… |
| Menciona una ventaja/desventaja… | Mention one advantage/disadvantage… |
| No es necesario escribir con frases completas. | It is not necessary to write in full sentences. |
| Escribe:<br>**P** si la opinión es positiva<br>**N** si la opinión es negativa<br>**P+N** si la opinión es positiva y negativa | Write :<br>**P** if the opinion is positive<br>**N** if the opinion is negative<br>**P+N** if the opinion is positive and negative |
| Puedes escribir la misma letra más de una vez. | You can use the same letter more than once. |
| ¿Quién…? | Who…? |
| Responde a las dos partes de la pregunta. | Answer both parts of the question. |
| Selecciona/Escoge el párrafo… | Select/Choose the paragraph… |

The following is a guide to the sort of rubrics and instructions which will be used in the Writing exam. The list is indicative, not exclusive.

| Spanish | English |
|---|---|
| Escribe aproximadamente **40** palabras en **español**. | Write approximately **40** words in **Spanish**. |
| Escribe aproximadamente **90** palabras en **español**. Responde a todos los aspectos de la pregunta. | Write approximately **90** words in **Spanish**. Write something about each bullet point. |
| Escribe aproximadamente **150** palabras en **español**. Responde a los dos aspectos de la pregunta. | Write approximately **150** words in **Spanish**. Write something about both bullet points. |
| Escribe **cuatro** frases en **español** que describan la foto. | Write **four** sentences in **Spanish** about the photo. |
| Escríbele sobre… | Write to him/her about… |
| Escríbele una carta/un email. | Write a letter/email to him/her. |
| Menciona… | Mention... |

☆☆☆☆☆