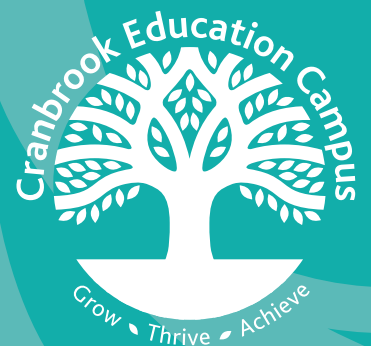


Knowledge Organiser

Year 11
Cycle One



Personal details

Name:	
Tutor Group:	Tutor:
Head of Year:	House Group:

Key log in information

My school email:	@cranbrook.education
My school password:	
Classcharts code:	

Sparx	sparxmaths.uk	sparxscience.com
Username:		
Password		

Educake	educake.co.uk
Username:	
Password	

Bedrock - literacy	app.bedrock.learning.org
Username:	
Password	

MFL languagenut	languagenut.com
Username:	
Password	



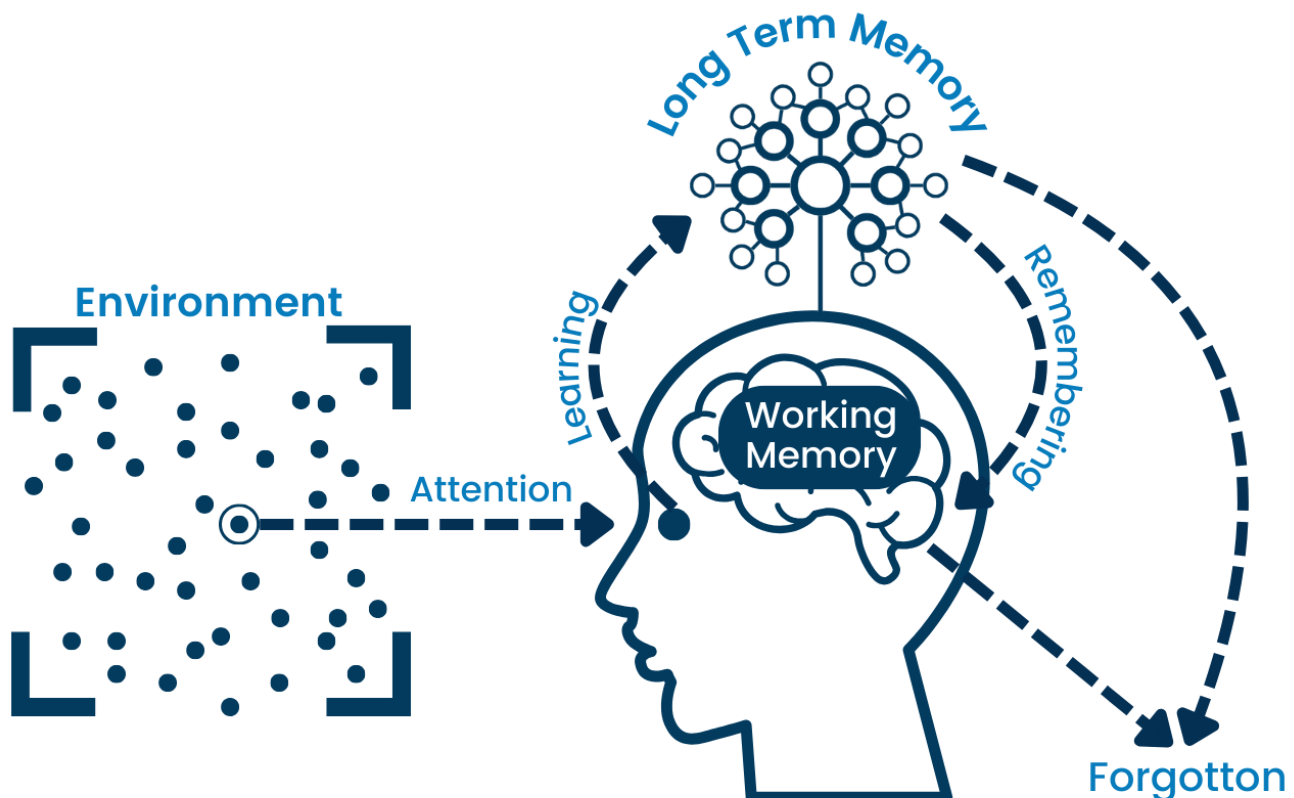
How do we learn?

In your lessons at CEC, teachers plan every minute to ensure the **teaching habits** and strategies they use create a productive learning **environment** and focus your **attention** on the most important content. The information you receive in class is held and dealt with by your **Working Memory** (sometimes called your **short term memory**). Your working memory capacity is limited, meaning you can only deal with a few pieces of new information at a time before you get overloaded - this is called your **Cognitive Load**.

Once in your working memory, new information can be dealt with and transferred to your **Long Term Memory** - this is what learning actually is. Once in your long term memory, the information is organised into **schema** - you organise new memories and link them to your previous experiences. The information in these **schema** can then be recalled to help you understand new information and importantly, this does not use up the limited slots in your working memory. If information is not effectively **learned** or **encoded** from your working to your long term memory, it will be forgotten.

