

Knowledge Organisers

Year 7

Summer Half Term 2

'Practice of what is taught'

Name:	••••••
Tutor:	••••••
House:	••••••

Year 7 - Cultural Arts project

Key knowledge & skills

Discuss different cultural arts and crafts.

Observational drawing of artefacts from different cultures, looking at how colour, texture and pattern are used.











Understanding pattern—you will be able to recognise patterns and develop your knowledge on how they are created in different ways. You will do this through wax resist techniques.





Symbolism—understanding how shapes and imagery can be used to create symbols which have a meaning, sometimes obvious sometimes hidden. Adinkra symbols/Symbolic alphabets are a key example to look at.

Printing—learning different ways to print onto fabric/paper. Stencil printing to create blocks of colour.







Tie dyeing — Using elastic bands, beads and dye to create patterns in fabrics. Understanding different techniques such as pleating, twisting and folding to create different patterns on fabric.











Hand embroidery—learning basic stitches such as running stitch, back stitch and more potentially complex stitches such as cross stitch and chain stitch.

Designing your own work—being able to understand textile techniques and how they can be combined together to create a fabric final outcome.





Key terms and techniques

pattern colour textured print repeated layered recycled cultural natural man made cloth clothing fabric garment mask practical personal expressive embellishment symbolic tribal decorative woven ceremonial embroidered carved sculpted painted sewn

Key descriptive words

printing tie dyeing dyeing embroidery weaving sewina loom stencil printing beading block printing embellishing crayons dyes drawing inks needle threads printing paints recycling masks designing development recording planning layering wax resist composition pattern sculpting

Key artefacts and skills



Symbols have been used for centuries. They have been used for ancient alphabets such as hieroglyphics to symbols for human traits/emotions such as Adinkra symbols. They can be applied to all sorts of arts and crafts such as pottery, fabrics, jewellery, furniture and art.





Ceramics is a term used to describe objects made out of clay. Different countries and cultures have used clay to create useable objects such as bowls, cups and vases as well as more decorative ones to commemorate people (sometimes called busts) or hold special items (canopic jars in Ancient Egypt). Clay is often moulded into shapes by hand and then heated to high temperatures to "cook" it so it sets, it can still be fragile though!





Masks are artefacts that can be used for theatrical purposes, such as creating a character on stage. They may be used in ceremonies or rituals to represent animals or spirits. They can be made from a variety of materials and will be decorated differently depending on the culture they come from.





Textiles is a term used to describe materials/fabrics. Fibres are spun and turned into yarns, and these are then woven or fused together to create fabric. They can be decorated using a wide variety of techniques from dyeing to hand embroidery.





Printing is a technique that can be used in lots of different ways. On fabric it can be used to create repeat patterns. You will be learning stencil printing, a technique where you create a hole in paper in a particular shape and then push paint through that to print onto fabric (it can also be done on paper). You can create multi-layered stencils to add more than one colour to a design.

Computing Knowledge Organiser







Rationale: Understand how data is used to represent real-world scenarios.

Navigating Column

Functions

All functions start with an equal sign (=) followed by the function's name.

SUM - adds values in selected cells

MIN - finds smallest value

MAX - finds largest value

AVERAGE - finds the average value COUNT – counts how many of the

selected cells have numbers in them

Calculations

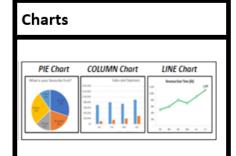
Formulas are usually simple calculations, e.g. adding two or more numbers together. They always start with an equal sign (=).

'+' add

'-' subtract

"" multiply

'/' divide



Formatting

Formatting icons used on the toolbar. Examples include: Bold, Italics, Grid lines, Fill, Change Font and Font Colour, Font Size and Alignment.



Data and Information

Data Values, typically letters or numbers

Information Data that has meaning, not just a number

Key Words

Spreadsheet	A program that is used to organise and analyse data.
Row	The range of cells that go horizontal on the spreadsheet. The rows are numbered – 1, 2, 3
Column	The range of cells that go vertical on the spreadsheet. The columns are lettered –A, B, C
Cell	The box in which you can enter a single piece of data, formulas or functions
Formulas	Needed for calculations; =A1*B3
Function	A premade formula: SUM, MIN, AVERAGE =SUM(A1:A10)

DT

Week 2 - The Soldering Iron

A soldering iron is a tool that gets very hot and is used to join pieces of metal together. It's often used in electronics to connect wires and components.

Safety Tips for Using a Soldering Iron

1. Wear Safety Gear

- Safety Glasses: Protect your eyes from any hot solder that might splash
- Heat-Resistant Gloves: Protect your hands from burns.

2. Set Up Your Workspace

- Work on a Heat-Resistant Surface: Use a mat or board that won't catch fire.
- Good Ventilation: Make sure the room is well-ventilated to avoid breathing in fumes.

3. Handling the Soldering Iron

- Hold it by the Handle: Never touch the metal part because it gets extremely hot.
- Use a Stand: Always place the soldering iron in its stand when not in use to prevent burns and accidents.

4. Soldering Process

- Heat the Joint: Hold the tip of the soldering iron against the joint you want to solder for five seconds.
- Apply Solder: Touch the solder to the joint (not the iron) and let it melt and flow into the connection.
- Remove the Iron: Take the soldering iron away and let the joint cool without moving it.

5. After Soldering

- Turn Off and Unplug: Always turn off and unplug the soldering iron when you're done.
- Let it Cool: Allow the soldering iron to cool down completely before putting it away.

Important Reminders - Be Careful with Wires: make sure wires are not in the way where they can be tripped over or pulled.





Week 6 - What is a Pillar Drill?

A pillar drill is a machine used to drill holes in various materials like wood, metal, or plastic. It has a vertical column, a base, a table to place the material on, and a drill head that moves up and down.

Safety First!

- Wear Safety Gear: Always wear safety goggles to protect your eyes.
- Tie Back Long Hair: If you have long hair, tie it back to prevent it from getting caught in the drill.
- No Loose Clothing: Avoid wearing loose clothing or jewellery that could get caught in the machine.
- Use Clamps: Secure the material you're drilling with clamps to keep it from moving.

Steps to Use a Pillar Drill

1. Prepare the Material:

- Mark the Spot: Use a pencil or marker to mark where you want to drill the hole.
- Clamp the Material: Place the material on the table and use clamps to hold it securely in place.

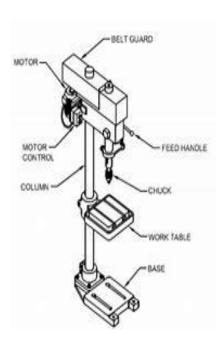
Drill the Hole:

- Turn On the Drill: Switch on the drill. Make sure you know where the emergency stop button is, just in case.
- Lower the Drill Bit: Use the handle to slowly lower the drill bit onto the marked spot. Apply gentle pressure and let the drill do the work.
- Drill Through the Material: Continue to apply steady pressure until the drill bit goes through the material. If you're drilling a deep hole, you might need to lift the drill bit occasionally to clear out the shavings.

3. Finish Up:

- Turn Off the Drill: Once you're done, turn off the drill and wait for it to come to a complete stop.
- Remove the Material: Carefully unclamp and remove your material from the table.

Tips for Success - Take Your Time: Don't rush. Drilling slowly and steadily will give you a cleaner hole and reduce the risk of mistakes.



English – Sparx Reader

You should log on to Sparx reader and spend 30 minutes reading your current book.

