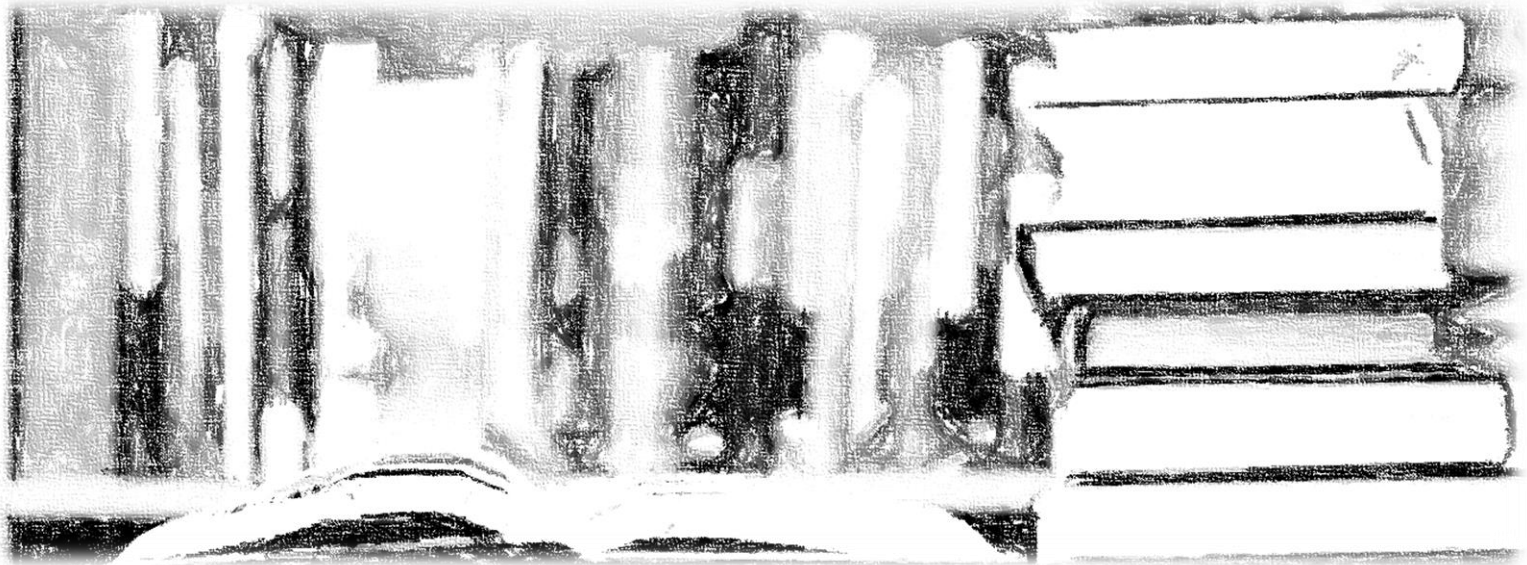# The Holt School

KS3 End of Year Assessments

2020

Year 9

Revision Guide

Year 9 End of Year Assessments

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Spanish

There will be no end of year assessments in the following subjects:

Drama

PE

PSHE

Art

Rather than revision, we will be setting a preparatory task that students need to complete so they are ready for the Art assessment. This will be drawing an accurate outline of the image they will then shade / colour during the exam time.

The preparatory task and exam details will be sent out via FROG (and email) on the day of their art lesson during the revision fortnight (4th May – 15th May).

Year 9 Computing

- Recap of some Year 8 Topics – including inside a computer and input and output devices and control
- Web Design – key terms and good/bad web design
- Text Based Programming using Python: variables, data types, input/print statements, conditional statements such as IF, FOR, While, functions, errors and debugging, syntax.
- Binary and denary conversion
- Computational thinking
- Logic gates
- System security
- Networks

Design & Technology Year 9 assessment
There will be no revision just preparation as follows: -

The question you will be asked in your year 9 Design & Technology exam in assessment week will focus on GPS watches.

Taking regular exercise has become an important aspect of our daily routines during lockdown. GPS sports watches are increasingly used by runners to monitor and aid training. They vary hugely in terms of their functionality and properties.