Retrieval practice will help to make sure your schema are well developed and that you are able to link all the knowledge you will need for your lessons. Retrieval practice is exactly what the name suggests - practising retrieval, and then applying, all of that information stored in your long term memory. Again, if you don't regularly practise remembering this information, it can become **forgotten**.

The model below summarises this process showing how new information moves from your environment (what is in happening in your classroom), eventually forming new and valuable memories.



Your Knowledge Organiser

This booklet contains **knowledge organisers** (or **KOs**) for all your subjects. Each knowledge organiser has the key facts and most powerful information that needs to be **memorised** to help you master your subjects and be successful in lessons. Your teachers have carefully selected the information included to ensure you construct the most effective schema, meaning you can recall the information you need in class to master your subjects.

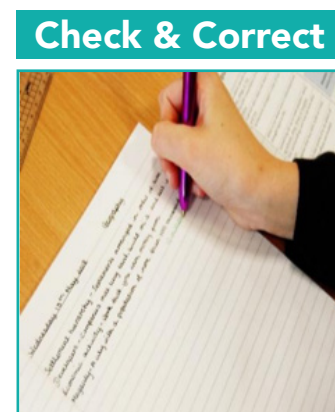
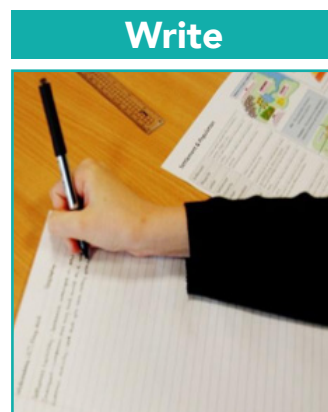
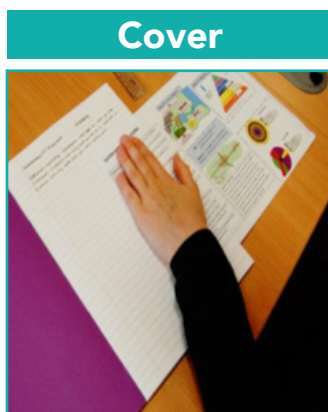
Each week as part of your independent study, you'll be asked to use your knowledge organiser to review this key content, ready for it to be used in class.

How can I use my Knowledge Organiser?

Your knowledge organiser is a great resource for use at any time at home or in school. Being able to **recall** the information it contains from your long term memory will help you have a really **high success rate** in lessons. One of the most effective ways of forming strong long term memories is by quizzing yourself. In fact, research shows that pupils remember 50% more when they test themselves after learning something new. Simply reading through your knowledge organiser is helpful, but there are also far more effective ways to memorise the important content.

How can I self-quiz?

- » **Cover-Write-Check:** Your teacher may direct you to read a specific section or week of your KO. Once you've read the information, **cover** it up and **write** out as much as you can from memory. Next, **check** the KO to see if you're right, then **correct** any mistakes in your purple pen. Repeat this process two more times - even if you got 100% correct.



- » **Self-quizzing questions:** Use the content in your KO to write a series of questions (vary the command words you use - *state, describe, explain, compare* and so on) and then quiz yourself to ensure you can answer them. Save the questions and use them for some spaced practice, or quiz a friend with them.
- » **Create flashcards:** These could be double-sided with a question on one side and the answer on the other. Alternatively, try a keyword on one side and a definition or diagram on the reverse. These can then be used for self-quizzing. The best way to use flashcards is called the Leitner System - find out more about it here: tinyurl.com/34e5p6f6
- » **Draw a mind-map:** jot down everything that you remember from the KO and make links between the ideas. Check for accuracy and repeat.

- » **Make up mnemonics:** (eg. MRS GREN) to help you remember key facts. Write these out from memory.
- » **Make Cornell notes:** This system of note taking makes revision and retrieval practice really easy due to the layout of the notes. Set up a page with the four sections shown in the diagram:
 - » **Subject** - write the title of your topic;
 - » **Recall** - this could be questions or keywords;
 - » **Notes** - write descriptions, explanations and examples from the content you studies here; and
 - » **Summary** - in one sentence, give an overview of everything in the notes.

Name		Date
Subject	Page #	
recall column	notes column	
summary		

Once your notes page is complete, you could cover the notes and recall section and see how much of the content you can write down - then check and correct. Alternatively, cover up the notes section and try to answer the questions you wrote in the recall section. Find out more about how to prepare and use Cornell notes here tinyurl.com/5xyt5ryc.

What are the independent study expectations?

During your independent learning, you may be asked to show you've used your Knowledge Organiser in various ways. For some subjects, such as Science, Geography and History, you may be asked to review your KO and then complete an online quiz. In other subjects, such as Art and Drama, you may be asked to complete Cover-write-check or Cornell notes. No matter how you are asked to use it, the aim is the same - to build strong long term memories that you then recall and use in class.