Reading Articles

You will have a reading article each week linking to the whole school theme for that week:

Week 1: Mental Health and Wellbeing

Week 2: Teamwork

Week 3: Democracy

Week 4: Careers

Week 5: Values

Week 6: Celebration

Read the article and highlight three words of which you were not sure. Then write the definition and draw an image which will help you remember.

As you read the articles, you will identify that the articles are not in UK English. However, the articles offer some great messages.

Use this QR code to access the reading articles read by a teacher:



Food - Diet and Physical Activity in Athletes

A balanced diet is the starting point for most people, but sportspeople may have specific dietary needs. This reflects their personal energy balance equation. When people become more active they use up more energy, so they need to take in more to restore their energy balance. Athletes adjust their diets differently depending on their sport and training/performance schedule.

How much to eat

On average, men need around 2,500 calories (Kcal) a day while women need around 2,000. When athletes are training intensively this may increase to around 5,000 calories a day. To calculate how much energy the body needs, the following equation may be used:

Key fact

Basal metabolic rate (BMR) + physical activity level (PAL) = total energy requirement.

BMR or *basal metabolic rate* is the amount of energy needed just to keep the body systems working normally. PAL or physical activity level is the amount of energy needed for any activity (sporting or housework). A big athlete – such as a shot putter or rugby forward – will have a higher BMR. A runner or a cross-country skier will have a higher PAL.

When to eat

Eating patterns may vary according to the day's training programme or competition schedule. For example, an elite rower may eat two breakfasts – one before and one after the first of the day's training bouts. Tennis players often eat a banana between games during a long match. Generally, performers do not eat two hours before performing.

Carbohydrate loading - Carbohydrates provide energy. The complex carbohydrates – starches – are stored in the body as *glycogen* and converted into *glucose* when the body needs more energy. Glycogen is a slow-release form of energy. This is particularly useful to endurance athletes in the last stages of a performance. So, for example, in the week leading up to a race, marathon runners may eat lots of starchy foods, such as pasta. This helps them to keep going towards the end of the race.

High-protein diets - Protein builds tissue, including muscle. Athletes who want to build up their muscle during strength-training sometimes eat high-protein diets. This includes obvious strength-training athletes, such as weightlifters, but also includes endurance athletes who want to repair or prevent torn muscle. The value of high-protein diets is debatable. Athletes do not need much more protein than other people, protein is difficult to digest, and it does not automatically turn into muscle – the athlete still needs to do strength-training, which is fuelled by carbohydrates.



Mo Farah's typical diet during training is pasta, steamed vegetables and grilled chicken. He often eats this for lunch and dinner – every day

Geography - 'Why is the UK's climate so varied?'

Week 2 - To know how we measure weather	Week 4 - To understand why it rains
Weather refers to the day-to-day condition of the atmosphere, answering the question, "What is it like today?" In contrast, climate describes the average weather conditions over a long period, typically 30 years, indicating what one might expect the weather to be like. Various instruments help measure different aspects of weather: a thermometer measures temperature, indicating how hot or cold a place is; a rain gauge measures precipitation, showing how much rain has fallen from the sky; an anemometer measures wind speed, revealing how fast the wind is blowing; a wind vane measures wind direction, indicating the direction the wind is blowing to; a barometer measures air pressure, reflecting the weight of air	The water cycle begins with water from oceans and lakes evaporating due to the sun's energy. This water vapour rises, cools, and condenses to form clouds, which eventually release precipitation, returning the water to oceans and lakes to continue the cycle. Relief rainfall occurs when the wind blows warm, moist air up mountains, causing it to form clouds. Frontal rainfall happens when a warm front meets a cold front, causing the warm air to rise over the cold air and form clouds. Convectional rainfall is generated when the sun heats the land, creating pockets of warmed air known as convection currents that rise and form clouds.
pressing down on us; and the Okta scale measures cloud cover, determining how many eighths of the sky are covered by clouds.	
Week 6 - To know what microclimates are	
A microclimate occurs when the climate in a small area differs from the general surroundings. Each specific location tends to develop its own unique climate conditions; for example, it may be windier and sunnier in the middle of a playing field compared to behind a building. The aspect, or the direction in which a place is facing, also influences its climate. Sun-facing aspects are warmer, and darker surfaces absorb more heat than lighter-coloured ones. Buildings can provide shelter from the wind while radiating heat from the sun, and trees offer shade, further affecting the local climate conditions.	

History – The Black Death – How did the Black Death impact rural areas like Somerset?

Component	Core knowledge (that you NEED to know)	Key vocab (that you NEED to know and use)
Week 1	Medieval people did not know about germs causing disease and did not understand that the plague was spread by rats and fleas.	Confess – admitting that you have done something wrong
What were	People believed that the Black Death was caused by	
the Beliefs	 The evil planets of Mars and Saturn have moved closer together, which has turned the air bad. They 	Flagellants - whipping
and Cure of	believed if they breathed in the bad air (miasma), they would catch the plague.	yourself to say sorry to God
the Black Death?	 They also believed that God had sent the plague because he was angry with people because they had spent too much time gambling, fighting and drinking. In addition, they believed that the plague passes from person to person. The plague sores gave off a terrible smell and if you breathed this in, you would catch the plague. In order to avoid catching the plague, medieval people came up with following ideas. They carried a bunch of herbs and held it to their nose at all times They went on pilgrimage to Canterbury to say sorry to God People called flagellants walked through the streets of London singing hymns and whipping each other to show how sorry they were to God. They prayed to God and confessed their sins They forced sick people to leave villages and towns, in order to quarantine. 	Miasma – poisonous air, which Medieval people believed spread disease. Quarantine – where diseased people must be isolated to prevent others from catching the disease.
Week 3	Historians think that just over half the population survived the Black Death. Life was never the same again. • After the plague there was a shortage of labourers, which meant that wages went up. In 1351, the	Labourer – someone who works on the land.
What were	government passed a law called the Statute of Labourers , which said that labourers should not earn	
the effects	more than 2d (pennies) a day. The law did not work as workers were needed and landowners were	Statute of Labourers – a rule
of the Black	forced to pay them higher wages.	or law that attempted to keep
Death on Medieval	Some villages lost nearly all their people. So, survivors were able to buy or rent all the spare land.	wages low.
Society?	Most peasants were villeins . After the Black Death, the lords/landowners were short of labourers , so the peasants were able to bargain with them. This halped to free the peasants from the lord's central.	
Jociety:	the peasants were able to bargain with them. This helped to free the peasants from the lord's control.	