In assessment we will be focusing on the design of GPS sports watches, in order to prepare for your assessment task please do the following: -

- Produce a mind map to think about the properties and functions of GPS watches, use ACCESS FM ME to help you think about the potential problems and possible solutions addressed when designing a GPS watch to monitor and aid training.
- Produce a mood board of existing GPS watches, noting materials properties used in manufacture and the variety of functions that they perform.

English

Q	What to expect	Marks	Top Tips
3	**How** does the writer's use language…	12	• Write about 3 or 4 examples of language • Zoom in on powerful words and phrases • Use varied vocabulary to explore the effect of words and phrases • You will need to identify the language devices the writer uses for effect in the text • Ask yourself: what does the quote make the reader think/feel/imagine?

Food and Nutrition

- Read about the Eatwell guide – the 5 food groups and sources of food from each group
- 8 Government guidelines
- Nutrients, their functions and sources
- Macro and micro nutrients
- HBV and LBV proteins and their examples
- Temperature zones and labelling i.e. chilling, freezing, danger zone
- Diet through life – all stages
- Food symbols and their meanings
- Eggs and their functions i.e. flavour, colour, glazing, binding, aeration
- Diet and Nutrition for young children i.e. babies and toddlers, teenagers

NB: Use your booklet for revision and look up some information in your old booklets as well as the internet as you covered some of the work in Year 7 and Year 8.

French

Reading and Listening assessment covering Modules 1 to 4 of their Studio textbook.

Resources:

- Studio 3 textbook

  Vocabulary pages as follows:

  1. Module 1 - pages 28 to 29
  2. Module 2 - pages 50 to 51
  3. Module 3 - pages 72 to 73
  4. Module 4 - pages 96 to 97

  Students can also practise the key vocabulary on www.quizlet.com

- Student's exercise book
- https://www.pearsonactivelearn.com/app/Home - The students will have accessed this in their computer lessons this year, and have their own username and password
- MFL websites e.g. linguascope username: holtschool password: franish20
- funwithlanguages and langugesonline (both free to access)

Geography Y9 - Population and Migration

1) Population growth
2) The Demographic Transition Model
3) Population Structures
4) Sustainable Populations
5) Population Policies
6) What is Migration?
7) Refugees
8) Economic Migration

Year 9 History Revision list

The following topics will be tested in short answers that require a few words maximum or multiple choice.

The Slave trade

-What happened at each stage of the triangular trade?

-Approximately how many slaves were transported from Africa to the Americas as a part of the slave trade?

British Empire

The British takeover of India, and how the British ruled over the Indians

The European takeover of Africa

Settlers in Australia

First World War

-Which key individual's assassination triggered the war?

-The Battle of the Somme

The following topics will need to be revised in a bit more detail

Second World War

-What caused the Second World War?

-The events and impact of **a** key battle/event of the Second World War (pick from **one** of the battles or events that you have studied e.g. Battle of Britain, D-Day landings, War in the Pacific, Blitzkrieg etc.)

Nazi Germany

How did the Nazi's keep control of Germany?

Year 9 Mathematics

Maths Revision List (Foundation Tier – Mr Adams' Group)

Topic	Objective	Chapter
Number	Use place value when calculating with decimals.	1.1
	Order positive and negative integers and decimals	1.1
	Round to a number of decimal places or significant figures.	1.2
	Add and subtract positive and negative integers and decimals.	1.3
	Multiply and divide positive and negative integers and decimals.	1.4
	Use BIDMAS in multi-stage calculations.	1.4
	Estimate answers to calculations and roots	9.1
	Use a calculator accurately	9.2
	Know factors, multiples and prime numbers	13.1
	Prime factor decomposition	13.2
	Find Lowest common multiple & Highest common factor	13.2
	Powers and roots	13.3
	Calculating with roots & indices	17.1
	Use index rules	17.1
	Using one calculation to get an answer to another	
Algebra	Use algebraic notation	2.1
	Substitute numbers into expressions.	2.1
	Use and understand the words expressions, equations, formulae, terms and factors.	2.1
	Collect like terms and simplify expressions involving sums, products and powers.	2.2
	Use the laws of indices.	2.3
	Multiply a single term over a bracket.	2.4
	Take out common factors in an expression.	2.4
	Substitute numbers into formulae.	6.1
Data	Tally charts & frequency tables	4.1
	Two way tables	4.2
	Stem and leaf diagrams	4.2
	Bar charts	4.3
	Composite & comparative bar charts	4.3
	Pie charts	4.4
	Discrete & continuous data	16.1
	Histograms with equal class widths	16.1
	Scatter graphs and line of best fit	16.3
	Line graphs & time series	16.4