When completing any written work from your KO, you should complete it in your green **Knowledge Organiser workbook**. You must:

- » Check your schedule to see which subject you should be working on each day
- » Write the date and subject heading for each piece of work
- » Complete one full page for each subject on the schedule in your workbook
- » Make sure you always use your knowledge organiser after you have finished to mark, evaluate and correct your own work in your purple pen.

For online Sparx tasks, assignments must be completed to 100% in both Maths and Science.



Independent study schedule

The schedule below shows you what independent study you should be completing each day. This includes your online work such as Sparx Maths and Science; subjects such as History and Geography where you will use your knowledge organiser and educake; and subjects where you should use some of the self-quizzing techniques detailed above in your **Knowledge Organiser workbook**.

In years 10 and 11, you will notice an increased focus on preparing you for your GCSE exams. This means teachers will start to use exam materials and other independent study tasks in addition to your KO and online platforms. You will also be provided with a **Countdown booklet** in the run up to any PPEs or exams to really focus your revision.

The schedule also shows how long you should spend on each task, the day you are allocated time to complete the task and also the day the task needs to be handed in. Work in your KO workbook will be checked in class by your subject teachers. If you have not completed any of your independent study tasks, you will be required to attend a 2 hour non-completion detention after school on the following Monday to catch up and get ahead with your homework.

Year 9, 10 and 11						
	15 min	15 min	15 min	15 min	Specialist support	Non-completion detention
Monday	Maths				MFL Languagenut & Comprehension	Monday afterschool 3 - 5 pm You will not need to attend the detention if all homework is completed by 3 pm on Monday
Tuesday	English				Maths	
Wednesday	Science				English	
Thursday	Geography/History		Options subject: Drama/Art/Music/ Sports Science/ Computer Science		Science	
Friday	MFL languagenut		Comprehension		Geography/ History and Option subject	

Who can help with my independent study?

There are lots of people who can help with your independent study. **Independent Study club** runs everyday in the library from **3:00 - 4:00**. There is a quiet space to work, computers to use for online tasks and members of staff available to help. It's a great place to complete all your tasks for the day, leaving your evening free to enjoy your other interests.

If you need help with a particular task, your **subject teachers** will be available at break and lunchtime to help with any issues - just make sure **you** see them before the hand-in day and they will be happy to help.

By using the schedule above, we hope you can plan to complete your independent study as well as still enjoying all your other interests, family and friends each day. If you do have any issues, please tell your **tutor or head of year** straight away.

Other useful information

A series of horizontal dotted lines for writing notes or additional information.









How should I present my work?

At CEC, we are **PROUD** our work and this shows in the presentation of work in books and booklets.

- » Book work and booklet tasks are completed in **blue** or **black** pen only.
- » Work in books is set out in the same way using **DUMTUMS** (Date, Underline, Miss a line, Title or Learning intention, Underline, Miss a line, Start).
- » Work is underlined with a ruler.
- » All tasks are completed neatly and to the highest of standard.
- » There is no doodling, tearing or scribbling in books or booklets – any defacing will be sanctioned.
- » Any mistakes are neatly crossed through with a single line.
- » There are no unintended empty spaces left in books.
- » Response to feedback and self assessment is completed in a **purple** pen.
- » Any incomplete tasks should have a written reason (such as “absent, on school trip”).
- » The full date should be written at the top left hand side of the page.
- » In Mathematics and Science the date should be written in figures.
- » Each calculation must be clearly numbered with a number or letter to distinguish it from working figures.

What are Talk Tactics?

Oracy - the ability to express yourself fluently in speech - is an important skill for all your subjects. Use the Talk Tactics below in class discussions and to help you formulate your verbal responses to questions.

<p>Instigate: </p> <p>Present an idea or open up a new line of inquiry</p> <p>“ I would like to start by saying _ “ I think ____ “ We haven’t yet talked about _</p>	<p>Probe: </p> <p>Dig deeper, ask for evidence or justification of ideas</p> <p>“ Why do you think ___? “ What evidence do you have to support X idea? “ Could you provide an example?</p>	<p>Challenge: </p> <p>Disagree or present an alternative argument</p> <p>“ I disagree because ____ “ To challenge you X, I think ____ “ I understand your point of view, but have you thought about ____?</p>
<p>Clarify: </p> <p>Asking questions to make things clearer and check your understanding</p> <p>“ So are you saying ____? “ Does that mean ____? “ Can you clarify what you mean by ____?</p>	<p>Summarise: </p> <p>Identify and recap the main ideas</p> <p>“ So far we have talked about ____ “ The main points raised today were ____ “ Our discussion focused on ____</p>	<p>Build: </p> <p>Develop, add to or elaborate on an idea</p> <p>“ Building on X’s idea ____ “ I agree and would like to add ____ “ X’s idea made me think ____</p>



Stop



'They're not bullying you because of you, they're bullying you because of how they are'

Jessie J

Bullying affects lots of people and can happen anywhere: at school, travelling to and from school, in sporting teams, in friendship or family groups.