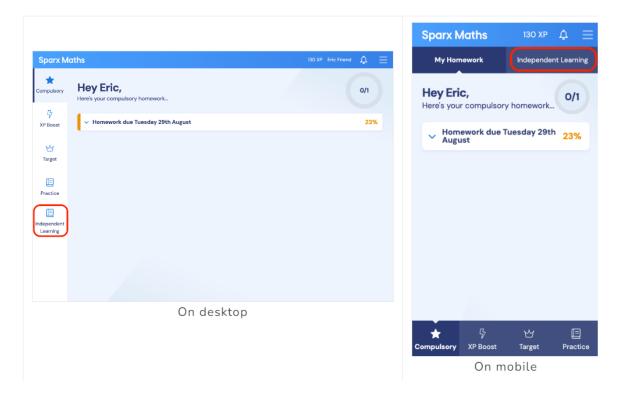
	 The peasants had a better standard of living. They were able to rebuild their houses, making them bigger and more comfortable. They ate better food, including more meat and even wore better clothes. 	Villein – A peasant who was not free to move away from his master's land.
		A.M Gould – a local Historian in Somerset
Week 5	Many people blamed God for the plague and felt that they had not received support from the Church and clergy during the Black death and so feelings toward the Church changed. A local historian, A.M Gould . in	Clergy – bishops and priests
How did the Black	Somerset has written – "feelings of abandonment by the clergy saw hostility towards the church grow".	Ravished – destroyed
Death affect areas	He describes the Black Death in Somerset as:	Wrath, Hostility - anger
like Somerset?	In the outbreak of the plague, in Somerset alone half of the clergy were killed within six months. The devastating spread of the plague in Somerset left communities questioning the support that they received from the clergy. The bishop self-isolated himself in a house in Wiveliscombe and offered no service or support to any citizens in the county. In Yeovil, the town had been ravished by the plague, which many believed was the wrath of God on the sinners and feelings of abandonment by the clergy saw hostility towards the church grow".	A.M Gould – a local Historian in Somerset

Maths

On a Monday, your Maths task will be set by your teacher. You should log on to Sparx Maths to complete this task. Your practice book has an area for your workings which you need to use as during the homework, Sparx Maths undertakes a bookwork check.

On a Thursday you practice independently on an area where you have a gap in your knowledge.

When logged in to Sparx students will always be able to see the Independent Learning option on the main menu:



MFL - French

Time phrase	Verb – imperfect tense	Activity	conjunction / verb	Qualifier	Adjective
	je jouais I used to play	au netball netball			
		à la pétanque boules			
		aux cartes cards			
	je faisais I used to do	du ski some skiing			
Quand j'étais plus jeune When I was more young		de la natation some swimming		un peu <i>a little</i>	nul - rubbish amusant - fun
Avant before				assez <i>quite</i> très very vraiment (really)	marrant – funny passionnant - exciting rapide - fast
		les échecs chess			

Key verbs in 4 tenses

Le week-end The weekend Le Samedi On Saturday	je joue I play / I am playing nous jouons we play/we are playing je fais I do / I am doing nous faisons we do/we are doing	au rugby	au centre-ville (at the town-centre)au parc (at the park)au centre sportif (at the sports centre)à la campagne	avec mon copain. (with my male friend)avec mon (beau-) père. (with my (step-)dad)avec ma copine.
Le week-end prochain Weekend next Demain tomorrow	je vais jouer I am / we are going to play je vais faire I am going to do	au tennis à la pétanque aux échecs du ski de la natation des	(at the countryside)à la montagne (at the mountains)à la maison (at home)	(with my female friend)avec ma (belle-) mère. (with my (step-) mum)
Un jour One day	je voudrais jouer I would like to play je voudrais faire I would like to do	randonnées	chez moi (at the house of me) chez mon ami (at the house of my friend)	avec mes copains /copines. (with my friends) avec mes parents. (with my parents)
Quand j'étais plus jeune When I was more young	je jouais I used to play je faisais I used to do			

MFL - German

noun	Connective	Conditional	Adjective
	und =	es wäre =	alt = old
•	and	It would be	modern = modern
einen Strand = a beach			historisch = historic
einen Wasserpark = a waterpark	aber =	die Stadt	touristisch = touristic
einen Radweg = a cycle path	but	wäre =	klein = small
einen Olympiapark = an Olympic park		The town	groß = big
einen Hafen = a harbour		would be	schön = beautiful
eine Kirche = a church			laut = noisy / loud
			ruhig = quiet
			industriell = industrial
ein Kino = a cinema			
ein Schwimmbad = a swimming pool			
ein Schloss = a castle			
ein Stadtzentrum = a town centre			
ein Theater = a theatre			
ein Einkaufszentrum = a shopping centre			
ein Stadion = a stadium			
	einen Bahnhof = a station einen Marktplatz = a market square einen Strand = a beach einen Wasserpark = a waterpark einen Radweg = a cycle path einen Olympiapark = an Olympic park einen Hafen = a harbour eine Kirche = a church eine Imbissstube = a snack bar eine Kegelbahn = a bowling alley eine Eisbahn = a skating rink eine Kunstgalerie = an art gallery ein Kino = a cinema ein Schwimmbad = a swimming pool ein Schloss = a castle ein Stadtzentrum = a town centre ein Theater = a theatre ein Einkaufszentrum = a shopping centre	einen Bahnhof = a station einen Marktplatz = a market square einen Strand = a beach einen Wasserpark = a waterpark einen Radweg = a cycle path einen Olympiapark = an Olympic park einen Hafen = a harbour eine Kirche = a church eine Imbissstube = a snack bar eine Kegelbahn = a bowling alley eine Eisbahn = a skating rink eine Kunstgalerie = an art gallery ein Kino = a cinema ein Schwimmbad = a swimming pool ein Schloss = a castle ein Stadtzentrum = a town centre ein Theater = a theatre ein Einkaufszentrum = a shopping centre	einen Bahnhof = a station einen Marktplatz = a market square einen Strand = a beach einen Wasserpark = a waterpark einen Radweg = a cycle path einen Olympiapark = an Olympic park einen Hafen = a harbour eine Kirche = a church eine Imbissstube = a snack bar eine Kegelbahn = a bowling alley eine Eisbahn = a skating rink eine Kunstgalerie = an art gallery ein Schloss = a castle ein Stadtzentrum = a town centre ein Einkaufszentrum = a shopping centre

Wo wohnst du? (Where do CORRECT FORM OF 'WOHNEN'	INDEFINITE ARTICLE	ADJECTIVE	NOUN	
Ich wohne [I live]	in einem (in a) auf einem (on a)	alten [old] gemütlichen [cosy]	Bungalow [bungalow] Wohnblock [block of flats] Wohnwagen [caravan] Bauernhof [farm]	am Stadtrand [in the suburbs] an der Küste [on the coast]
Du wohnst [you live] Er wohnt [he lives]	in einer (in a)	großen [big] bunten [multi-coloured] hässlichen [ugly] kleinen [small]	Wohnung [flat]	auf dem Land [in the countryside] im Stadtzentrum
Sie wohnt [she lives] Wir wohnen [We live] Ihr wohnt [you all live] Sie wohnen [they live]	in einem (in a)	neuen [new] schönen [beautiful] modernen [modern]	Bauernhaus [farmhouse] Einfamilienhaus [detached house] Doppelhaus [semi-detached house] Hochhaus [high-rise building] Mehrfamilienhaus [multi-family house] Reihenhaus [terraced house]	in the city centre] in der Stadt [in the city] in den Bergen [in the mountains] in einem Dorf [in a village] in der Nähe von Bristol

Part of 'werden'	+ infinitive	connective	+infinitive
ch werde = wi	segeln sail		Souvenirs kaufen
du wirst you will	klettern climb		buy souvenirs
er wird He will	an den Strand gehen go to the	und	nach Interlaken fahren
sie wird She will	beach	and	travel to Interlaken
es wird it will	wandern hike		zwei Wochen bleiben
wir werden we will	im See baden bathe in the lake	oder	stay for two weeks
hr werdet you will	tauchen dive	or	ein Picknick machen
(plural)	windsurfen windsurf		have a picnic
Sie werden you will	rodeln toboggan		das Schloss besuchen
sie werden they will	im Meer schwimmen swim in		visit the castle
·	the sea		meine Oma besuchen
			visit my grandma
Man kann			Tennis <mark>spielen</mark>
You can			play tennis

