KNOWLEDGE ORGANISER

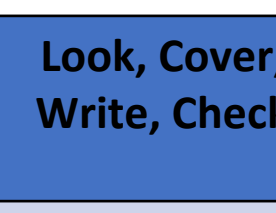
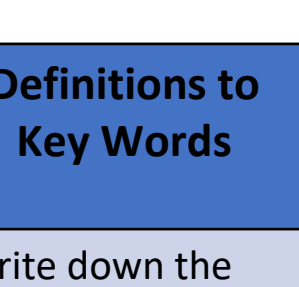
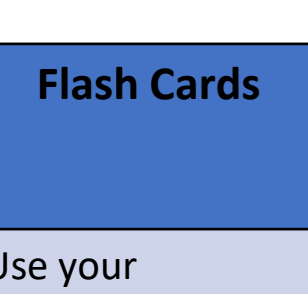
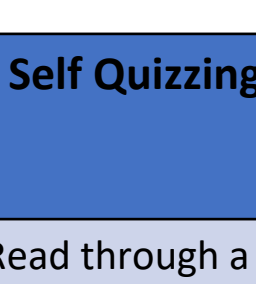
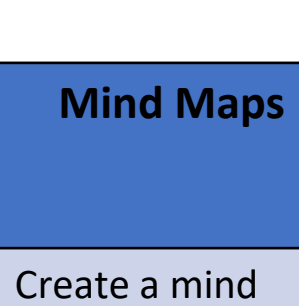
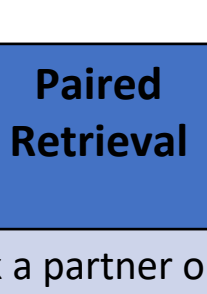
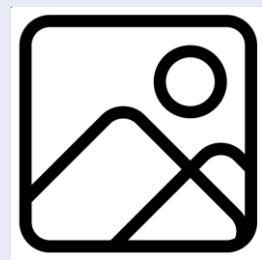
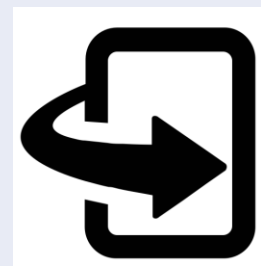
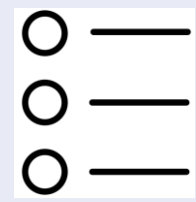
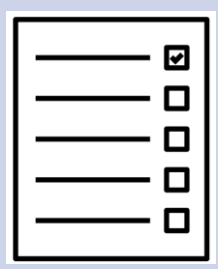
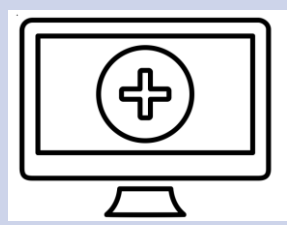
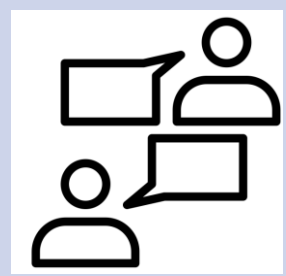
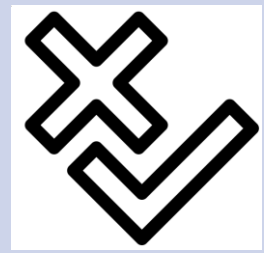
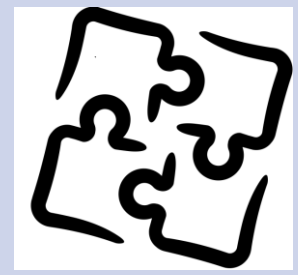
Year 8
Half Term 5

Name:	
Tutor Group:	
Academic Year:	

How to use your Knowledge Organiser

The aim of the knowledge organiser is to ensure that **ESSENTIAL KNOWLEDGE** is stored and retrieved over a long period of time.

You need to ensure that you keep your knowledge organiser in your bag, ready for revision, quizzing and to refer to at any time in all of your subjects.

	Look, Cover, Write, Check	Definitions to Key Words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your knowledge organiser 	Write down the key words and definitions. 	Use your knowledge organiser condense and write down key facts and/or information on your flash cards. 	Read through a specific area of your knowledge organiser 	Create a mind map with all the information that you can remember from your knowledge organiser. 	Ask a partner or someone at home to have the quiz questions or flash cards in their hands. 
Step 2	Flip the knowledge organiser and write everything you can remember. 	Try not to use the solutions to help you. 	Add diagrams or pictures if appropriate. Write the solutions on the back of the cards. 	Turn over and answer the questions related to that area. 	Check your knowledge organiser to correct or improve your mind map. 	Ask them to test you by asking questions on the section you have chosen from your knowledge organiser. 
Step 3	Check what you have written. Correct mistakes and add extra information. Repeat. 	Check your work. Correct using red pen and add more information if appropriate. 	Self quiz using the cards or ask some to help by quizzing you. 	Turn back over and mark your quiz. Keep quizzing until you get all questions correct. 	Try to make connections that links information together. 	Either say or write down you answers. 