Bullying can take many forms including:

- emotional abuse
- social bullying
- social media
- threatening behaviour
- name calling
- cyberbullying
- sexting

Bullying includes REPEATEDLY:

- people calling you names
- making things up to get you into trouble
- hitting, pinching, biting, pushing and shoving
- taking things away from you
- damaging your belongings
- stealing your money
- taking your friends away from you or leaving you out
- posting insulting messages or rumours, in person online
- threats and intimidation
- making silent or abusive phone calls
- sending you offensive texts or messages

Speak



'Blowing out someone else's candles doesn't make yours shine any brighter'

Drake

Speak to someone.

No one has a magic wand, but we always do our best and we do really care.

Telling someone shares the problem. It helps you feel supported.

It is really important to tell someone, particularly if the bullying has been going on for a while or the strategies you've tried haven't worked.



You're not alone

Don't be afraid to tell an adult. Telling isn't snitching!



Support



'You always have to remember that bullies want to bring you down because u have something that they admire'

Zak Efron



What we do at Cranbrook to deal with bullying:

- **Mentoring** is having a named person you can go to for support at school. Tutor/HOY/Refocus/Other
- **Restorative justice** brings all children involved together so everyone affected plays a part in repairing the harm and finding a positive way forward.

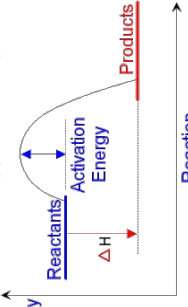
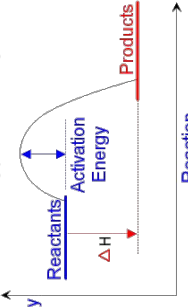
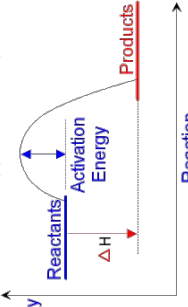
Any form of bullying will not be accepted at Cranbrook.

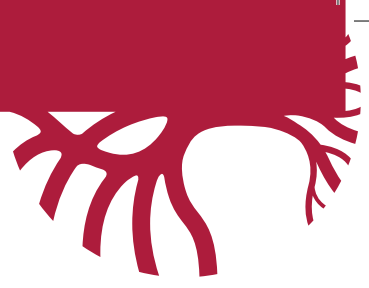




Year 11 Combined Science - Cycle 1		Week 1 - Blood and blood vessels		Week 2 - Heart and Circulation	
<p>Key vocabulary</p> <ul style="list-style-type: none"> Blood vessel: the part of the circulatory system that transports the blood. Artery: a thick muscular blood vessel that transports blood to the tissues. Capillary: the smallest blood vessels. Their walls are only one cell thick to maximise the diffusion of substances into the tissues. Vein: a large diameter blood vessel that returns blood to the heart. Respiration: releasing energy from sugars. Cardiac output: the volume of blood pumped by the heart per minute. Avogadro's constant: the number of particles of a substance in one mole, 6.02×10^{23}. Fossil fuel: a fuel produced over millions of years due to heat and high pressure, e.g. coal and oil. 		<ul style="list-style-type: none"> The blood is the transporter of all the important nutrients, chemicals and hormones that you need to survive. The blood is made up of 4 components: plasma, platelets, red blood cells and white blood cells. Plasma: the liquid component of blood. Sugars like glucose are dissolved in this as well as waste products like carbon dioxide. Platelets: support our body's clotting process should a wound occur. Red blood cells: the cells which carry oxygen to deliver it to the tissues. They contain haemoglobin, a red pigment that binds oxygen. White blood cells: a range of cells which are involved in the immune system There are three types of blood vessels which carry the blood: <ul style="list-style-type: none"> Arteries (away from the heart), Veins (towards the heart), and Capillaries (small branches) 		<ul style="list-style-type: none"> The heart is separated into two halves, the right side pumps blood to the lungs while the left side receives blood from the lungs and pumps it around the rest of the body. Each half of the heart has an upper and lower chamber, the upper chamber is called the atrium and the lower is called the ventricle. 4 valves control blood flow through the heart, preventing it from moving in the wrong direction. The blood moves through the heart as follows: vena cava → right atrium → right ventricle → pulmonary artery → pulmonary vein → (Lungs) → left atrium → left ventricle → aorta → (body) The cardiac output is the amount of blood transferred by the heart. Cardiac output = Heart rate x stroke volume Heart rate is the number of beats per minute and the stroke volume is the amount of blood pumped per beat. 	
<p>Week 3 - Respiration and exercise</p> <ul style="list-style-type: none"> Respiration is the process of releasing energy from sugars. There are two forms of respiration, aerobic and anaerobic. Aerobic respiration requires the presence of oxygen and follows this word equation: Glucose + oxygen → carbon dioxide + water Anaerobic respiration releases less energy per sugar molecule than aerobic and also produces a harmful byproduct known as lactic acid. Anaerobic respiration in humans follows the word equation: Glucose → lactic acid Anaerobic respiration is inefficient therefore our body will increase the heart rate during exercise to transfer more oxygen to the muscles to respire aerobically. 		<p>Week 4 - Chemical calculations</p> <ul style="list-style-type: none"> Conservation of mass: the mass of reactants will always be equal to the mass of the products (symbol equations must be balanced). Amounts of substances are measured in moles (mol). 1 mol = 6.02×10^{23} particles of a substance This number is the Avogadro constant. Moles of a substance can be calculated: Number of moles = mass of substance (g) ÷ Relative Atomic Mass Empirical formulae: simplest whole number ratio of elements in a compound. It can be found by: <ol style="list-style-type: none"> Write the mass of each element in the question. Record the RAM for each element. Calculate the number of moles (No of moles = mass in grams ÷ RAM) Divide all elements by the smallest number of moles. 		<p>Week 5 - Fuels</p> <ul style="list-style-type: none"> Crude oil is a fuel which can be burnt in order to release energy in the form of heat. Crude oil contains a mixture of Hydrocarbons which are made of hydrogen and carbon only. The properties of hydrocarbons are related to the length of the chain. Hydrocarbons with a single bond are called Alkanes. The first 4 are: methane, ethane, propane, butane. General formula: C_nH_{2n+2} Hydrocarbons which contain at least one double bond are called Alkenes. General formula: C_nH_{2n} We separate the mixture of alkanes in crude oil by boiling point in a process called fractional distillation. The mixture is heated at the bottom of a fractionating column until it evaporates. As they rise up the column they cool and will condense at different points depending on their boiling point. 	