Modal verb	Activity/place	Verb in the infinitive	Connective	activity	Verb in the infinitive
Man kann = you can Man soll = you should Man könnte = you could	in den Park = to the park in die Stadt = to the town ins Museum = to the museum ins Kino = to the cinema ins Restaurant = to the restaurant	gehen = go	und = and auch = also oder = or	den Park = the park den Dom = the cathedral den Strand = the beach den Wasserpark = the water park Die Kunstgalerie = the art gallery Die Kirche = the church Das Museum = the museum Das Schloss = the castle Das Einkaufszentrum = the	besuchen = to visit besichtigen = to visit (place) sehen = to see
	schwimmen = swimming wandern = walking/hiking segeln = sailing klettern = climbing			shopping centre die Sehenswürdigkeiten = the sights	

Was möchte What would yo				
Ich möchte	einmal a portion of zweimal two portions of dreimal three portions of	Bratwurst fried sausage Hamburger hamburgers Pizza pizza Salat salad Pommes chips	bitte	please
I'd like Ich hätte gern I'd like	eine a/one	Eis ice-cream Mineralwasser mineral water Cola coke Tasse Tee cup of tea		

MFL - Mandarin

你星期几有<mark>英文</mark>课? What day do you have <u>English</u> lesson?

我星期一有英文课。

<mark>Subject</mark>	Days of the week	<mark>Verb</mark>	School subjects	<mark>lesson</mark>
<mark>戦 I</mark>	^{室期一} Monday	yŏu	中文 Mandarin	课。lesson
朋友 friend	星期二 Tuesday	有 have/has	英文 English	V. lesson
Lily	星期三 Wednesday		法文 French	
	星期四 Thursday		德文 German	
	星期五 Friday		科学 Science	
	星期六 Saturday		数学 Maths	
	星期日 Sunday		历史 History	
	^{変現 ない} Sunday		地理 Geography	
			<mark>体育 P.E.</mark>	
			音乐 music	

我 (不) 喜欢<u>中文</u>课,也(不) 喜欢<u>数学</u>课。 I (dis)like Mandarin lesson, also (dis)like Maths lesson.

who	(dis)like	School subject	lesson	also	(dis)like	subject	lesson
我	(不)	中文 Mandarin	课,	₩.	(不)	英文 English	课。
péng yǒu 朋友	xǐ huôn 喜欢	英文 English			xǐ huān 喜欢	法文 French	
friend		法文 French				^{de wen} 德文 German	
Lily		^{dé wén} 徳文 German				科学 Science	
^{gè} 哥哥		科学 Science				数学 Maths	
Older brother		数学 Maths				历史 History	
姐姐 Older		历史 History				地理 Geography	
sister		地理 Geography				^t ∳育 P.E.	
		[₫] Å 育 P. E.				音乐 music	
		音乐 music				中文 Mandarin	

wo shi xuó shēng 我是学生。Iam a student

Subject	am, is , are	Noun
<mark>戦 ।</mark>	shi 足	学生 student
我们		xião xué shêng 小学生 primary school student
<mark>你</mark>		
你们		r 学生 secondary school student
tt men		大学生 university student
他们 wh		老师 teacher
ws 我们 你 你 你 你 他 他 他 他 他 她 她		teacher teacher
司 Older brother		
姐姐 Older sister		
弟弟 Younger brother		
妹妹 Younger sister		
朋友 friend		

你为什么(不)喜欢<u>英文</u>课?Why do (not) you like <u>English</u> lesson?

Subject	<mark>Like</mark> dislike	School subject	lesson	Link word for reason	subject	Verb for expressing opinion	School subject	Lesson or teacher	adjective
<mark>義</mark>	ike like bù xi huớn 不喜欢 dislike	Mandarin 中學文 Mandarin 学文 English 法 Martin French 德 Martin A Science 教 Maths 	lesson	<mark>因为</mark> because	·····································	觉得 think think think	中 Mandarin Mandarin Mandarin English Accience Maths History Geography Geography F.E. Geography Maths Geography Geography Maths	lesson teacher	清意。 interesting 有用。useful 容易。easy 没有意思。 not interesting 很好。 very difficult 中では、 では、 では、 では、 では、 では、 では、 では、 では、 では、

The order of time words

Subject	Days of the week	AM or PM	time	<mark>have</mark>	School subject	<mark>lesson</mark>
我	^{xing qi} yi 星期一	shàng wǔ 上午	jiù diễn 九点	<mark>秀</mark>	r 中文 Mandarin	课。
<u></u>	Monday 望期二	morning	9 o'clock	<mark>have</mark>	英文 English	lesson
	Tuesday		shí diặn		法文 French	
	<mark>星期三</mark> Wednesday		+点 10 o'clock		^{de wen} 德文 German	
	zing qi si 星期四				科学 Science	
	Thursday 望期五		十一点半 half past 11		数学 Maths	
	Friday	下午			历史 History	
		afternoon	m点 2 o'clock		地理 Geography	
					体育 P.E.	
					音乐 music	

The order of time words – negative form

Subject	Days of the week	AM or PM	time	<mark>negative</mark>	<mark>have</mark>	School subject	<mark>lesson</mark>
我	zing qi yi 星期一	shàng wǔ 上午	n dian 九点	méi	yŏu	zhōng wén 中文 Mandarin	kè 文甲
-	Monday xing qi èr	morning	9 o'clock	沿	有	y ^{ing wén} 英文 English	课。
	<mark>星期二</mark> Tuesday			12	have	fo wen 法文 French	lesson
	xing qi sān 星期三		shí diǎn 十点	not		e X French de wen 使文 German	
	Wednesday		10 o'clock				
	型期四		the shift yi diğn bàn			科学 Science	
	Thursday 翼期五	xià wǔ 下午	half past 11			数学 Maths	
	Friday	afternoon				历史 History	
			m 点 2 o'clock			地理	
						Geography Geography	
						本育 P.E.	
						音乐 music	

wo bi diễn shông xuế 我八点上学。I go to school at 8.

Subject	<mark>time</mark>	Verb phrase
我 .		上学 go to school
gē gē 리 리 Older brother	8 o'clock	吃午饭 eat lunch
jiě jiě 女王女王 Older sister	bà diòn yī kè 八点一刻	放学 finish school
弟弟 Younger brother	8.15 yǐ diàn bòn 一点半	
妹妹 Younger sister	1.30	
朋友 friend	sân diân êr shí fên 三点二十分	
Lily	3.20	

There is no single word for YES or NO in Chinese. If someone asks you a YES/NO question, you just repeat the verb and make it positive or negative.

