Year 8 Revision Support Guide

Name:

Tutor group:

Each subject has provided you with a list of content which needs to be covered for revision.

The list is a series of 'I can…' statements. You need to tick the box next to each statement once you have covered it. You should aim to cover each statement at least 3 times.

Some subjects have provided a list of key terms. It is your job to write in the definitions. The use of the key words enables you to achieve higher marks in assessments as it shows the examiner that you are aware of the subject specific language.

You will also find a section for 'memorisation' for a majority of subjects. This is the information you are expected to know off by heart for each exam. You should make this a key focus of your revision.

English

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	1	2	3
I can respond to an unseen fiction extract			
I can select and retrieve information			
I can infer and deduce meanings			
I can recognise effect of structure and layout on meaning			
I can work out and explore a writer's intention			
I can recognise effects on the reader			
I can write using the P.E.E. structure			
I can explain in detail			
I can write a narrative text			
I can use vocabulary for effect			
I can use a range of punctuation accurately			
I can use connectives to organise ideas			
I can structure a text by using a variety of sentence types and paragraphs			
I can write a descriptive text			

Key terms and definitions

Using subject specific terminology in your exam answers increases your chances of being awarded higher grades.

Complete the table below to give the definition of each of the key terms provided

Key term	Definition
Audience	
Purpose	
Noun	
Verb	
Adverb	
Adjective	
Pronoun	
Simile	
Metaphor	
Alliteration	
Narrator	
Conveys	
Implies	

Mathematics: Foundation

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

	Revision content	**MathsWatch Clip References**	**1**	**2**	**3**
Calculations	I can carry out mental calculations using efficient methods				
	I can add, subtract, multiply and divide integers using written methods	17, 18, 19, 20			
	I can add, subtract, multiply and divide decimals (including money) using written methods	17, 18, 66, 67			
	I can apply BIDMAS correctly	75			
	I can use a calculator and interpret it's display Including brackets, sign change, powers, roots, fractions	77			
	I can find a reciprocal	76			
	I can multiply and divide by numbers between 0 and 1				
	I can solve worded number problems				
	I can solve problems involving money and change both with and without a calculator	22			
Area, Volume and Surface	I can find the area and perimeter of rectangles, I can find the area of triangles, parallelograms and trapezium	53 54, 55, 56			
	I can find the area of a compound shape				
	I can find the area and circumference of circles	117, 118			
	I can find the area and perimeter of parts of circles				
	I can find the area of a sector and the length of an arc **(higher paper only)**	167			
	I can find the volume and surface area of cubes and cuboids	114, 115			
	I can find the volume and surface area of prisms	114, 119			
	I can find the volume and surface area of cylinders	119			
	I can find the volume and surface area of cones, pyramids and spheres **(higher paper only)**	169, 170, 171			
	I can work with frustums **(higher paper only)**	172			
	I can enlarge a perimeter, area or volume				
Probability	I can read and use the probability scale in words and from 0 to 1	14			
	I can identify outcomes of events and find probabilities using fractions, decimals or percentages	59, 60			
	I can estimate the probability from an experiment	125			
	I can find the probability of an event happening *p* and not happening as *1-p*				
	I can use the sum of all outcomes being 1				
	I can use lists & sample space diagrams to systematically record possible outcomes	58, 61, 126			
	I can compare and understand the difference between theoretical and experimental probability	125			
	I can explain how to make experimental probability more reliable	125			
	I can identify outcomes and find probabilities from experiments	125			
	I can complete and use a frequency tree	57			
	I can complete and use a Venn diagram	127, 185			
	I can complete and use a tree diagram **(higher paper only)**	151			
	I can decide when to add or multiply two probabilities to solve a problem **(higher paper only)**	204			