CORE

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Year 8
Photosynthesis and Respiration
Science

Essential knowledge

- The word equation, reactants and products of photosynthesis
- Plants and algae are important in maintaining levels of oxygen and carbon dioxide
- The adaptations of leaves for photosynthesis
- The process of anaerobic respiration in humans and micro-organisms, including fermentation
- The differences between aerobic and anaerobic respiration

Key Vocabulary

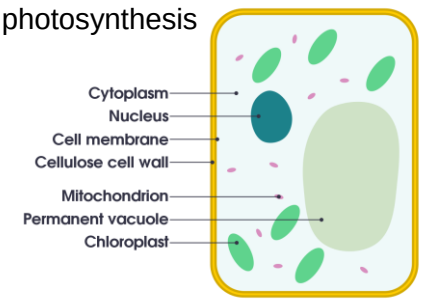
- Photosynthesis
- Chloroplast
- Carbon dioxide
- Glucose
- Palisade mesophyll
- Aerobic respiration
- Anaerobic respiration
- Fermentation

Prior learning links

- Plants produce glucose in a process called photosynthesis
- Plant cells are different to animal cells in that they have a cell wall, vacuole and chloroplasts
- Chloroplasts are filled with a green pigment called chlorophyll
- The function of the chloroplast is to absorb light energy for photosynthesis
- Respiration is a process which uses oxygen to release energy
- Cells that carry out respiration have lots of mitochondria
- Mitochondria are the part of the cell where respiration takes place
- Energy cannot be created or destroyed, only transferred

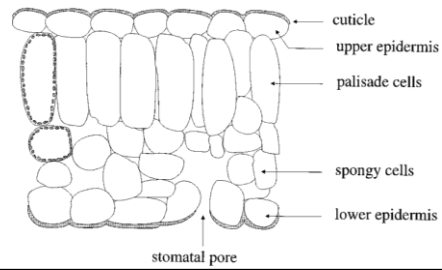
Plant Cells

- Plant cells have a cell wall, vacuole and chloroplasts, whereas animal cells do not
- A cell wall strengthens and protects the cell
- The vacuole contains cell sap and nutrients
- The chloroplasts absorb light energy for photosynthesis



Plant Tissue

- The palisade mesophyll layer is packed with chloroplasts for maximum light absorption
- The spongy mesophyll layer has air spaces to allow gases to diffuse in and out of the leaf
- The waxy cuticle is transparent to allow light to enter the plant



Photosynthesis

Carbon dioxide + water → glucose + oxygen

$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$

- Carbon dioxide is absorbed through the stomata
- The water is taken in through the root hair cells via osmosis
- Glucose is produced which is used by the plants for energy and to be stored as starch
- The stomata are tiny holes on the underside of the leaf. They are mainly on the underside of the leaf to reduce water loss
- Stomata are surrounded by guard cells which control the opening and closing of the stomata

Respiration

Respiration takes place in the mitochondria and releases energy for the organism.

Aerobic respiration takes place when there is oxygen present:

Glucose + oxygen → carbon dioxide + water

Anaerobic respiration takes place when there is a lack of oxygen present

Glucose → lactic acid

Lactic acid builds up in muscles and causes muscle cramping and fatigue.

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Year 8
Photosynthesis and Respiration
Science

Essential knowledge

- The word equation, reactants and products of photosynthesis
- Plants and algae are important in maintaining levels of oxygen and carbon dioxide
- The adaptations of leaves for photosynthesis
- The process of anaerobic respiration in humans and micro-organisms, including fermentation
- The differences between aerobic and anaerobic respiration

Key Vocabulary

Which key word:

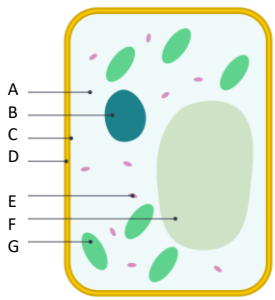
1. Is a product of photosynthesis?
2. Is a reactant during the process of photosynthesis?
3. Is the layer of the leaf where most of the photosynthesis takes place?
4. Describes respiration that takes place when oxygen is present?

Prior learning links

1. Name the process whereby plants produce glucose
2. Name three organelles found in a plant cell but not an animal cell
3. What is the green pigment that is found in the chloroplasts?
4. State the function of the chloroplasts
5. Which gas is needed for respiration?
6. In which cell organelle does respiration occur?
7. State the law of conservation of energy

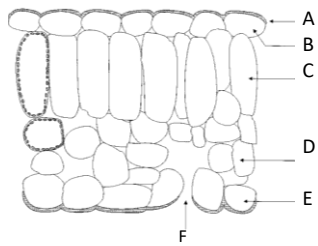
Plant Cells

1. What is the function of the cell wall?
2. What is found inside the vacuole?
3. State the function of a chloroplast.
4. Name the part of the plant cell labelled A-G



Plant Tissue

1. Which layer is packed with chloroplasts?
2. Why is this layer packed with chloroplasts?
3. Which layer of the leaf has air spaces?
4. Why does this layer have air spaces?
5. Why is the waxy cuticle transparent?
6. Name the parts of the leaf labelled A-F



Photosynthesis

1. Write the word equation for photosynthesis
2. Write the symbol equation for photosynthesis
3. Which gas is absorbed through the stomata?
4. Name the cell that absorbs water for the plant.
5. What is the glucose that is produced by photosynthesis used for?
6. What is glucose stored as?
7. What are stomata?
8. What are stomata found on the underside of leaves?
9. Name the cell that controls the opening and closing of the stomata

Respiration

1. Where, in the cell does respiration take place?
2. Which gas needs to be present for aerobic respiration to take place?
3. Name the two reactants in aerobic respiration
4. Write the word equation for aerobic respiration
5. Name the type of respiration that occurs when there is a lack of oxygen
6. Write the word equation for this type of respiration
7. State two effects of lactic acid