Question	Answer
1 你是老师吗?	是,我是老师。
	x 是,我不是老师。我是学生。
2 你 <mark>喜欢</mark> 看书吗?	喜欢,我 <mark>喜欢</mark> 看书。
	bù xǐ huốn wó bù xǐ huốn shū 不 <mark>喜欢</mark> ,我不 <mark>喜欢</mark> 看书。
3 你今天 <mark>有</mark> 中文课吗?	有,我今天 <mark>有</mark> 中文课。
	méi yǒu tiễn méi yǒu zhōng wén kè 没有中文课。

姐姐<mark>在</mark>北京学习。

subject	在	Place	verb
wŏ 我	zài	běi jīng 北京	xué xí 学习。
wǒ men 我们	+	shàng hǎi 上海	gông zuò 工作。
gån låo shī 甘老师	仁	xiāng gắng 香港	shàng wǎng 上网 _○
爸爸		家	wán ér diàn nỗo yóu xì 玩儿电脑游戏。
^{mā mā} 妈妈		xué xiào 学校	dǐ wǎng qiú 打网球。
gë g		TCS	踢足球。
péng yǒu 朋友		Taunton	
Tim			

wo shì ying guó rén 我是英国人。

wo bù shì fà guó rén 我不是法国人。

WHO	AM/IS/ARE	COUNTRY	PERSON
我	shì	zhōng guó 中国	rén
wŏ men 我们	是	yīng guó 英国	人。
伱		^{fǎ} guó 法国	
你们		dé guó 德国	
他		měi guó 美国	
tā men 他们			
她		rì běn 日本	
tā men 她们		xi bān yá 西班牙	
péng yǒu 朋友			
Tim			

wo men bân yôu shí gè nón xué shêng 我们班有十个男学生, 十五个女学生。 In our class there are 10 male students, 15 female students.

Our class	there are	number	measure word	male or female	students
wǒ men bān 我们班	有	shí	gè ^	nán 男	xué shēng 学生。
Our class		shí wǔ 十五			
wǒ men xué xiào 我们学校		èr shí			
秋 IT 子 校 Our school		sãn shí		女	
		yī qiān — ‡			
		èr bǎi 二百			

MFL - Spanish

Y7 HT6 SB1 ¿Qué te gusta hacer en tu tiempo libre? - What do you like doing in your spare time?

When	OPINION VERB	ACTIVITY
	Me gusta = I like	chatear = to chat online
	Me gusta mucho	escribir correos = to write emails
	= I really like	escuchar música = to listen to music
	Me encanta = I love	jugar al ordenador = to play on the computer
En mi tiempo libre	Me flipa	jugar a los videojuegos = to play video games
= In my spare time	= I'm crazy about	leer = to read
	No me gusta	mandar SMS = to send text messages
	= I don't like	navegar por internet = to surf the Internet
	Odio = I hate	salir con mis amigos = to go out with my friends
		ver la televisión = to watch TV

Y7 HT6 SB2	¿Qué te gusta hacer en tu tiempo libre? - What do you like doing in your spare time?					
CONNECTIVE	OPINION VERB / PHRASE	VERB	INTENSIFIER	ADJECTIVE		
			un poco = a bit / a little	activo = active		
	en mi opinión			difícil = difficult		
	= In my opinion	es	bastante = fairly / quite	entretenido = entertaining		
	pienso que = I think that	= it is	estresante = stressful			
			muy = very	estúpido = stupid		
bccaasc	creo que = I believe that	no es	extremadamente	fácil = easy		
		= it is not	= extremely	guay = cool		
	diría que = I would say that		demasiado = too	importante = important		
				inútil = pointless		
				útil = useful		

Y7 HT6 SB3	¿Qu	é hora es?	- What time is it?	
VERB	HOURS	MINUTES		TIME PHRASE
Es la = it is (+singular) A la = at (+singular)	una = one O'Clock		o = sharp o = and five	de la mañana = in the morning
	dos = two O'Clock	y diez	= and ten	
	tres = three O'Clock	y cuart	o = and a quarter	
	cuatro = four O'Clock	1 -	e = and twenty	de la tarde = in the afternoon
San les - it is (unlural)	cinco = five O'Clock	y veint	icinco = and twenty five	
Son las = it is (+plural)	seis = six O'Clock	y medi	a = and a half	
A las = at (+plural)	siete = seven O'Clock	menos	veinticinco = minus twenty five	
A ias – ut (+piuiui)	ocho = eight O'Clock		veinte = minus twenty	de la noche
	nueve = nine O'Clock	menos	cuarto = minus a quarter	= in the evening
	diez = ten O'Clock			
	once = eleven O'Clock	1	diez = minus ten cinco = minus five	
	doce = twelve O'Clock			
Y7 HT6 SB4	¿Qué vas a hacer? -	What are y	ou going to do? The Near Future	
WHEN	VERB 'ir' (to go)	+ a	INFINITIVE	
Cuando sea mayor =When I'm older	YOY		hablar con mis amigos = to talk w hacer atletismo = to do athletics	ith my friends
El fin de semana próxim = Next weekend			hacer ciclismo = to ride a bike hacer equitación = to go horse rid hacer mis deberes = to do my hor	_
En el futuro = In the future	ella va = she is going ella va = she is going	a	hacer natación = to go swimming ir al cine = to go to the cinema ir de compras = to go shopping	
La próxima semana Next week	vamos = we're going		jugar al baloncesto = to play bask jugar al fútbol = to play football sacar fotos = to take photos	etball
Mañana	- we re going		salir con mis amigos = to out with	my friends

Y7 HT6 SB5	Cuándo haces deporte y a qué hora? - When do you do sport and at what time?					
FREQUENC	ACTIVITY	TIME				
A menudo = Ofte	jueg o al baloncesto = I play basketball					
A veces	jueg o al tenis = <i>I play tennis</i>	a <mark>la</mark> una = αt one				
= Sometimes	jueg o al fútbol = <i>I play football</i>					
Generalmente = Generally	jueg o al voleibol = <i>I play volleyball</i>	a las dos = at two				
Los lunes	hago artes marciales = I do martial arts					
= On Mondays	hag o equitación = <i>I go horse-riding</i>	a las tres y cuarto = at quarter past two				
Normalmente = Normally	hag o esquí = <i>I go skiing</i>					
Nunca = Never	hag o gimnasia = <i>I do gymnastics</i>	a las cuatro y media = at half past four				
Siempre = Alway	hag o natación = <i>I go swimming</i>	a las caults ; media activity past jour				
Todos los días	hag o patinaje = <i>I go rollerskating</i>					
= Every day	hago patinaje sobre hielo = I go ice skating	a las cinco menos cuarto = at quarter to five				

Music

What Makes a Good Song?

Exploring Popular Songs and Musical Arrangements



A. Popular Song Structure

SONG STRUCTURE – How a song is made up of or divided into different sections (see below) and the order in which these sections occur. To work out the structure of a song, it's helpful to analyse the **LYRICS** <u>and</u> listen to a recording for the song (for instrumental sections).

INTRO – often shortened to 'intro', the first section of a song which sets the mood of the song and is sometimes, but not always, an instrumental section using the song's chord pattern.

VERSES – songs normally have several verses. Verses introduce the song's theme and have the same melody but different lyrics for each verse which helps develop the song's narrative and story. Songs made up entirely of verses are called STROPHIC.

LINK — a optional short section often used to join different parts of a song together, often instrumental, and sometimes joins verses together or appears at other points within a song.

PRE-CHORUS – an optional section of music that occurs before the **CHORUS** which helps the music move forward and "prepare" for what is to come.

CHORUS – occurs several times within a song and contains the most memorable HOOK/RIFF. The chorus relays the message of the song and is repeated with the same melody and lyrics each time it is heard. In popular songs, the chorus is often repeated several times towards the end of the song.

MIDDLE 8/BRIDGE – a section (often 8 bars in length) that provides contrasting musical material often featuring an instrumental or vocal solo using new musical material allowing the performer to display their technical skill on their instrument or voice.

CODA/OUTRO – The final section of a popular song which brings it to an end (Coda is Italian for "tail"!)

B. Key Words

LYRICS – The words of a song, usually consisting of VERSES and a CHORUS.