Week 6 - Combustion and Pollution		Week 7 - Earth and Atmosphere	
<p>Key vocabulary</p> <ul style="list-style-type: none"> • Acid rain: precipitation with a pH between 4.2-4.4. • Atmosphere: the combination of gases in the air surrounding a planet. • Combustion: burning a fuel in oxygen. • Distortion: a change in shape. • Elastic potential energy: the energy stored in a stretched object. • Endothermic: an energy change in a reaction in which energy is taken in from the surroundings. • Exothermic: an energy change in a reaction in which energy is released to the surroundings. • Global warming: the change in global temperature which occurs as a result of greenhouse gas emissions. • Hooke's Law: the extension of an elastic object is directly proportional to the force applied to a limit. • Photosynthesis: the process of using energy from light to produce sugars. 	<ul style="list-style-type: none"> • Hydrocarbons can be burnt to release energy in a process called combustion. • Complete combustion occurs when there is a good supply of oxygen. Fuel + Oxygen → Carbon Dioxide + Water • When there is a low supply of oxygen incomplete combustion occurs which releases less energy and produces a harmful byproduct. Fuel + Oxygen → Carbon Monoxide + Water • Carbon monoxide is a toxic gas which prevents our red blood cells from being able to carry oxygen. • Sulfur dioxide is an atmospheric pollutant that occurs when impure fuels are burnt and the sulfur reacts with oxygen in the air. It can produce acid rain. • Oxides of nitrogen is another pollutant that occurs when Nitrogen and Oxygen in the air are heated to high temperatures in an engine. It also causes acid rain and respiratory diseases. 	<ul style="list-style-type: none"> • When the Earth first formed, the atmosphere was very different to now and the temperature was extremely high • Early atmosphere: very little oxygen, high levels of carbon dioxide, high levels of methane, high levels of water vapour. • As the temperature of the Earth cooled, the water vapour condensed into liquid. • Carbon dioxide became trapped in the water and rocks. • Small organisms began to photosynthesise and so converted the carbon dioxide into oxygen. • As a result of this, the levels of carbon dioxide decreased and the oxygen levels increased. • The atmosphere today: <ul style="list-style-type: none"> ○ 78% nitrogen ○ 21% oxygen ○ 0.9% argon ○ 0.04% carbon dioxide 	<ul style="list-style-type: none"> • When a chemical reaction occurs, an energy change takes place. • The amount of energy required to break the existing bonds is different to the amount of energy released when the new bonds form. • An exothermic reaction is where energy is released when new bonds are formed., heating the surroundings. • An endothermic reaction is where energy is taken in when existing bonds are broken, cooling the surroundings. • This can be represented in an energy level diagram as shown below: 
Week 8 - Global Warming		Week 9 - Forces and Extension	
<ul style="list-style-type: none"> • A greenhouse gas is a gas which enters the atmosphere and absorbs heat. Examples include methane and carbon dioxide. • Burning fossil fuels such as crude oil release high levels of carbon dioxide. • Cattle farming releases high levels of methane gas. • Infrared radiation from the sun passes into our atmosphere and reflects off the Earth's surface. This natural process maintains the Earth's temperature. • Excess energy is normally re-emitted into space. • Greenhouse gases insulate the Earth from radiating the energy, warming the planet. • Negative impacts of climate change includes glaciers and polar ice melting and changes in weather patterns due to high energy levels in the atmosphere. • Effects of climate change are now observable on our planet. 	<ul style="list-style-type: none"> • A force when applied to an object can deform it (bend, stretch or squash). • Elastic distortion is reversed when the force is removed but inelastic distortion is not. • When a force is applied to an elastic object, it can either extend or compress. Each elastic object has its own spring constant which is a measure of how much force is needed to make it extend. Force = spring constant x extension • When a spring is stretched beyond its limit of proportionality it will not longer return to its original shape. We call this its elastic limit. • The relationship between force and extension is described by Hooke's Law. • The energy stored in a compressed spring can be calculated as: Elastic potential energy = ½ x spring constant x extension² 	<ul style="list-style-type: none"> • When a chemical reaction occurs, an energy change takes place. • The amount of energy required to break the existing bonds is different to the amount of energy released when the new bonds form. • An exothermic reaction is where energy is released when new bonds are formed., heating the surroundings. • An endothermic reaction is where energy is taken in when existing bonds are broken, cooling the surroundings. • This can be represented in an energy level diagram as shown below:  	<ul style="list-style-type: none"> • When a chemical reaction occurs, an energy change takes place. • The amount of energy required to break the existing bonds is different to the amount of energy released when the new bonds form. • An exothermic reaction is where energy is released when new bonds are formed., heating the surroundings. • An endothermic reaction is where energy is taken in when existing bonds are broken, cooling the surroundings. • This can be represented in an energy level diagram as shown below: 
Week 10 - Energy changes in reactions			