Place Value, Rounding and Estimating	I can state the place value of a digit within a number, including decimals	1, 92			
	I can multiply and divide by powers of 10	30			
	I can round positive whole numbers to the nearest 10, 100 or 1000	31			
	I can round decimals to the nearest whole number or stated decimal place	32			
	I can order decimals	3			
	I can round to a stated number of significant figures	90			
	I can use significant figures to approximate answers	91			
	I can use rounding to make estimates and give solutions to problems	90, 91			
	I can calculate the upper and lower bounds **(higher paper only)**	132			
	I can combine upper or lower bounds appropriately to achieve an overall maximum or minimum for a calculation **(higher paper only)**	206			
Measures and Conversions	I can read and interpret scales	4			
	I can convert between metric units	112			
	I can do rough metric equivalents of imperial measures such as miles, pounds and pints				
	I can make a scale drawing				
	I can use and interpret scales on a map and scale drawing				
	I can combine measures and interpret such as kmph or pence per metre	142			
	I can use the rules for distance, speed and time & density, mass and volume	142			
	I can convert areas and volumes into different units	142			
Simplifying and Substitution	I can interpret expressions	7			
	I can simplify algebraic expressions by collecting like terms	33			
	I can multiply a term over a single bracket	93, 134			
	I can factorise expressions by removing the largest common factor	94			
	I can expand double brackets	134			
	I can substitute positives, negatives and decimals into a formulae	95			
	I can add simple algebraic fractions	210			
Coordinates and Straight Line Graphs	I can read and plot a coordinate in all four quadrants	8			
	I can find and use coordinate points to make a shape on a grid	113			
	I can find the midpoint of a line given the coordinates of each end	133			
	I can find the coordinate points that divide a line into a given ratio				
	I can understand and use conditional probability in tree diagrams and venn diagrams **(higher paper only)**	175			

Foundation paper – do not revise the topics indicated as higher paper only.

Higher paper - remember the higher paper can cover <u>all</u> topics, from any grade, not just those indicated to be in the higher paper only.

All areas of maths could be tested in a standard question that makes it obvious what maths is needed or through problem solving where you may need to interpret and think carefully about the maths needed to be able to solve the problem.

Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.

There is so much to memorise and use in maths that the best way to revise is to practice, practice and practice some more, do not just sit and read your exercise book.

Find lots of questions which give you the opportunity to practice the skills learnt, especially when the question is not straight forward and you need to unpick what all the words are actually asking you to do.

Use your memorisation skills learnt in Spanish to help you memorise all the formulae needed for maths, this is just a flavour of what you may need.

- BIDMAS – Brackets, Indices, Division/Multiplication, Addition/Subtraction

- Know the location and how to use the key buttons on your calculator for creating; powers, roots, negative numbers, fractions

- Rules for area and perimeter:
  - Area of a rectangle or square = length x width
  - Perimeter of a rectangle or square = (length + width) x 2
  - Area of a triangle = ½ x base x height
  - Area of a parallelogram or rhombus = base x height
  - Area of a trapezium = ½ (top + bottom) x height
  - Area of a circle = πr^2
  - Circumference of a circle = πd

- Rules for finding the volume:
  - Volume of cube or cuboid = length x width x depth
  - Volume of a prism = area of the cross section x depth
    (use the rules above for area to find the area of the cross section – the shape that goes all the way through the prism)
  - Volume of a cylinder = πr^2 x depth

- Probabilities can only be given using fractions, percentages or decimals
- Probabilities add up to 1
- The probability of something happening (p) and not happening ($1-p$) add up to 1

- If you are asked to estimate or approximate an answer round everything to 1 significant figure