Year 8- Geometry – Area of Trapezia and Circles

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Essential knowledge

- Find the area of common 2D shapes
- Find the area of trapezia
- Find the perimeter and area of compound shapes
- Find the area of a circle

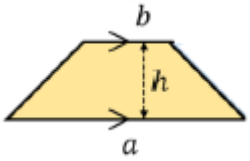
Key Vocabulary

Congruent: The same
Area: Space inside a 2D object
Perimeter: Length around the outside of a 2D object
Pi (π): The ratio of a circle's circumference to its diameter.
Perpendicular: At an angle of 90°to a given surface
Formula: A mathematical relationship/ rule given in symbols.
E.g. b x h = area of rectangle/ square
Sector: A part of the circle enclosed by two radii and an arc.

Prior learning links

Area and Perimeter of Shapes (Y6)
Addition and Multiplication Problems (Y7)
Geometric Notation (Y7)

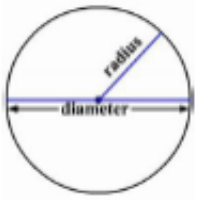
Area of Trapezia



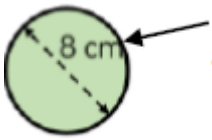
Trapezia - $\frac{a+b}{2} \times h$

. Add together the two parallel sides
. Divide them by 2
. Multiply by the perpendicular height

Area of Circles



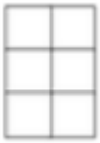
Circle $-\pi r^2$
(π multiplied by the square of the radius)



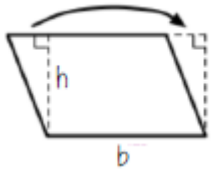
Diameter = 8cm
Radius = 4cm
$\pi \times radius^2$
$\pi \times 4^2$
$\pi \times 16$
$16\pi\ cm^2$ (non calculator)
$50.3\ cm^2\ (3\ s.f)$

It is really important to round your answer correctly if you are asked to round to decimal places or significant figures.

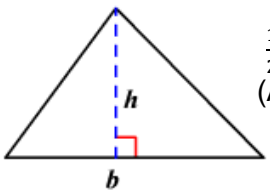
Rectangles, Triangles and Parallelograms



Rectangle – Base x Height

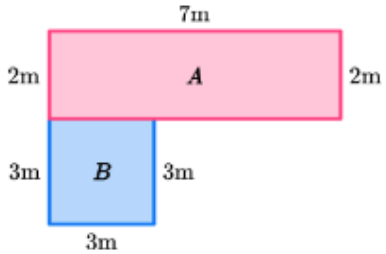


Parallelogram –
Base x Perpendicular Height
(identify the height that meets the base at a right angle)



Triangle –
$\frac{1}{2}$ x Base x Perpendicular Height
(A triangle has half the area of the rectangle it could fit inside).

Area of Compound Shapes



Area of Shape A
(7m × 2m)
$14m^2$

Area of Shape B
(3m × 3m)
$9m^2$

Split the shape into known shapes
Calculate the areas separately
Add together to find total area. √

Area of Compound Shape

$23m^2$

Year 9- Geometry- Area of Trapezia and Circles

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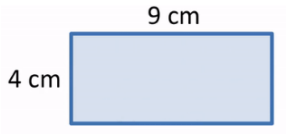
Prior learning links

Find the area and perimeter of this shape:



Calculate:

0.5 x 12 x 8 =

15^2=

Key Vocabulary

Define the following key words:

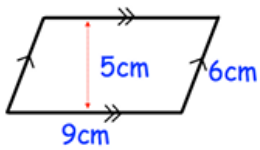
Area -

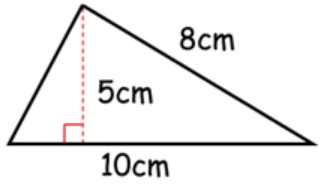
Perpendicular Height -

Radius -

Area of Known Polygons

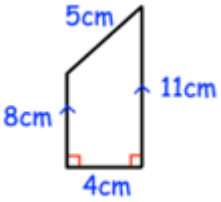
Calculate the area of the following shapes:

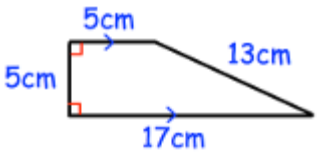




Area of Trapezia

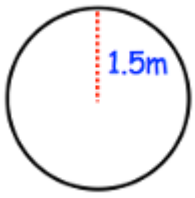
Find the area of these trapezia:

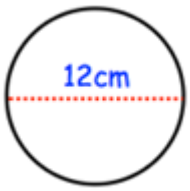




Area of a Circle

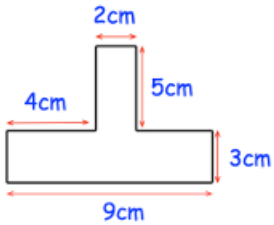
Calculate the area of these circles, leaving your answers in terms of π:

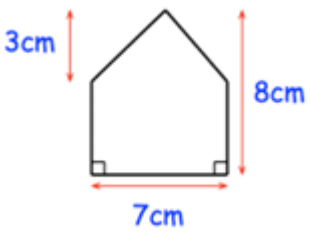




Area of Compound Shapes

Calculate the area and perimeter of these shapes:





Year 8, Unit 3: Animal Farm

Essential Knowledge

Context	
George Orwell 	George Orwell was an author who became a **socialist** as a young man. Despite this, Orwell did not like the Soviet Union and its policies. He could not ignore the cruelties and hypocrisies of Soviet Communist Party. Orwell became a critic of both capitalism and communism, and is remembered chiefly as an advocate of freedom and a committed opponent of communist oppression.
Communism 	In *Das Kapital (Capital),* German economic and political philosopher Karl Marx argued that the logical progression of society would lead to communism, **a system under which all property would be held in common** and all people would live as equals.
Socialism 	Socialism is a political and economic theory of social organisation which advocates that the means of production and **resources should be owned or regulated by the community as a whole.**
The Russian Revolution 	In Russian society in the early twentieth century a tiny minority controlled most of the country's wealth, while the vast majority of the country's inhabitants were impoverished and oppressed. Communism arose in Russia when the nation's workers and poor rebelled against and overwhelmed the wealthy and powerful class of capitalists and aristocrats.
Trotsky vs Stalin 	After Lenin died in 1924, Stalin and Trotsky competed for control of the newly formed Soviet Union. Stalin, a crafty and manipulative politician, soon banished Trotsky, an idealistic proponent of international communism. Stalin then began to consolidate his power with brutal intensity, killing or imprisoning his perceived political enemies and overseeing the purge of approximately twenty million Soviet citizens.

Big Ideas	
Corruption 	*Animal Farm* demonstrates the idea that **power corrupts**. The novella's use of foreshadowing creates the sense that the events of the story are unavoidable. Not only is Napoleon's rise to power inevitable, but it is possible that any other ruler would have been just as bad as Napoleon. In the novel's final image suggests that power inevitably has the same effect on anyone who wields it.
Exploitation 	As well as being an allegory of the ways humans exploit and oppress one another, *Animal Farm* makes a more literal argument: humans exploit and oppress animals. It suggests that there is a real and allegorical connection between the exploitation of both animals human workers. Mr. Pilkington jokes: "If you have your lower animals to contend with […] we have our lower classes!". From the point of view of the ruling class, animals and workers are the same.

Key Terms	
Satire	The use of humour to expose other people's cruelty or flaws.
Modernism	a style or movement in the arts that aims to depart significantly from classical and traditional forms
Post-modernism	a departure from modernism and is characterized by the self-conscious use of earlier styles and conventions
Extended Metaphor	The repeated use of a metaphor, or a metaphor that is developed in great detail.

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Year 8, Unit 3: Animal Farm

Prior Learning

- Rhetoric and the Aristotelian Triad
- Rhetorical devices and their effects:
  - tricolon
  - Anaphora
  - Epiphora
- Transactional writing form: speech
- Structuring clear and cohesive arguments
- The edit and re-draft process

Rhetoric	
Ethos	Appeal of personality, reputation or character. Establishes the author's credibility.
Pathos	Appeal to the emotions of the author's audience.
Logos	Appeal to reason. Establishes a logical argument.

Structural Techniques

Circular narrative – The narrative could be described as circular - this means that it ends as it began, with the animals being oppressed by a cruel leader.
Flashback – A literary device where a scene in the story takes place at an earlier point in the narrative.
Flashforward - A literary device where a scene in the story takes place at a later point in the narrative.
Repetition – The repeated use of a particular word or phrase. There are many different types of repetition, such as Anaphora, Epiphora, Anadiplosis, Symploce, Polysyndeton, Epizeuxis etc.
Animal Farm follows a simple structure. It is written in 10 chapters that can be divided into three sections: the Dream; the Rebellion and Napoleon's regime. Each chapter tells a story in its own right and has an 'ending'. It allows the reader a chance to reflect about the lessons taught in each chapter.

Transferable Knowledge	
Political Allegory	**Political allegories** are stories that use imaginary characters and situations to explore/ discuss real-life political events. Orwell's novella brings events in the Soviet Union to the heart of the English countryside. This allows Orwell to argue that the events of the Soviet Revolution were "closer to home" than his English readers realised.
Class System	The **class system** is a term for the way that economic and social status is organised, in which people are grouped into a set of hierarchical social categories, the most common being the upper, middle and lower classes.
Dystopian Literature	Literature set in an imagined state or society where there is great suffering or injustice


EBACC

French Knowledge Organiser
Core Information

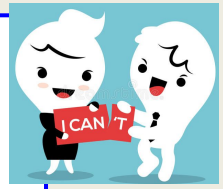
Year 8/Term 3
Paris, je t'adore!

Prior Knowledge

Le futur proche - the near future tense
Formed with aller + infinitive
E.g **Je vais** visiter = I am going to visit
Tu vas visiter = You are going to visit
Il va visiter = He is going to visit
Elle va visiter = She is going to visit

Pouvoir to be able to (can)
Je peux I am able
Tu peux You are able
Il/Elle/On peut He/she/ we are able
Je peux faire I am able to do
Je peux avoir am able to have
Je peux aller I am able to go

Using vouloir to say you would like
This can be used on it's own as;
Je voudrais une glace = I would like an ice cream
Or with the infinitive of another verb to say
Je voudrais visiter l'église = I would like to visit the church



Saying MY - Mon, ma or mes?

The word for MY in French changes depending on the gender or the object or thing you are talking about.