Year 11 - French- Cycle 1		Week 1 – key vocabulary and content		Week 2 - key vocabulary and content	
Classroom interaction language		J'avoue que je suis	I admit that I am	Le commerce	Business studies
<ul style="list-style-type: none"> • Ça va? – How are you? (How is it going?) • Ça va bien – I am well (it is going well) • Ça ne va pas – I am not well (it's not going well) • Merci – Thank you • Et toi? – And you? • Comment dit-on...en français? – How do you say...in French? • un stylo violet – a purple pen • un stylo noir – a black pen • J'ai gagné – I (have) won • Tu as perdu – You (have) lost • On a fini – We have finished • Est-ce que je peux avoir...?– Can I have...? • Est-ce que je peux faire les points? – Can I do the points? 	Mon prof dirait que je suis I am My teacher would say that I am Il faut que je sois I need to be plus more moins less soit...soit... either...or... Non seulement...mais aussi... Not only...but also... Je suis fort en...(histoire) I am good at...(history) Je suis faible en...(EPS) I am bad at...(PE) Je suis membre de... I am a member of... Je suis fier/fière de moi I am proud of myself	Le dessin Art L'allemand German L'art dramatique drama L'EPS PE L'informatique ICT L'étude des médias Media studies Plus...que... More...than... Moins...que... Less...than... Aussi...que... As...as... Le/la plus intéressant(e) The most interesting			
Week 3 - key vocabulary and content		Week 4 - key vocabulary and content		Week 5 - key vocabulary and content	
Ma matière préférée est	My favourite subject is	Le gymnase	Sports hall	Il faut ...	You must...
Soit....soit....	Either...or....	Le terrain de sport	Sports ground	Il ne faut pas...	You must not...
facile	easy	La bibliothèque	The library	C'est interdit de...	It is forbidden to...
difficile	difficult	La cour de récréation	The playground	C'est nécessaire de...	It is necessary to...
utile	useful	Les labos de science	Science labs	être à l'heure	be on time
inutile	useless	Les salles de classe	classrooms	porter l'uniforme scolaire	wear a school uniform
ennuyeux/ennuyeuse	boring	Les vestiaires	Changing rooms	porter des bijoux/du maquillage	wear jewellery/make-up
passionnant(e)	exciting	La pause	breaktime	c'est juste/injuste	it's fair/unfair
fascinant(e)	fascinating	La pause de déjeuner	Lunch time	c'est frustrant	it's frustrating
Le/la prof est sévère	The teacher is strict	Un emploi du temps	A timetable	c'est raisonnable	it's reasonable
		Les horaires du collège	School hours	c'est logique	it's logical