Maths Revision List (Higher Tier – Mr Robinson's, Mrs Connor's, Mr Fulker's, Mr Green's, Miss Pyle's and Mrs Tearle/Mrs Lamey's groups)

Topic	Objective	Chapter
Number	Order positive and negative integers and decimals.	1.1
	Round numbers to a given number of decimal places or significant figures.	1.1
	Use mental and written methods to add, subtract, multiply and divide with positive and negative integers and decimals.	1.2, 1.3
	Use BIDMAS to complete calculations in the correct order.	1.3
	Estimate answers to calculations and roots	9.1
	Know factors, multiples and prime numbers	13.1
	Prime factor decomposition	13.1
	Find Lowest common multiple & Highest common factor	13.1
	Powers and roots	13.2
	Use index rules	13.2
	Negative and fractional indices	17.1
	Using one calculation to get an answer to another	
	Simplify surds and rationalise the denominator	13.3
	Use standard form to write numbers and do calculations	17.3
Algebra	Use algebraic notation and simplify expressions by collecting like terms.	2.1
	Substitute numbers into formulae and expressions.	2.1, 6.1
	Use the laws of indices to simplify expressions	2.2
	Multiply a single term over a bracket and factorise using a single bracket	2.3
	Expand brackets to get a quadratic expression and factorise quadratics of the form $x^2 +bx + c$ into brackets. Use difference of two squares.	6.4
	Substitute values into formulae and rearrange formulae to change their subject.	6.1
	Use the terms expression, equation, formula, identity, term and factor.	6.3
	Solve equations involving brackets and fractions, and with the unknown on both sides.	10.1
	Write linear sequences and find the nth term.	21.1
	Write quadratic sequences and find the nth term.	21.2
	Recognise and continue geometric and Fibonnacci sequences	21.3
Data	Construct and interpret frequency tables, bar charts and pie charts.	4.3, 16.1
	Calculate the mean, median, mode and range of a data set.	4.4
	Estimate the mean for a grouped data set, and find the modal and median class	16.2
	Use averages and measures of spread to compare data sets.	16.2
	Use and write two-way tables	4.2
	Draw and use stem and leaf diagrams	4.2
	Draw scatter graphs and line of best fit; comment on correlation	16.4
	Draw and interpret time series	16.5
Number	Find fractions and percentages of amounts.	5.1
	Add, subtract, multiply and divide with fractions and mixed numbers.	5.2
	Convert between fractions, decimals (including recurring decimals) and percentages.	5.3
	Order fractions, decimals and percentages	5.3
	Find percentage increase and decrease; calculate simple interest, VAT and income tax; write numbers as a fraction/percentage of another: find the original number after a percentage change (reverse percentage).	12.3

	Find the reciprocal of a fraction	5.2
	Write, simplify and use ratio	12.2
	Use direct proportion	12.1

Maths Revision List (Higher Tier – Mr Bryce's group)

Topic	Objective	Chapter
Number	Order positive and negative integers and decimals.	1.1
	Round numbers to a given number of decimal places or significant figures.	1.1
	Use mental and written methods to add, subtract, multiply and divide with positive and negative integers and decimals.	1.2, 1.3
	Use BIDMAS to complete calculations in the correct order.	1.3
	Estimate answers to calculations and roots	9.1
	Know factors, multiples and prime numbers	13.1
	Prime factor decomposition	13.1
	Find Lowest common multiple & Highest common factor	13.1
	Powers and roots	13.2
	Use index rules	13.2
	Negative and fractional indices	17.1
	Using one calculation to get an answer to another	
	Simplify surds and rationalise the denominator	13.3
	Use standard form to write numbers and do calculations	17.3
Algebra	Use algebraic notation and simplify expressions by collecting like terms.	2.1
	Substitute numbers into formulae and expressions.	2.1, 6.1
	Use the laws of indices to simplify expressions	2.2
	Multiply a single term over a bracket and factorise using a single bracket	2.3
	Substitute values into formulae and rearrange formulae to change their subject.	6.1
	Use the terms expression, equation, formula, identity, term and factor.	6.3
	Solve equations involving brackets and fractions, and with the unknown on both sides.	10.1
	Write linear sequences and find the nth term.	21.1
	Write quadratic sequences and find the nth term.	21.2
	Recognise and continue geometric and Fibonnacci sequences	21.3
Data	Construct and interpret frequency tables, bar charts and pie charts.	4.3, 16.1
	Calculate the mean, median, mode and range of a data set.	4.4
	Estimate the mean for a grouped data set, and find the modal and median class	16.2
	Use averages and measures of spread to compare data sets.	16.2
	Use and write two-way tables	4.2
	Draw and use stem and leaf diagrams	4.2
	Draw scatter graphs and line of best fit; comment on correlation	16.4
	Draw and interpret time series	16.5
Number	Find fractions and percentages of amounts.	5.1
	Add, subtract, multiply and divide with fractions and mixed numbers.	5.2
	Convert between fractions, decimals (including recurring decimals) and percentages.	5.3
	Order fractions, decimals and percentages	5.3