Mon = masculine objects
E.g. mon chien = my dog
Ma = feminine objects
E.g ma soeur = my sister
Mes = plural objects
E.g. mes copains = my friends

Saying HIS or HER - son, sa or ses?

The word for HIS or HER in French is the same, but changes depending on the gender of the object that is his or hers

Son = masculine objects
E.g. son chien = his/her dog
Sa = feminine objects
E.g sa soeur = his/her sister
Ses = plural objects
E.g. ses copains = his/her friends

il y a = There is il n'y a pas de = There isn't

Les questions

We have already met two ways to ask questions in French. These were using the phrases;

Est-ce que = Do/Is it that
e.g. Est-ce que tu aimes les glaces?
Do you/Is it that you like ice creams
(not how we would normally speak in English!)
Qu'est-ce que = What do/What is it that
e.g. Qu'est-ce que tu aimes faire?
What do you like to do/What is it that you like to do.
(not how we would normally speak in English!)

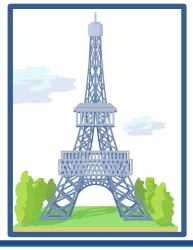
Another way you can ask a question is by using the word **c'est** and changing your tone of voice to go up at the end to sound like a question.
E.g C'est bon? = Is it good?
C'est ouvert? = Is it open?
C'est fini? = Is it finished?
C'est cher? = Is it expensive?

Les passé composé - the perfect tense

This is used to describe things that have happened in the past when we would say 'have done' or 'did' in English.
To form the perfect tense in French, we usually use the verb '**avoir**' (to have) and something called the '**past participle**' (like the **ed** on **changed**). For a regular 'er' verb it would look like this:

J'ai visité	- I have visited/I visited
Tu as visité	- You have visited/You visited
Il a visité	- He has visited/He visited
Elle a visité	- She has visited/She visited
On a visité	- We have visited/We visited
Nous avons visité	- We have visited/We visited
Vous avez visité	- You have visited/You visited
Ils ont visité	- Theyhave visited/They visited
Elles ont visité	- They have visited/They visited

c'était = It was
J'ai visité le Tour Eiffel, c'était magnifique!



French Knowledge Organiser Activities

Year 8/Term 3
Paris, je t'adore!

Copy the table and complete it with the correct words for my, your, his and her.

English	Masculine singular	Feminine Singular	Plural
My		ma	
Your			tes
His/Her	son		

Writing and translating

Qu'est-ce qu'il y a dans la photo? Écris 4 phrases en français.
What is in the photograph? Write 4 sentences in French.

Moi, j'adore habiter à Paris! On peut visiter les monuments et les musées ou on peut faire une balade en bateau-mouche. Le soir, on peut aller à un concert ou au théâtre. Le samedi, j'adore aller voir des matchs de foot au Parc des Princes. J'aime aussi prendre des photos de Paris et faire du roller au Trocadéro. Mais je n'aime pas faire les magasins. C'est ennuyeux! Et toi, qu'est-ce que tu aimes faire?
Yasmine

1. How does Yasmine feel about living in Paris?
2. Name **two** things she says you can do in the evenings.
3. What does she love doing on Saturdays?
4. Name **one** other thing she likes doing.
5. What **doesn't** she like doing and why?

Watch and listen to an episode 4 of Easy French on Youtube. Find out about tourism in Nice, France.

YouTube

Research/Write about at least one famous Paris landmark.

Practising the perfect tense of 'er' verbs and c'était

Turn the following sentences from the present to the perfect tense or from it is to it was.
E.g. Je joue au football (I play football)
J'ai joué au football (I played football)

1. Elle danse.
2. On visite le Tour Eiffel.
3. Nous regardons le spectacle.
4. Je mange un croissant.
5. C'est interessant.
6. C'est cool.
7. Je regarde la Mona Lisa, c'est très beau.

Can you describe things you have done using the perfect tense and the phrase 'it was'?

Geography 8.3.1 – The Horn of Africa

1 - Countries

Ethiopia

Capital city: Addis Ababa
Area: 1 120 000
Population: 109 900 000

Somalia

Capital city: Mogadishu
Area: 637 657
Population: 20 300 000

Djibouti

Capital: Djibouti
Area: 23 000
Population: 1 052 000

Eritrea

Capital city: Asmara
Area: 121 100
Population: 6 344 000

2- Physical features and climate

Ethiopia has a diverse climate due to its varying topography: The greater the altitude, the higher the precipitation nd the lower the temperatures

Uplands - Ethiopian Highlands

A mild and temperate climate with two seasons.
Summers: (June to September) are warm and wet, with average temperatures between 20-25° C.
Winters: (December to February) are cooler and drier, with temperatures between 10-15°C.

Lowlands - Danakil Depression

An arid climate.
Hot temperatures of 30-40°C throughout the year, with very little rainfall.

Somalia has a mainly arid and semi-arid climate with distance from the coast having most influence on both temperature and precipitation.

Inland areas

Arid and semi-arid climates with two seasons: a wert season and a dry season.
High daytime temperatures often over 30°C.
Receive little and unreliable rainfall which can lead to drought and famine.

Coastal areas

Humid with higher rainfall than inland areas.
Influenced by the Indian Ocean monsoon winds, which bring moisture and rainfall.

3 - Economic activities

Nomadic pastoralism

Seasonal movement of herds of camels, cattle, sheep, and goats in search of water and grazing land in arid areas of Somalia.

Challenges: droughts and environmental degradation made worse by climate change. Leads to increased competition for resources.