Classroom interaction language		Week 6 - key vocabulary and content		Week 7 - key vocabulary and content	
<ul style="list-style-type: none"> • car je suis non seulement...mais aussi... - because I am not only... but also... • C'est vrai – it is true • C'est faux – it is false • A mon avis – In my opinion • Je pense que – I think that • Selon moi – according to me • Je dirais que – I would say that • D'une part... - on the one hand... • d'autre part ... - on the other hand • Je suis d'accord (avec toi) – I agree with you • Je ne suis pas d'accord (avec toi) – I don't agree (with you) • soit... soit ... - either... or.... • Quand j'étais plus jeune – when I was younger 	<p>In Britain</p> <p>In France</p> <p>school starts at</p> <p>school finishes at</p> <p>we study religion</p> <p>it is possible to retake</p> <p>it's possible to wear their own clothes</p> <p>It is necessary to wear a uniform</p> <p>the holidays are longer</p> <p>The hours are more reasonable</p>	<p>To say what you did in the past use the perfect tense.</p> <p>Present tense of avoir</p> <p>+</p> <p>past participle</p> <p>-ER verbs → é</p> <p>-IR verbs → i</p> <p>-RE verbs → u</p> <p>j'ai joué I played</p> <p>on a regardé we watched</p> <p>j'ai participé I participated</p> <p>on a écouté we listened</p> <p>j'ai fini I finished</p> <p>on a réussi we succeeded/passed</p> <p>j'ai perdu I lost</p> <p>on a reçu we received</p>			
Week 8 - key vocabulary and content		Week 9 - key vocabulary and content		Week 10 - key vocabulary and content	
<p>The imperfect is used to say what you used to do regularly or over a period of time in the past. It can translate 'used to' or 'was/were' + verb-ing in English (I was doing)</p> <p>Use the nous form of the present tense minus the -ons + imperfect ending.</p> <p>j'étais I was/used to be</p> <p>c'était It was</p> <p>j'avais I used to have</p> <p>j'aimais I used to like</p> <p>je jouais I used to play</p> <p>Quand j'étais plus jeune When I was younger</p> <p>Si c'était possible If it were possible</p>	<p>The conditional is used to say what you would like to do in the future. It expresses a future intention that is not certain and depends on other factors.</p> <p>Si j'étais riche If I were rich</p> <p>Si j'étais le directeur/la directrice If I were the head teacher</p> <p>je voudrais changer I would like to change</p> <p>j'aimerais améliorer I would like to improve</p> <p>je changerais I would change</p> <p>je remplacerais I would replace</p> <p>je dirais que I would say that</p> <p>ce serait It would be</p>	<p>Dans le futur In the future</p> <p>À l'avenir In the future</p> <p>Après les examens After the exams</p> <p>j'aimerais mieux I would prefer</p> <p>continuer mes études to continue my studies</p> <p>aller à l'université to go to university</p> <p>faire du bénévolat to do volunteering</p> <p>trouver un emploi to find a job</p> <p>travailler comme... to work as...</p> <p>devenir to become</p> <p>faire le tour du monde to go on a tour of the world</p>			



Year 11 - Geography- Cycle 1	Week 1 –Local Ecosystem	Week 2 – Tropical Rainforests
<p>Key vocabulary</p> <ul style="list-style-type: none"> Ecosystem: A community of plants and animals that interact with each other and their environment. Consumer: Creature that eats animals and or plant matter. Decomposer: An organism such as a bacterium or fungus, that breaks down dead tissue, which is then recycled to the environment. Producer: An organism or plant that is able to absorb energy from the sun through photosynthesis. Nutrient cycling: A set of processes whereby organisms extract minerals necessary for growth from soil or water, before passing them on through the food chain – and ultimately back to the soil and water. 	<p>Tropical rainforest vegetation</p> <ul style="list-style-type: none"> Haldon Forest is a forest located in the Haldon Hills, Devon, England. 3,500 acres of woodland It is an ancient deciduous woodland. It has many native trees including oak, ash, elm and beech. There is a lower shrub layer of grasses, brambles and bracken that form the main producers in the ecosystem. There are many birds, mammals, amphibians and insects which are the consumers including Deer. 	<p>Tropical rainforest vegetation</p> <p>Emergents: Tallest trees in the rainforest reaching around 50 metres.</p> <p>Canopy: Receives 70% of sunlight and 80% of rainfall. Around 30 metres high.</p> <p>Undercanopy: Sheltered layers of young trees growing to a height of 20 metres.</p> <p>Shrub layer: Only small trees and shrubs. Less than 2% of sunlight reaches the forest floor.</p> <p>Epiphytes: Some plants grow on larger trees as they only need water and air to survive e.g. orchids.</p> <p>Convectonal rainfall: Where the ground is heated intensely by the sun, the air rises and condenses to form clouds and heavy downpours.</p> <p>Plant Adaptations: Buttress Roots, Epiphytes,</p> <p>Animal Adaptations: Camouflage, Bright colours</p>
<p>Week 3 – Threats to the Rainforest</p> <p>Threats to the rainforest</p> <p>Deforestation: The cutting down of trees, transforming a forest into cleared land for other uses.</p> <p>Logging: Trees cut down for items such as furniture, paper and utensils. Half of wood used for fuel.</p> <p>Cattle ranching: Cattle raised on the cleared land to meet the demand for beef elsewhere e.g. USA.</p> <p>Mining: The removal of solid mineral resources from the earth. These resources include ores, which contain commercially valuable amounts of metals</p> <p>Palm oil plantations: Palm oil is monoculture farming.</p> <p>Dam building: Often built to produce hydroelectric power for other activities such as logging.</p> <p>Ecotourism: Responsible travel to natural areas that conserves the environment, sustains the wellbeing of the local people, and may involve education.</p>	<p>Week 4 – Management</p> <ul style="list-style-type: none"> Sustainable- Actions and forms of progress that meet the needs of the present without reducing the ability of future generations to meet their needs. Conservation means that natural resources such as timber can still be used, but must be used sustainably. Protection means that the environment should be untouched and humans should not interfere, so ecosystems can find their own balance. Local Scale – small scale strategies, working with communities. National Scale – within country by the government. International Scale – Agreements on a global scale. 	<p>Week 5 – Hot Deserts</p> <ul style="list-style-type: none"> Deserts cover one-fifth of the Earth’s land surface. During the day, temperatures can reach 38°C with extremes of up to 50°C. However, during the night, the temperatures can fall to below freezing. Annual precipitation (this means rainfall) is around 40mm and very unreliable. 