	Find percentage increase and decrease; calculate simple interest, VAT and income tax; write numbers as a fraction/percentage of another: find the original number after a percentage change (reverse percentage).	12.3
	Find the reciprocal of a fraction	5.2
	Write, simplify and use ratio	12.2
	Use direct proportion	12.1

Year 9 Music

There will be two sections to your exam.

Section A: A selection of listening extracts related to topics you've studied throughout the year. You will answer questions based on the musical features.

Section B: Music theory, asking questions about note values, notes on the stave and notes on the keyboard.

Section A- Topics covered this year

Important musical words:

Melody: The main tune
Texture: The number of parts/layers in a piece.
Dynamics: How loud or soft a piece or section of a piece is.
Tempo: The speed of a piece of music.
Instrumentation: The instruments or sounds used in a piece.
Time signature: How many beats there are in a bar (e.g 3/4, 4/4)
Key- Major (happy), Minor (sad)

Blues/Jazz instruments – trumpet, trombone, clarinet, piano, saxophone, drumkit, double bass

Blues/Jazz terms – improvisation, syncopation, walking bass

Blues

Use of flat/ blue notes in melody
Repeated vocal lines in verses
12 bar blues chord sequence

C	C	C	C
F	F	C	C
G	F	C	C

Section B:

Crotchet = 1   quaver = ½   minim = 2   semibreve = 4   semiquaver = 1/4

E G B D F

F A C E

Middle C D E F G A B C D E F G A
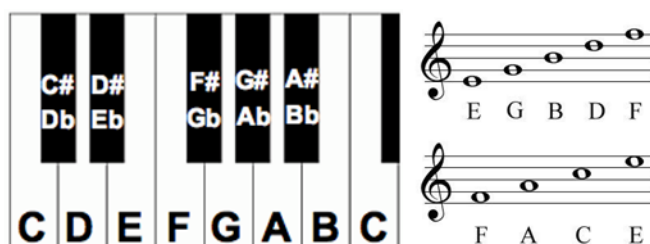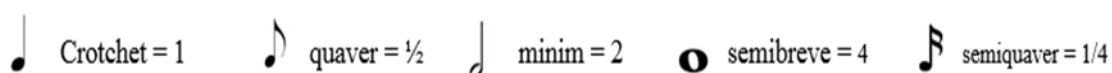
Notes in the space	Notes on the line
FACE in the SPACE	Every Green Bus Drives Fast

Year 9 AQA GCSE Religious studies revision list 2020

Your assessment will be knowledge based on the 4 sections we have covered this year.
If you do not have your book, please do not worry – you can revise the topics in other ways including Kerboodle, Frog and your revision guide.

Topics:
- Christian Beliefs
- Christian Practices
- Islamic Beliefs
- Islamic Practices

Make sure you have a secure knowledge of the key terms for these sections.

<u>Where will the information be?</u>

Use the revision resources on Frog/ department resources

I will attach these lists to Teams and Frog for you. I will also put a copy in the revision resources on FROG.

<u>Remember any words or phrases used on the revision lists can be used in an exam question – it is worth spending time revising these.</u>

This is a good opportunity to make revision notes for the topics covered this year.

Your test will be 1 and 2 mark questions only.