Opportunities: Products such as milk, meat, and hides are used by the nomads. These and livestock are sold in local markets and also exported.

Coffee farming

Smallholder farmers intercrop coffee plants in the Ethiopian Highlands where the climate is ideal for coffee production. Coffee cherries are usually harvested by hand.

Challenges: Unreliable rainfall and rising temperatures due to climate change as well as unfair trade and fluctuating prices.

Opportunities: Coffee is a major Ethiopian export. It could be more profitable if more processing was carried out before being exported.

4- Key terms

Climate - The average weather conditions of a place.
Drought - Below normal precipitation
Famine - Severe shortage of food
Nomads - people or groups who continually move from place to place
Pastoralist - a farmer who rears animals
Degradation - Removal of nutrients.
Topography - Shape, size, and arrangement of geographical features of the Earth's surface.e.g. Rivers, lakes, plains, hill or coastlines.
Intercropping - Planting between other crops

Questions

1 - Countries

1. Which four countries make up the Horn of Africa?
2. Which is the biggest by population?
3. Which is the biggest by area?
4. Which is the smallest by population?
5. Which is the smallest by area?
6. Rank the countries in order of size by population.
7. Rank the countries in order of size by area.
8. What is the capital of each country?
9. Which country is landlocked?
10. Which country has the longest coastline?
11. Which countries share a border with Somalia?
12. Which ocean is off the east coast of Somalia?
13. Which countries in the Horn of Africa share a border with Ethiopia?

2- Physical features and climate

1. Why does Ethiopia have a diverse climate?
2. What is the upland area of Ethiopia called?
3. What is the climate of the upland area of Ethiopia?
4. What are the seasons in upland Ethiopia called?
5. How do the seasons in upland Ethiopia differ?
6. What is the name of the lowland area of Ethiopia?
7. What type of climate does the lowland area of Ethiopia have?
8. How do the climates of the upland and lowland areas of Ethiopia differ?
9. What is the climate of Somalia?
10. What are the seasons in Somalia called?
11. What is the climate of inland areas of Somalia like?
12. What is the climate of coastal areas of Somalia like?
13. How do the climates of inland and coastal area of Somalia differ?
14. What problem can be caused by unreliable rainfall?

3 - Economic activities

1. What are the two types of economic activity being discussed?
2. What is nomadic pastoralism?
3. What animals are farmed?
4. Give two challenges faced by nomadic pastoralists.
5. What problem is being caused for nomadic pastoralists because of climate change?
6. What are the products of nomadic pastoralism?
7. What are the products used for?
8. Where does coffee farming take place?
9. How are coffee cherries harvested?
10. What challenges face coffee farmers in Ethiopia?
11. How important is coffee farming to the economy?
12. What can be done to increase the income from the exportation of coffee?

4- Key terms

1. What is the climate?
2. What is a drought?
3. What is a famine?
4. What do nomads do?
5. What do pastoralists do?
6. What is degradation?
7. What is topography?
8. Name three geographical features.
9. What is intercropping?

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Year 8 History Knowledge Organiser
Protest

Key individuals

William Cartwright
William Horsfall
George Mellor
Ned Ludd
Captain Swing
Henry Hunt
Rebecca
Millicent Fawcett (NUWSS)
Emmeline Pankhurst (WSPU)
Sylvia Pankhurst
Christabel Pankhurst
Emily Davison
Kitty Marion

Luddites

They wanted to get rid of the machines that were taking their jobs away.They smashed up the machines and threatened the mill owners. Letters were signed by Ned Ludd who was a mythical person. One mill owner was killed.17 men were hung and others were transported to Australia.

Peterloo

They wanted to listen to Henry Hunt talk about working men and the vote.On August 16th 1819 60 000 people gathered at St Peter's Fields Manchester. Families went for a day out.The army tried to clear the crowd to arrest Hunt. They killed 11 defenceless people and badly injured 400.

Chartists

They wanted a people charter with; equal electoral districts, no property qualifications for MPs, votes for all men, annual parliaments, secret votes, payments for MPs. They collected names on petitions, one had 6 million names on it that they marched to parliament. The petitions were ignored but we now have all points except the annual parliament.

Swing Riots

Farm labourers suffered high taxes, low wages and were losing their jobs to new machinery.The Swing Rioters smashed the threshing machines and threatened the farmers who had them. They wrote letters from Captain Swing. 9 rioters were hung and 450 were transported to Australia. The farm machinery continued to be used.

Rebecca Riots

People wanted to protest against the high tolls they were having to pay on the turnpike roads.Toll houses and gates were attacked in Wales and some of the men disguised themselves in women's clothes.Two leaders were captured, found guilty and sentenced to transportation. However the taxes on the roads were looked at and found to be too high.

Women's suffrage

They wanted votes for women.The Suffragists used peaceful methods but the Suffragettes used violent methods.Women over the age of 30, householders or married to householders got the vote because of the 2 groups and the work women did in the war.