- Metric conversions e.g. grams to kilograms

Year 8 Science revision

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	1	2	3
I can state what an atom and molecule are			
I can define the terms; element, compound and mixture			
I can describe the properties of some elements			
I can identify elements using the periodic table			
I can describe how the parts an atom are arranged			
I can explain the atomic structure of given elements			
I can identify a compound and state what different elements make it up			
I can describe how to separate mixtures using filtration, evaporation, magnetism, chromatography, distillation and fractional distillation			
I can write formula for simple compounds			
I can compare the electrical conductivity and heat conductivity of metals with non-metals			
I can state that metals can be reacted with oxygen			
I can describe a habitat and the living things found in them			
I can draw a food chain and food web and describe it			
I can describe the organism using the terms; carnivore, omnivore, herbivore, consumers and producers			
I can explain possible outcomes if part of the food web is affected			
I can define and identify predators and prey			
I can construct and explain a predator-prey graph			
I can represent food chains as a pyramid of numbers or pyramid of biomass			
I can describe the differences between a pyramid of numbers and a pyramid of biomass			
I can describe the process of bioaccumulation and explain why it occurs			
I can describe and explain how humans are impacting on other organisms			
I can describe the role of bees in pollination and explain why it is important to food security			
I can explain adaptations of plants and animals to make them more suited to an environment			
I can describe the following sampling techniques; pooters, quadrats and pond dipping			
I can describe and compare the arrangement of particles of solids, liquids and gases			
I can describe what happens to the particles inside substances as they are heated			
I can explain how heating and cooling results in a change of state			
I can state how heat travels through solids through conduction			
I can explain how heat is transferred through convection			
I can define radiation and state where it occurs			
I can state the different forms of energy and describe how energy can change from one form to another			
I can identify useful and wasted energy in energy transfers			
I can state the units and calculate power			
I can state how light travels and explain how we see using ray diagrams			
I can describe the reflected image in a mirror and draw the path of rays of light as they are reflected			
I can explain why a glass block causes refraction			
I can state that white light is made up of the colours of the spectrum and describe how a prism effects white light			
I can explain how we see colour using absorb and reflect			
I can label a diagram of the eye and explain how it differs in long and short sighted people			

I can explain the relationship between frequency and pitch			
I can use the particle model to describe how sound behaves in different media			
I can describe the use of an oscilloscope to detect sounds and display information about them			
I can label a diagram of the ear and describe how vibrations travel through the ear			
I can define and identify the dependent, independent and control variables in an experiment			
I can write the method, equipment and draw a diagram for various experiments			
I can identify the risks, describe why they are a risk and explain how to overcome them for various experiments			
I can draw a suitable table of results to collect accurate data			
I can explain the importance of repeating an investigation			
I can plot results in a suitable graph			
I can identify anomalous results			
I can describe the pattern shown by data			
I can conclude and evaluate an investigation			

Key terms and definitions

Using subject specific terminology in your exam answers increases your chances of being awarded higher grades.

Complete the table below to give the definition of each of the key terms provided

Key term	Definition
Atom	
Element	
Compound	
Periodic table	
Group	
Period	
Properties	
Atomic structure	
Electron	
Proton	
Neutron	
Nucleus	
Shell	
Chemical Reaction	
Word equation	
Symbol equation	
Sampling	
Transects	
Quadrats	
Pooters	
Interdependence	
Food webs	

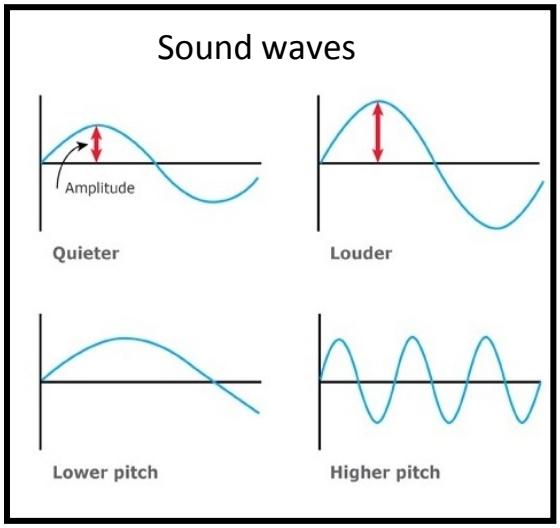
Food chains	
Bioaccumulation	
Pollinators	
Pollination	
Predator	
Prey	
Producer	
Environmental factors	
Adaptations	
Melt	
Freeze	
Evaporate	
Condense	
Heat	
Cool	
Energy	
Heating and Cooling curve	
Conduction	
Convection	
Radiation	
Waves	
Vacuum	
Vibration	
Frequency	
Wavelength	

Amplitude	
Reflection	
Refraction	
Dispersion	
Spectrum	
Accuracy	
Precision	
Repeatability	
Reproducibility	
Independent variable	
Dependent variable	
Control Variable	

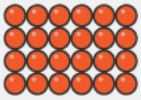
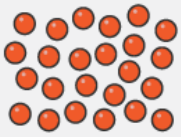
Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.