HOOK – A 'musical hook' is usually the 'catchy bit' of the song that you will remember. It is often short and used and repeated in different places throughout the piece. Hooks can be either MELODIC, RHYTHMIC Or VERBAL/LYRICAL.

RIFF – A repeated musical pattern often used in the introduction and instrumental breaks in a song or piece of music. Riffs can be rhythmic, melodic or lyrical, short and repeated.

MELODY – The main tune of the song often sung by the LEAD SINGER.

COUNTER-MELODY – An 'extra' melody often performed 'on top of' the main melody that 'fits' with it a DECANT OF INSTRUMENTAL SOLD. TEXTURE – The layers that make up a song e.g., Melody, Counter-Melody, Hooks/Riffs, Chords, Accompaniment, Boss Line.

C. Lead Sheet Notation and Arrangements

A LEAD SHEET is a form of musical NOTATION that contains only the essential elements of a popular song such as the MELODY, LYRICS, RIFFS, CHORDS (often as guitar chord symbols) and BASS LINE; it is not as developed as a FULL SCORE ARRANGEMENT and is open to interpretation by



performers who need to use and adapt the given elements to create their own musical ARRANGEMENT: their "version" of an existing song.

COVER (VERSION) - A new performance, remake or recording by someone other.

COVER (VERSION) – A new performance, remake or recording by someone other than the original artist or composer of the song.

D. Conjunct and Disjunct Melodic Motion

CONJUNCT MELODIC MOTION – Melodies which move mainly by step or use notes which are next to or close to one another. DISJUNCT MELODIC MOTION – Melodies which move mainly by leap or use notes which are not next to or close to one another.

MELODIC RANGE – The distance between the lowest and highest pitched notes in a melody.



E. Song Timbre and Sonority (Instruments that are used to Accompany Songs)



Pop Bands often feature a DRUM KIT and PERCUSSION to provide the rhythm along with ELECTRIC GUITARS (LEAD GUITAR, RHYTHM GUITAR and BASS GUITAR) and KEYBOARDS. Sometimes ACOUSTIC INSTRUMENTS are used such as



the PIANO or ACOUSTIC GUITAR. ORCHESTRAL INSTRUMENTS are often found in pop songs such as the STRINGS, SAXOPHONE, TROMBONE and TRUMPET. Singers are essential to a pop song - LEAD SINGER — Often the "frontline" member of the band (most famous) who sings most of the melody line to the song. BACKING SINGERS support the lead singer providing HARMONY or a COUNTER-MELODY (a melody that is often higher in pitch and different, but still

'fits with' the main melody) and do not sing all the time but just at certain points within a pop song e.g. in the chorus.

DR SMITH: BUILDING ON WHAT YOU ALREADY KNOW

Dynamics - volume

Rhythm - how long notes last and how they are grouped together in a pattern

Structure - the different sections in a piece of music (AB, ABA, verse/chorus)

Melody - the tune or most important layer in a piece of music. In pop songs the singer has the melody.

Metre is the time signature, always put at the beginning of a piece of music. It tells us how many beats are in a bar.

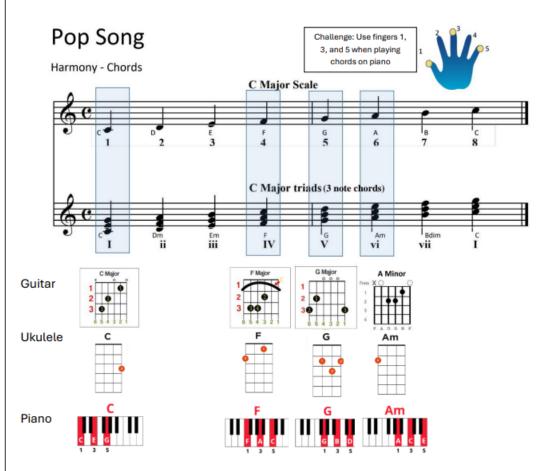
Instrumentation - what instruments are used

Articulation - the way you play your instrument staccato - detached and spikey, legato - playing
smoothly.

Texture - the different layers happening within a piece.
-Monophonic - a single unaccompanied line of music, one layer. -Homophonic - multiple layers of music but everything moves in chunks, the same rhythm. - Polyphonic - multiple layers of music doing different things. Tempo – speed. Tonality - what key is the piece in -Major gives a happy feel -Minor makes the

Harmony – more than one note at the same time

music seem sadder.





Term 6

Use the QR code to learn more about Democracy







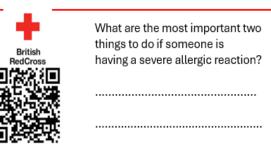
ideology based on violence, hatred or intolerance. What does ACT stand for? Use the QR code. Mental health & wellbeing...

List as many ways you can think of to boost your mental health and wellbeing



What are the 5 sections of the eat well

plate?





Achieve . Belong . Participate

Religion and Worldviews - What did the Buddha teach about suffering?

Week 1 - What are the four Noble truths and how do they help understand suffering?

A long time ago, in Northern India, there was a man named Siddhartha Gautama. He became known as the Buddha, which means "the Enlightened One." After many years of searching for the truth, he finally understood how to end suffering. He wanted to share this knowledge with others, so he gave his first sermon at a place called the Deer Park. In his sermon, the Buddha talked about something very important called the Four Noble Truths. These truths help us understand why we suffer and how we can stop suffering.

The First Noble Truth: The Truth of Suffering (Dukkha): the Buddha said that life is full of suffering. This doesn't mean that life is always bad, but that everyone experiences pain, sadness, and disappointment at times. For example, when we lose a belonging, get hurt, or feel sad, we are experiencing suffering.

The Second Noble Truth: The Cause of Suffering (Samudaya): the Buddha explained that suffering happens because of our desires and attachments. We often want things to be a certain way, and when they aren't, we feel unhappy. For example, if we really want a new game but can't have it, we might feel upset.

The Third Noble Truth: The End of Suffering (Nirodha): the good news is that the Buddha said we can end our suffering. If we stop being so attached to our desires and learn to accept things as they are, we can find peace and happiness.

The Fourth Noble Truth: The Path to End Suffering (Magga): the Buddha taught that there is a path we can follow to end suffering. This path is called the Noble Eightfold Path. It includes things like being kind, speaking truthfully, and thinking wisely. By following this path, we can live a happier life.

The Buddha's teachings help us understand that while suffering is a part of life, we can learn to deal with it in a way that brings us peace. By understanding the Four Noble Truths and following the Noble Eightfold Path, we can find happiness and help others do the same.

Week 3 - How does following the eight-fold path lead to the end of suffering?

Once upon a time, in a peaceful village nestled among the mountains, there lived a young girl named Maya. Maya was kind-hearted and always eager to help others, but she often felt sad and worried. She didn't understand why life sometimes felt so difficult. One day, Maya met an old monk named Ananda who was visiting the village. Ananda was wise and had spent many years studying the teachings of the Buddha. Maya decided to ask him for advice. "Why do I feel so sad and worried, even when I try to be good?" Maya asked. Ananda smiled gently and said, "Maya, the Buddha taught us that suffering is a part of life, but he also showed us a way to end it. This way is called the Noble Eightfold Path. Let me tell you about it."

Ananda began to explain the Eightfold Path to Maya:

- 1. **Right Understanding**: Knowing the truth about life and suffering.
- 2. **Right Thought**: Thinking kindly and wisely.
- 3. **Right Speech**: Speaking truthfully and kindly.
- 4. **Right Action**: Doing good deeds and avoiding harm.
- 5. **Right Livelihood**: Choosing a job that helps others and does no harm.
- 6. **Right Effort**: Trying hard to do good and avoid bad.