Key dates

16/8/1819	Peterloo Massacre
1830	Swing Riots
1839 - 43	Rebecca riots
1848	Chartist march on London
1872	Secret Ballot
1918	Representation of the people act. Men over 21 and most women over 30
1928	All women over 21 could vote
1969	Votes for all over 18s

KEY VOCABULARY/ TERMS

Protest, suffrage, vote, General election, constituencies, Luddites, Swing rioters, Rebecca rioters, Peterloo, cavalry, riot act, massacre, Chartist, petition, suffragette, suffragist, martyr, transportation, tolls, tithes, taxes, hayrick

Year 8 History Knowledge Organiser
Protest

Key questions

1. What did the Luddites hate?
2. How did the Luddites express their hatred?
3. What happened to the Luddites who were captured?
4. Who was Ned Ludd?
5. Where did Peterloo happen?
6. When did Peterloo happen?
7. Who was Henry Hunt?
8. Why were the people there?
9. Why was it called a massacre?
10. When were the Swing Riots?
11. What were they protesting about?
12. What happened to them?
13. Who was Captain Swing?
14. When were the Rebecca riots?
15. What were they protesting about?
16. Who was Rebecca?
17. What happened to them?
18. Who were the Chartists?
19. What were their six points of the charter?
20. When was their biggest march?
21. They were not successful but with of their points do we have today?
22. When was the secret ballot introduced?
23. Who were the two groups that wanted votes for women?
24. Who was the leader of the NUWSS?
25. Who was the leader of the WSPU?
26. When did women over 30 get the vote?
27. When did women over 21 get the vote?
28. When did all people over 18 get the vote?

Extension tasks

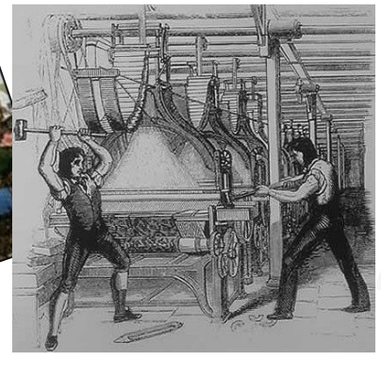
Key people research

The following people were all involved in the women's suffrage movement. You can research them and write a page of home study.

- Millicent Fawcett (NUWSS)
- Emmeline Pankhurst (WSPU)
- Sylvia Pankhurst
- Christabel Pankhurst
- Emily Davison
- Kitty Marion

Research ideas

- What was transportation and what did it involve?
- Why did the Chartists fail?
- How does our system of government work?
- What is an MP?
- What is a constituency?
- What were the methods of the NUWSS?
- What were the methods of the WSPU?
- What happened on Derby Day 1913?



Year 8 - 8.3 Representation of Data

Essential Knowledge

- Describe the term binary as a base two number system that only uses 1 and 0
- Define the term bit as a single binary digit
- Define byte as a collection of 8 binary digits
- Describe the term denary as a base ten number system that uses 0 to 9
- Show the steps to convert a binary number to denary and back
- State that each character is represented by a unique binary number that allows it to be displayed
- State that digital images are made up of pixels. Each pixel is represented by a unique binary number that allows it be displayed
- State that digital sounds are made up of samples. Each sample is represented by a unique binary number that allows it be played

Key vocabulary

- Binary – A base 2 number system, that uses 1 and 0
- Bit – A single binary digit
- Byte – A collection of 8 binary digits
- Denary – A base 10 number system, that uses numbers 0 - 9
- Character – A symbol representing a number or letter
- Pixel – A picture element that makes up a larger image
- Sample – A recording of a sound wave

Prior Links

- Year 4 – Creating media – Audio editing
- Year 4 – Creating media – Photo editing

What is a bit?

A **bit** is a **binary digit**, the smallest increment of data on a computer. It can only hold one of two values: 0 or 1.

Because bits are so small, you rarely work with information one bit at a time. Bits are usually assembled into a group of eight to form a **byte**.

What is binary

Binary is a base 2 number system that means it only uses two digits: 1 and 0. All information that is processed by a computer is in the form of a sequence of 1s and 0s. Therefore, all data that we want a computer to process needs to be converted into binary.

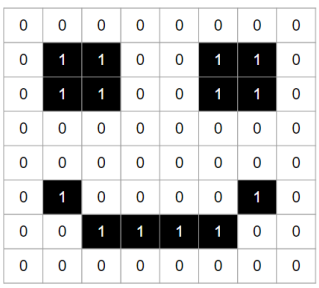
Representation

Binary is used to represent everything you see on a computer including characters, sounds and images.

Every character you can represent on a computer is given a unique binary number. This includes a separate character for each upper and lower case letter, number and symbol.

Digital images are made up of pixels. Each colour has a unique binary number.

To add more colours each pixel needs more bits



Denary

Outside of computers we have a base 10 number system (0-9) known as denary. To convert numbers between the two number systems you need a number line. The line starts at 1 and the next number is double the previous one.

128	64	32	16	8	4	2	1
↓	↓	↓	↓	↓	↓	↓	↓
1	0	0	0	1	0	1	0

To convert a binary number to denary. Write the number line above it, add all the numbers that have a 1 under them together.

To convert from denary to binary you use the same number line but compare the number to the end of the number line. If the denary is bigger you put a 1 under it and take that number from the denary.

Digital sounds are composed of samples. Samples are like tiny snapshots of the sound taken at regular intervals.

Each of these samples is then represented by a unique binary number, this tells the computer how loud the sound is at that particular moment.

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Year 8 - 8.3 Representation of Data

Essential knowledge questions

1. List the steps you need to follow to convert a binary number into a denary number
2. List the steps you need to follow to convert a denary number into a binary number
3. What is binary used to represent on a computer?