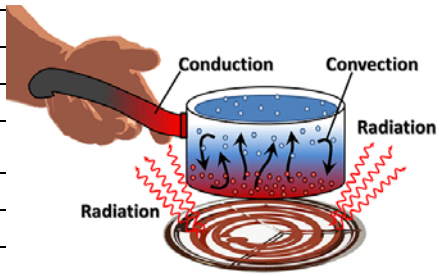
Energy (J) = power (W) x time (s)

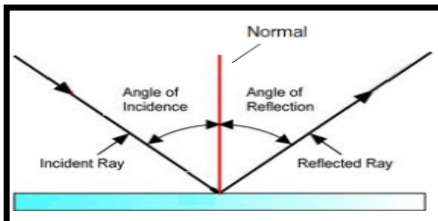


Kinetic theory

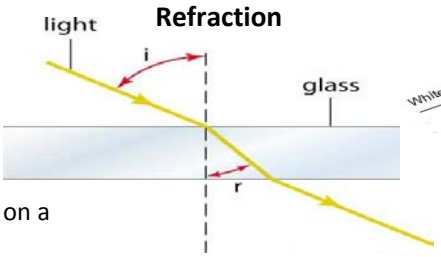
State	Solid	Liquid	Gas
Diagram			
Arrangement of particles	Regular arrangement	Randomly arranged	Randomly arranged
Movement of particles	Vibrate about a fixed position	Move around each other	Move quickly in all directions
Closeness of particles	Very close	Close	Far apart

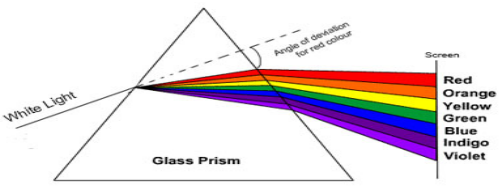
Organism	How it gets its energy
Consumer	Feeding on other organisms
Primary consumer	Eating plants
Secondary consumer	Eating primary consumers
Tertiary consumer	Eating secondary consumers
Herbivore	Eating plants
Carnivore	Eating other animals
Decomposer	Feeding on dead and decaying organisms, and on the undigested parts of plant and animal matter in faeces