- 7. **Right Mindfulness**: Being aware of your thoughts, feelings, and actions.
- 8. **Right Concentration**: Focusing your mind through meditation.

Maya listened carefully and decided to follow the Eightfold Path. She started by understanding that suffering is a part of life and that it comes from our desires and attachments. She learned to think kindly and wisely, and she began to speak truthfully and kindly to everyone she met. Maya also made sure her actions were good and helpful. She chose a job that allowed her to help others, and she worked hard to do her best. She practiced being aware of her thoughts and feelings, and she learned to meditate to focus her mind.

As time went by, Maya noticed that she felt happier and more peaceful. She wasn't as worried or sad anymore. She realised that by following the Eightfold Path, she was able to understand and deal with her suffering in a better way. One day, Maya met Ananda again and thanked him for his advice. "I feel so much better now," she said. "Following the Eightfold Path has helped me find peace and happiness." Ananda smiled and said, "The Buddha's teachings are like a guiding light. By following the Eightfold Path, you have learned to end your suffering and find true happiness. Remember to keep practicing and sharing this wisdom with others." Maya nodded and promised to continue her journey on the Eightfold Path, helping others find peace and happiness just as she had.

Week 5 – What is compassion (Karuna) and loving kindness and how are these beliefs important for ending suffering?

In a serene village surrounded by lush forests and flowing rivers, there lived a young girl named Lotus. Lotus was known for her gentle nature and her willingness to help anyone in need. However, she often felt overwhelmed by the suffering she saw around her and didn't know how to make a real difference. One day, Lotus met an elderly monk named Bhante who was visiting the village. Bhante was wise and had spent many years practicing the teachings of the Buddha. Lotus decided to seek his guidance.

"Bhante," Lotus said, "I see so much suffering around me, and I want to help, but I don't know how. What can I do to make a difference?"

Bhante smiled warmly and said, "Lotus, the Buddha taught us that compassion and loving-kindness are powerful tools for overcoming suffering. Let me tell you a story."

Bhante began to share a story about the Buddha's teachings:

A long time ago, there was a prince named Siddhartha who became the Buddha. He realised that all beings experience suffering, and he wanted to find a way to help them. The Buddha discovered that by practicing compassion (karuna) and loving-kindness (metta), we can alleviate our own suffering and the suffering of others. Compassion means feeling empathy for others and wanting to help them. Loving-kindness means wishing happiness and well-being for all beings, without expecting anything in return. The Buddha taught that by cultivating these qualities, we can create a more peaceful and harmonious world.

Inspired by Bhante's story, Lotus decided to practice compassion and loving-kindness in her daily life. She started by being kind to herself, understanding that she needed to take care of her own well-being to help others. She then extended her kindness to her family, friends, and even strangers. Lotus noticed the positive effects of her actions. When she helped an elderly neighbour carry shopping, she saw the gratitude in their eyes. When she comforted a friend who was feeling sad, she felt a sense of warmth and connection. She realised that her compassion and loving-kindness were making a real difference.

One day, Lotus saw a young boy named Arun sitting alone and crying by the river. She approached him and gently asked, "What's wrong, Arun?"

Arun looked up with tear-filled eyes and said, "I lost my favourite toy, and I can't find it anywhere."

Lotus felt a deep sense of compassion for Arun. She sat beside him and said, "I'm sorry you're feeling sad, Arun. Let's look for your toy together."

They searched the area and eventually found the toy stuck in some bushes. Arun's face lit up with joy, and he hugged Lotus tightly. "Thank you, Lotus! You're so kind."

Lotus smiled and said, "I'm happy I could help. Remember, Arun, whenever you feel sad, there are people who care about you and want to help."

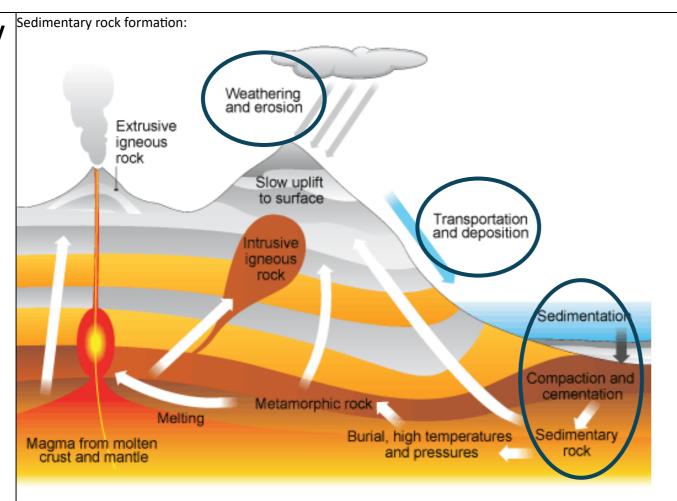
As Lotus continued to practice compassion and loving-kindness, she noticed that her own suffering began to lessen. She felt more connected to others and found a sense of purpose in helping those in need. She realised that by spreading compassion and loving-kindness, she was creating a ripple effect of positivity and healing.

Bhante saw the change in Lotus and said, "You have learned well, Lotus. The Buddha's teachings on compassion and loving-kindness are powerful tools for overcoming suffering. By practicing them, you are not only helping others but also finding peace and happiness within yourself."

Lotus nodded and promised to continue her journey of compassion and loving-kindness, knowing that she was making the world a better place, one kind act at a time.

Chemistry

Week 1 - What is a fossil?



Weathering and erosion – bits of rock are broken off. This can be through chemical, physical or biological weathering.

Transportation and deposition – small parts of rocks (sediment) are transported away and deposited into the ocean

Sedimentation – sediment settles to the bottom of the ocean

Compaction and cementation – over many years the sediment gets compacted under the high pressure.

Fossils as the 'remains of once living animals or plants.' They are found in sedimentary rocks

Two main types of fossil: Body fossil - fossilised remains of a plant or animal e.g. a bones, shell, leaves and Trace fossil - record an activity of an animal e.g. footprints, trackways, coprolites.

Body fossils show us what a plant or animal looked like. They are the fossilised remains of an animal or plant, like bones, shells and leaves.













The fossilised dinosaur skeletons and big bones we see, petrified wood and whole body fossils (mammoths caught in ice or insects trapped in amber) are all body fossils.

Fossils can give information about how long ago a plant/animal lived.

Fossil records can show how an organism has evolved over time

The fossil record is not complete!

People who study fossils are called palaeontologists.

Trace fossils record the activity of an animal. These include footprints, trackways, and coprolites (fossil poo!).







The three fossil fuels are crude oil, coal and natural gas.

Week 2 -What are

Fossil fuels are non-renewable because they are being used quicker than they are being replaced. This means they are running out.

Crude oil formation: Formed from ancient dead animals and plants which have been buried in sediment and compressed over many years.