Religious Studies contd. - Revision links

✓ Here are some links that could also help you:

Christianity	Islam
Kerboodle resources – Christianity textbook http://request.org.uk/ https://www.youtube.com/watch?v=z3Z7c6Nw7eE https://www.youtube.com/watch?v=Sxwh9cY44Fk Mr Finlayson - YouTube He has an excellent channel covering all of Christianity – beliefs and practices.	Kerboodle resources – Islam textbook https://www.truetube.co.uk/list?search=islam&page=1 https://www.youtube.com/watch?v=z18o4wO5gEI Mr Minton -YouTube Great videos covering Islam (he also does Christianity- he has a very cute dog!)

This is the revision list for your science summer exam. The science exam will be one paper (1 hour), which will be divided into three equal sections: Biology, Chemistry and Physics. The exam will only consist of parts of modules 1 and 2, so look at the revision list below carefully so you only revise the relevant sections. Using your class notes and the textbook is the main source for revision; however, there are other resources that you could use like BBC bitesize, GCSE Gateway (9-1) videos, Fuse school videos, Seneca and Kerboodle.

You may use a calculator and data sheets which will be sent to you when you are set to do the summer exam. You will be sent a link through FROG and email for you to go on. It will be a closed book exam, done under exam conditions. If you have any questions, please get in touch with any of your science teachers. Good luck!

Biology

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.	☐
B1.1.3 Light microscopy	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.	☐

	Aiming for 4		Aiming for 6		Aiming for 8	
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.	☐

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.	☐

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
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.	☐

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
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	☐	I can use a method to carry out an	☐	I can use a method to carry out an	☐

B2 – Scaling up

	Aiming for 4		Aiming for 6		Aiming for 8	
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.	☐

	Aiming for 4		Aiming for 6		Aiming for 8	
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.	☐

Chemistry

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.	☐				

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.	☐

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
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.	☐

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.	☐

Physics

P1 MATTER

P1.1 The particle model

Specifically: What happens if new evidence is discovered in the atomic model.

P1.2.2 Energy and Temperature

Specifically: Changes of state.

P1.2.3 Specific Heat Capacity

Specifically: The specific heat capacity equation and how to use it.

P2 FORCES

P2.1.2 Vectors and Scalars

Specifically: what the differences are between them.

P2.1.4 Distance-Time graphs

Specifically: How to interpret them.

P2.1.5 Velocity-Time graphs

Specifically: How to interpret them.

P2.1.6 Equations of motion and Kinetic Energy

Specifically: The kinetic energy equation and how to use it.

P2.2.4 Newton's Second Law

Specifically: The equation and how to use it.

P2.2.7 Work and Power

Specifically: The work done equation and how to use it.

P2.3.1 Stretching Springs

Specifically: Interpreting extension graphs.

General

Unit prefixes e.g. centi, milli etc.

Spanish

Use the online Kerboodle book for Foundation AQA GCSE Spanish to revise the key vocabulary from each module covered up to the end of the spring term:

Grammar (Pg 10-15) – Nouns, articles, present/preterite/immediate future tense formation, numbers, ages, time, day, months, dates.

Module 3 (Pg 62-63) – Freetime activities, films, TV, eating out and food, sports.

Module 9 & 10 (Pg 156-157) – School subjects and opinions, school rules, uniform, facilities, school day, extra-curricular activities.

In addition, make sure that you have revised the quantifiers (un poco, bastante, muy), the grammar rules for adjective agreement/word order etc., comparatives and superlatives and the formation of the preterite (past), present and immediate future tenses.

For the translation assessment practice using the short texts from the textbook to translate into English. Make a note of any new vocabulary you look up and revise these separately.

You will complete **ONE assessment** over **1 hour maximum**:

1) **Reading, grammar and translation**

   a) Reading- short texts with questions to respond to either with multiple choice or short answers in English and/or Spanish.

   b) A multiple choice sentence gap-fill testing knowledge of Spanish grammar rules.

   c) A short paragraph to translate from Spanish into English

Additional revision sources:

www.linguascope.com (holtschool / franish20)

www.espanol-extra.co.uk (holtschool / holtspanish)

www.zut.org.uk → OYE → (1123/ holtspanish)

www.languagesonline.org.uk → Español

Google → Fun with Languages → Spanish → KS3

https://www.languagenut.com/en-gb/ (you have your own personal log-ins, if you have lost yours contact your teacher who can remind you.)