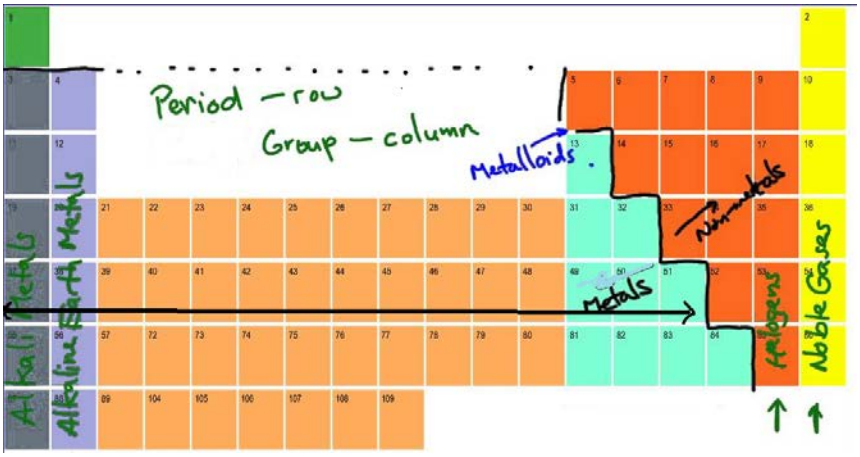


Angle of incidence = angle of reflection on a mirror

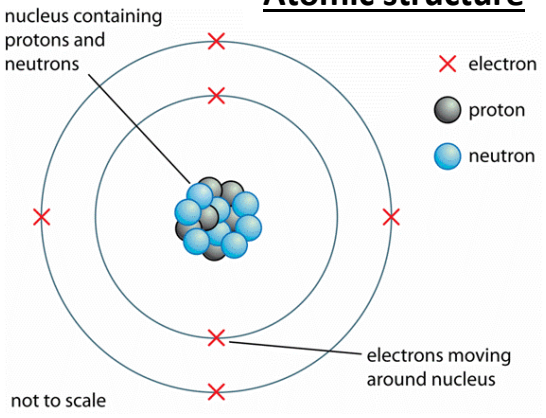




Dispersion means white light splits into different colours



Atomic structure



Year 8 – Revision Checklist

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	1	2	3
Able to explain the main causes of the First World War			
Able to explain what is meant by imperialism			
Able to explain what is meant by militarism			
Able to explain nationalism			
Able to explain what an alliance is			
Able to identify the difference between a long term cause, short term cause, and a trigger cause			
Able to explain who Franz Ferdinand was and why he was important			
Able to explain the significance (impact) of Franz Ferdinand's death			
Able to explain the main features of a trench			
Able to describe the conditions soldiers faced in the trenches			
Able to explain the main problems faced by soldiers in the trenches			
Able to describe the features of rifles, artillery, mustard gas, machine guns, grenade, tanks			
Able to explain the main problems associated with rifles, artillery, mustard gas, machine guns, grenade, tanks			
Able to describe the events of the Battle of the Somme			
Able to explain the causes for the failure of the Somme			
Able to explain and evaluate the role of General Haig			
I can confidently analyse sources by picking out and explaining the main features			
I can infer from sources			
I can identify similarities and differences			
I can produce a balanced argument that explores both sides of a debate and reaches a conclusion			
I can explain my points using 'because'			
I can use key vocabulary to support my answers			

Key terms and definitions

Using subject specific terminology in your exam answers increases your chances of being awarded higher grades.

Complete the table below to give the definition of each of the key terms provided

Key term	Definition
Imperialism	
Militarism	
Alliances	
Nationalism	
Empire	
Independence	
Kaiser	
Ultimatum	
Artillery	
Trench Foot	
Shell Shock	
Assassination	
Balkans	
Serbs	

Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.

The main causes of the First World War

- Militarism
- Nationalism
- Imperialism
- Alliances
- Know what each term means and how it contributed towards the First World War

Weapons

- Able to describe the main weapons used during the First World War e.g.
- Rifles
- Artillery
- Gas
- Grenades
- Tanks
- Machine guns
- Able to explain in detail the problems related to each weapon.

Trenches

- Able to explain the main features of a trench
- Able to explain the conditions soldiers would have experienced in a trench
- Able to explain the problems soldier's faced and the impact the trenches had.

Philosophy and Ethics

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	1	2	3
I can use key terms prejudice and discrimination correctly			
I can give an example of racism • Holocaust • Murder of Stephen Lawrence • Islamophobia • Own example			
I can explain the beliefs and actions of Martin Luther King			
I can Point Evidence Explain at least two teachings in relation to racism			
I can explain my own opinions about prejudice and discrimination and how someone should stand up for their beliefs			

Key terms and definitions

Using subject specific terminology in your exam answers increases your chances of being awarded higher grades.

Key term	Definition
Discrimination	To act on a prejudice
Equality	A state of equal treatment and rights
Genocide	A mass killing of an entire group of people
Martin Luther King	A black American man who campaigned for civil rights and fought for equality
Pacifism	A belief that violence is wrong
Prejudice	A belief or opinion about someone before you know anything about them.
Racism	Discrimination based on skin colour or country of origin
Stereotypes	A generally accepted view about a certain group of people.
Ummah	A whole community of Muslims tied together by religion

Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.

Key terms and their meanings

Sikhism 	**Waheguru (God) created every being and is in everyone.** **Waheguru (God) is formless and colourless, and the differences between humans do not make one person better than another.** **There is no Hindu and no Muslim because everyone is the same in Waheguru's eyes.** **You should not be prejudice.**
Christianity 	Everyone is equal in the eyes of God. You should treat your neighbour as you would like to be treated yourself (good Samaritan) There is neither Jew nor Greek, slave nor free, male nor female, for you are all one in Christ Jesus.
United Nations 	All forms of discrimination go against the Declaration of Human Rights: **1** All human beings are born free and equal in dignity and rights. They are given reason and conscience and should act towards one another in a spirit of brotherhood. **2** Everyone is entitled to human rights and freedoms, regardless of your race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.
Islam 	Everyone was created by Allah (God) and everyone is equal. A white person is not better than a black person, nor is a black person better than a white person except by their good actions. Every Muslim is the brother of every other Muslim and that Muslims form one brotherhood. (Ummah)