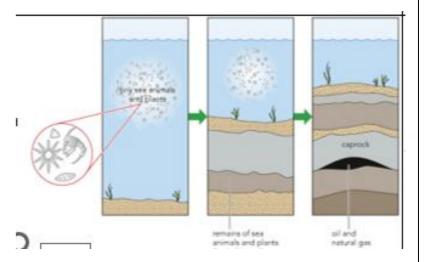
fossil fuels? Uses of fossil fuels:

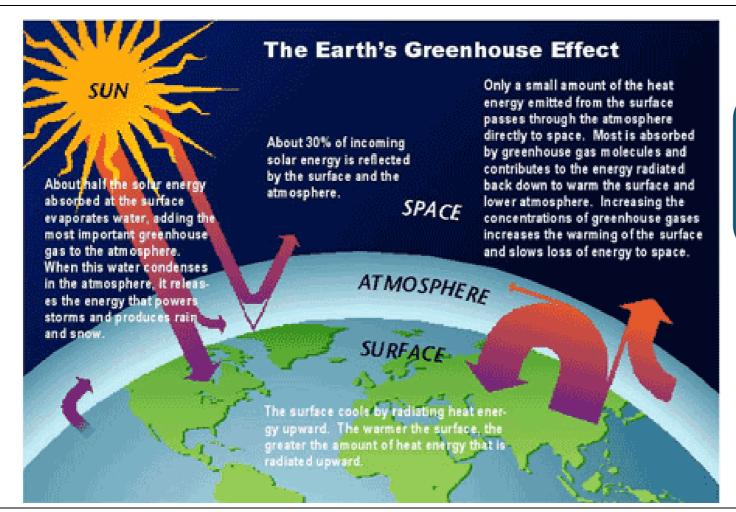
Crude oil can be used in cooking, to fuel cars, to fuel ships and even to make tarmac.

Energy is released when we burn fossil fuels (combustion)

Fuel (hydrocarbon) + Oxygen → Carbon Dioxide + Water (+ Energy)

Problems with burning fossil fuels including the release of carbon dioxide (a greenhouse can) that contributes to global warming.





Burning fossil fuels also produces acid rain. This causes lakes and soil to become more acidic. Crops can fail to grow and aquatic organisms can die.

Global warming can lead to ice caps melting, sea levels rising, more extreme weather, loss of land and habitats.

Finite resources are substances that can only be used once and are in limited supply. e.g. oil, metals, rocks

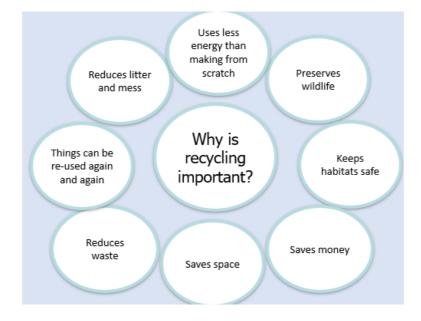
Week 3 Finite resources and

recycling.

At home we can recycle:

There are a number of reasons why recycling is so important:

- Glass
- Metals
- Paper
- Card
- Plastic



Finite = Can only be used once and is in limited supply

Infinite = Can be used more than once or is in unlimited supply

Sustainable = Able to be maintained at a certain rate or level

Renewable = Will not run out in the foreseeable future

Recycling methods:

Resource	How?	Advantages	Disadvantages
Glass	It can be melted, remoulded and reused	The energy needed to do this is less than the energy needed to make new glass from raw materials	Need to sort different coloured glass ready for recycling and transport to the plant.
Metal	It can be melted, remoulded and reused	The energy needed to do this is less than the energy needed to extract new metal from ores	Melting down metals uses energy, producing pollution
Paper	It can be broken up into small pieces and reformed to make new sheets of paper	This takes less energy than making new paper from trees. Less need to cut down trees	Paper can only be recycled a few times before its fibres become too short to be useful
Plastic	It can be melted, remoulded and reused	We use less crude oil and recycling prevents plastic ending up in landfill sites	Different types of plastics have to be sorted



Week 4 Earth and the atmosphere

The atmosphere is the layer of gas which surrounds a Planet! The layers of the atmosphere to include:

- Troposphere
- Stratosphere
- Mesosphere
- Thermosphere
- Ionosphere
- Exosphere

Ionosphere isn't always included in diagrams because it overlaps with many layers.



The troposphere is the first layer!

(The layer we live in)

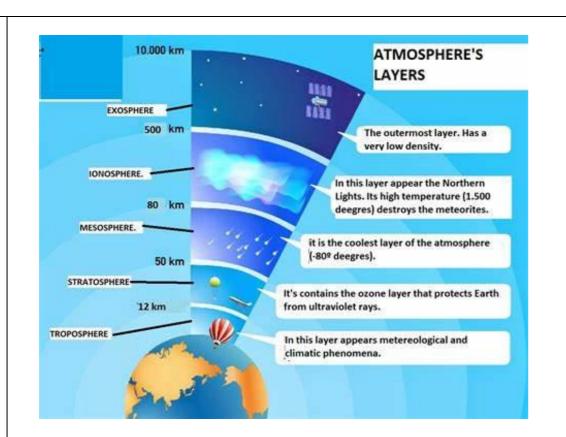
The air in the troposphere consists of...

78% Nitrogen

21% Oxygen

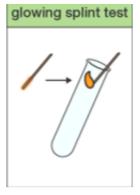
1% Argon

0.04% Carbon dioxide



Test for oxygen gas:

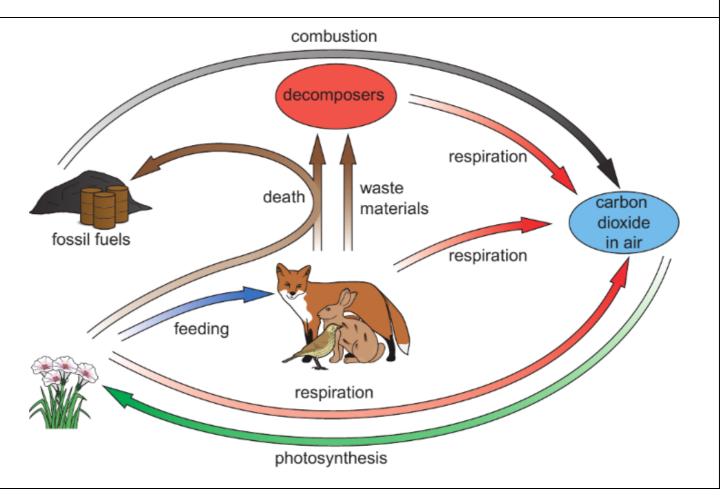
Place a glowing splint
 over the gas. If it
 relights the split it is
 oxygen!



Week 5 -The Carbon Cycle

The carbon cycle involves the following processes:

- Photosynthesis a chemical reaction uses carbon dioxide from the atmosphere.
- Combustion a chemical reaction which reacts carbon (in fuels) with oxygen and releases it as carbon dioxide into the atmosphere.
- Respiration a chemical reaction which releases carbon dioxide into the atmosphere
- Decomposition when an organism is broken down by microorgamisms
- Feeding when one organism eats another
- Fossilisation turning into a fossil over thousands of years.



Week 6 -How do we choose materials?

- Composite materials are made from 2 different types of materials.
- They are different in their chemical or physical properties and are merged to create a new type of material.
- Examples of composite materials:









MDF kitchen

cabinets









Metal roofing

Concrete bathroom floor

PVC windows

Polythene bags

How do we choose which materials to use for different jobs?

- Abundance of raw material
- Extraction method and cost
- Physical properties

Plywood

flooring

- Manufacturing cost and energy
- Environmental impact including carbon footprint.

We have to look at the whole life cycle of a product to know if it is sustainable for use. This might include:

- How raw materials are extracted
- How different materials work together
- How materials can be disposed effectively