<p>Desertification</p> <p>On the borders of Hot Deserts are semi-arid areas known as drylands or 'desert-fringe' areas. An example is the Sahel which borders the southern part of the Sahara Desert. This area is at risk of Desertification. - The process by which land becomes drier and degraded, as a result of climate change or human activities, or both.</p>	<p>Case Study: Amazon Rainforest</p> <p>Location: The Amazon Rainforest is in South America and covers 2.1 square miles of land across many different countries. Brazil has about 480 000 hectares of rainforest and is home to 60% of the Amazon Rainforest.</p> <p>Biodiversity: The Amazon Rainforest is home to 10% of the known species in the world. There are approximately 3,000 fruits that grow in the rainforest that are edible. There are approximately 10 million species of animals, plants and insects known to man. Many plants around the world have medicinal qualities.</p> <p>Deforestation: The UN estimates that around half of the world's tropical rainforests have now been deforested. The rate of deforestation has fallen in Brazil to a record low. It is estimated that around 50% of Brazil's remaining rainforest now has some form of protection status. However, 20% of the Amazon rainforest has now been cleared since 1970.</p> <p>Causes:</p> <ul style="list-style-type: none"> • Cattle ranching accounts for 80% of deforestation • Logging accounts for 3% of the causes of deforestation • Roads link the Trans-Amazon rainforest account for 2%. • In 1999, there were 10,000 hectares of land being used for gold mining. Today, there is over 50,000 hectares of land being used for gold mining. • Hydropower: In Brazil, the Belo Monte Dam will block the Xingu River flooding more than 40 500 hectares of land and displacing 15 000 people. • Population growth and migration to the area is also putting pressure on the Amazon rainforest. <p>Impacts:</p> <ul style="list-style-type: none"> • The roots of trees and plants bind the soil together. As soon as any part of the rainforest is cleared, the thin layer of topsoil is quickly removed by heavy rainfall. Bare slopes are prone to soil erosion. • Biodiversity it has been estimated that 137 plant, animal and insect species are being lost each day due to deforestation. This amounts to 50, 000 species each year. +more impacts and management strategies! 	<p>Case Study – Thar Desert</p> <p>Location: Thar Desert is the world's seventh largest desert. It is a hostile environment that lies to the west of New Delhi. The desert straddles the border between India and Pakistan and covers over 200,000km squared. It is the most populated desert in the world with nearly 30 million people and is also the most densely populated with 83 people per km2.</p> <p>Challenges: Hot deserts are hostile, remote and challenging environments for development.</p> <p>Water supply: Precipitation levels are in the Thar Desert are very low, between 120-240mm, and evaporation rates are high. Stable water supplies are essential for economic development. Water is traditionally stored in natural ponds known as tobas and are used by farmers in remote locations. The Indira Gandhi canal was constructed to provide irrigation and drinking water in 1958. Many settlements have formed along rivers due to the availability of fresh water. However, climate change could lead to river levels being lower which will lead to water scarcity.</p> <p>Inaccessibility: Covering 200,000km², The Thar Desert is vast. Despite having the highest desert population density in the world, it has a limited road network. Tarmac can melt in the hot temperatures, and sand can easily blow over roads.</p> <p>Extreme Temperatures: Temperatures can exceed 50°C in the Thar Desert which makes it very challenging to for people, such as farmers, to work outside. High temperatures lead to rapid evaporation and a shortage of water.</p> <p>Opportunities include:</p> <ul style="list-style-type: none"> • Mining • Subsistence Farming • Commercial Farming • Energy Supply • Tourism
<p>Great Green Wall</p> <p>Project: Reforestation of an 8,000 km corridor to combat desertification and the effects of climate change. Benefits also include the creation of local jobs.</p>	<p>Great Green Wall</p> <p>THE GREAT GREEN WALL OF AFRICA</p> <p>PROBLEM</p> <p>RAIN NOT IN THE FORECAST 1970-2000: 25-48% less rain than from 1950-1960.</p> <p>Halting Desertification North of Great Green Wall South of Great Green Wall</p> <p>Barrier Farming is a way of growing crops with both to grow in the same climate.</p> <p>GREAT GREEN WALL THEN & NOW Idea started as a wall of trees stretching across Africa. This was too simplistic. Currently, each country and locality will develop its own plan.</p> <p>FARMERS PITCH IN Farmer-managed natural regeneration allows natural trees to grow among the crops.</p> <p>SOLUTION ATTEMPTS</p>	