Sikhism 	**Waheguru (God) created every being and is in everyone.** **Waheguru (God) is formless and colourless, and the differences between humans do not make one person better than another.**
Christianity 	Everyone is equal in the eyes of God. You should treat your neighbour as you would like to be treated yourself (good Samaritan)
United Nations 	All forms of discrimination go against the Declaration of Human Rights: **1** All human beings are born free and equal in dignity and rights. **2** Everyone is entitled to human rights and freedoms, regardless of your race or colour.
Islam 	Everyone was created by Allah (God) and everyone is equal. A white person is not better than a black person, nor is a black person better than a white person except by their good actions.

Spanish

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	**1**	**2**	**3**
I can say and write the phrases in Spanish from the following sections of vocabulary from my green year 8 vocabulary booklet:			
Conocer personas nuevas – welcome, how are you? & I get on well with Elena			
Conocer pesonas nuevas – are you coming with me?			
Hospedarse en España – first impressions & household chores			
Hospedarse en España – enjoy your meal & let's cook something typical			
La moda – what do you think of fashion? & my style			
La moda – does it suit me?, where shall we go shopping? & specialist clothing			

Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.

Memorise your Spanish paragraph about fashion so you can write it from memory in Spanish (you have divided it into sections on flash cards!)

Practise 4 or 5 times a week for a few minutes, saying it loud and writing it out in the back of your book or on paper

Key phrase to memorise	Definition
Spanish paragraph practice	
Me llevo bien con mis padres	I get on well with my parents
Mi madre me ayuda siempre	My Mum always helps me
Esta camiseta me queda bien	This t-shirt suits me
En los años sesenta, llevaban minifaldas	In the 60s, they used to wear miniskirts
En el siglo diecinueve	In the 19th century
Los hombres llevaban las medias	The men used to wear tights
Mis amigos y yo solemos llevar	My friends and I usually wear
Prefiero llevar	I prefer to wear
Mi amigo prefiere llevar	My friend prefers to wear
Me queda(n) bien ya que es/son..	It/they suit(s) me because it is / they are
Antes, mis padres llevaban….era	Before, my parents used to wear….it was
Prefiero comprar en….	I prefer to shop in…
Ya que son más / menos….que	Because they are more / less….than
Lo mejor es comprar en los/las…	The best thing is shopping in …
Cuando sea mayor, voy a llevar….será	When I'm older, I'm going to wear…it will be
Aiming for 30+ points…(all of the above, plus…)	
Para ayudar a mis padres	To help my parents
Si tuviera más dinero, llevaría	If I had more money, I would wear
Puesto que / dado que sería	Because it would be
Ayer, llevé….fue	Yesterday, I wore…it was
Este fin de semana, llevaré..ya que será	This weekend, I will wear…because it will be
Lo/la encuentro más cómodo/a	I find it more comfortable
Los/las prefiero ya que son más…	I prefer them because they are more…
Cuando hace frío, es mejor llevar…	When it's cold, it's better to wear
Si fuera rico/a, compraría…	If I were rich, I would buy…

Music

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	1	2	3
I can understand the elements of music.			
I can identify dynamics within different pieces of music.			
I can identify rhythm within different pieces of music.			
I can identify structure within different pieces of music.			
I can identify melody within different pieces of music.			
I can identify instruments within different pieces of music.			
I can identify tempo within different pieces of music.			
I can write about the history of Blues music.			
I can write about how Stomp create music.			
I can identify music note values.			
I can write notes on the treble clef.			
I can identify different Blues techniques.			
I can write a 12 bar blues.			
I can identify the different parts of a drum kit.			

Key terms and definitions

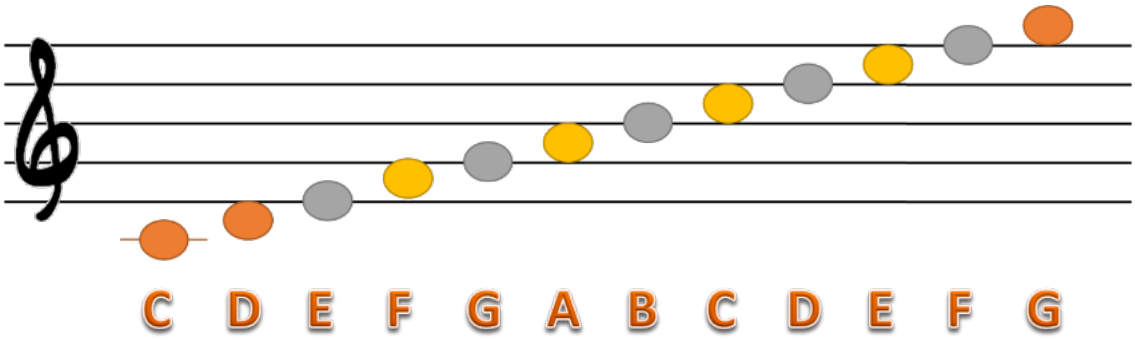
Using subject specific terminology in your exam answers increases your chances of being awarded higher grades.

Complete the table below to give the definition of each of the key terms provided

Key term	Definition
Dynamics	
Rhythm	
Structure	
Melody	
Instrumentation	
Tempo	
Tonality	
Texture	
Harmony	
Walking Bass	
12 Bar Blues	
Syncopation	
Improvisation	
Blues Scale	

Memorisation

There are key elements of each examination course that need to be fully memorised in order for you to obtain the highest marks possible in the exam. The information below should be a priority for memorising as part of your revision.



Semibreve	Dotted Minim	Minim	Crotchet
4	3	2	1

Quaver	Two quavers	Semiquaver	4 Semiquavers
1/2	1/2+1/2= 1	1/4	1/4 x 4 = 1

Geography

Science has proved that pathways between neurons in your brain can be strengthened over time. Simple repetition – practising retrieving a memory over and over again – is the best form of consolidating information. You need to try and revise each 'I can statement…' at least three times.

Revision content	**1**	**2**	**3**
I can use data to draw graphs			
I can describe patterns on a graph			
I can explain why graphs have certain patterns			
I can analyse unseen data and make comments on it			
I can describe the hypothesis for our Nottingham University fieldwork			
I can describe the methods used for our Nottingham University fieldwork			
I can explain why we choose the methods used for our Nottingham University fieldwork			
I can describe the results of our Nottingham University fieldwork			
I can explain why we got the results of our Nottingham University fieldwork			
I can describe how we could improve our Nottingham University fieldwork			

Year 8

Monday 22nd January 2018

Mon Reg	Mon 1	Mon 2	Mon 3	Mon 4	Mon 5	Mon 6	Mon 7	Mon 8	Mon 9
Registration	Maths - non calculator 1 hour Main Hall			P and E 1 hour Main Hall		English - Reading 1 hour Main Hall			Period 9 as normal

Tuesday 23rd January 2018

Tues Reg	Tues 1	Tues 2	Tues 3	Tues 4	Tues 5	Tues 6	Tues 7	Tues 8	Tues 9
Registration				English - Writing 45 mins Main Hall		Spanish - writing 45 minutes Main Hall			Period 9 as normal

Wednesday 24th January 2018

Weds Reg	Weds 1	Weds 2	Weds 3	Weds 4	Weds 5	Weds 6	Weds 7	Weds 8	Weds 9
Registration	Music 45 minutes Main Hall			Geog 1 hour Main Hall					Period 9 as normal

Thursday 25th January 2018

Thurs Reg	Thurs 1	Thurs 2	Thurs 3	Thurs 4	Thurs 5	Thurs 6	Thurs 7	Thurs 8	Thurs 9
Registration						History 1 hour Main Hall			Period 9 as normal

Friday 26th January 2018

Fri Reg	Fri 1	Fri 2	Fri 3	Fri 4	Fri 5	Fri 6	Fri 7
Registration	Maths - calculator 1 hour Main Hall			Science 1 hour Main Hall			

Note: Drama, Design technology and Art will be assessed during normal lessons. Your teachers will give you more information on this.