Key vocabulary

Define the following key words:

- Binary
- Bit
- Byte
- Denary
- Character
- Pixel
- Sample
- Unique

Denary

1. How many numbers are in the denary system?
2. What numbers are used in denary?
3. What do you need to convert between denary and binary?

Binary

1. How many numbers are used in binary?
2. What numbers are in the binary system
3. What happens to all data before a computer processes it?

Bits and Bytes

1. What does bit mean?
2. What is a bit?
3. What two values can it be?
4. How many bits make a byte?
5. Why do we rarely work in bits?

Binary to Denary

1. Convert 0001 1001 into denary
2. Convert 0101 0011 into denary
3. Convert 1100 1101 into denary
4. Convert 1011 0111 into denary
5. Convert 0111 0010 into denary
6. Convert 1110 0000 into denary
7. Convert 0000 1111 into denary
8. Convert 1010 1100 into denary

1. Complete the number line

2. What happens to each number as you go up the number line?
3. If the number line was nine spaces what would be the last number

Representation

1. What is a character?
2. What does every character have to be represented?
3. What is a pixel?
4. What is a sample?
5. How are samples represented?

Denary to Binary

1. Convert 74 into binary
2. Convert 25 into binary
3. Convert 247 into binary
4. Convert 60 into binary
5. Convert 43 into binary

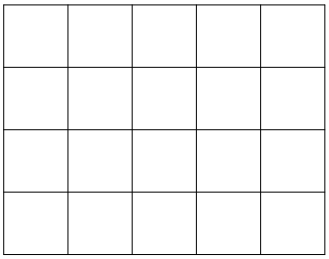
0	1	0	0	1	0
0	1	0	0	1	0
0	0	0	0	0	0
0	0	1	1	0	0
1	0	0	0	0	1
0	1	1	1	1	0

Shade in the grid to show the picture.

1 = black
0 = white

1. How could more colour be added to the image?
2. How many bits are being used per pixel

Plot out a picture using 1 and 0



RE Knowledge Organiser
Crime and Punishment

Reasons for crime

There are many reasons why people commit crimes. These range from specific, immediate reasons- such a stealing someone's wallet to pay for a drug addiction -to more complex reasons to do with the way that society is structured, which affect, for example, people's upbringing and education. There are always moral arguments for why people may commit crime, such as stealing, however Christians argue this wouldn't happen if people showed kindness to those around them. While Christians condemn stealing they are keen to make sure that nobody is so poor that they use poverty as an excuse for stealing. In June 2015, Pope Francis said: ''Focusing on poverty and sacrificing for the poor are the heart of the gospel. If Christians don't dig deep and generously open up their wallets, they do not have genuine faith".

Capital punishment

The Old Testament teaching supports the death penalty and lists 36 capital offences. Of these, Murder is the ultimate capital offence. This is used in some Christian nations as a religious excuse to use Capital Punishment, an example of which is the United States of America.
In the New Testament, Jesus called on his followers to adhere to an even higher standard than that demanded by the Old Testament. The laws about revenge were there to stop disputes getting out of hand, rather than make revenge seem acceptable. In the Bible, Jesus says it is better not to take revenge at all. This is evidenced in the quote "But now I tell you, do not take revenge on someone who wrongs you". This means there are religious teachings that can be used to argue both for and against the use of Capital Punishment.

Religious views on prison

Religion views prison as a chance for an individual convicted of a crime to reflect on their actions but also as a method of reforming the individual so that they can return to society as a better person.
Many Christians are concerned with the welfare of prisoners. They may campaign for prison reform, visit prisoners, or vote for a political party that reflects their views on justice equality. In the Bible, Jesus taught in the parable of the sheep and the goats (Matthew 25:36) that people who help those in prison will go to Heaven. This is because Jesus identifies himself with the outcasts, including prisoners. Those who treat the outcasts well will have eternal life, which means they will go to Heaven.

Punishment in religions

Rarely are there need for punishments in religion, however, they do exist. An example of this is in Christianity, where members of the Catholic Church can be excommunicated from the Church. Excommunication essentially means you are banned from taking part in any Church activity due to something you have done. This is very rare and is usually only authorised in extreme cases by a high ranking member of the Catholic Church. Despite excommunication being rare, the most recent case of was in 2021, meaning it is still a punishment for those who break Christian law. Excommunications are lifted when the excommunicated person repents, or at least gives some sign of repenting.

Forgiveness

Forgiveness is a core belief in Christianity and one that Jesus emphasised in his teachings. Individual Christians are expected to forgive others, regardless of what they have done, and Christians believe that in turn, God will forgive them.
Buddhism teaches that if people do not forgive then they will suffer, because they will continue to be angry and resentful. This means that people should forgive for the sake of their own health and welfare.
Some people argue that some crimes are simply unforgivable. For example, Elie Wiesel, a Jewish survivor of the holocaust, said, 'I cannot and I do not want to forgive the killers of children; I ask God not to forgive.' He believed that he would dishonour all the murdered Jews if he forgave the Nazis, and he would find it hard to live with himself.

Buddhism

Given the teachings on nonviolence, Buddhism could be interpreted as taking a position of indifference to crimes that many feel should warrant direct, concise punishment. This apparent passiveness is explained by the concepts of karma and rebirth.
Buddhists believe that ultimately, punishment is dictated by a natural order in which a person's unethical actions, either in the current life or a subsequent one, will catch up with them. The Buddha did not hold back when warning his followers about the karmic conditions that lead to naturally manifesting punishment. The Dhammapada, an anthology of verses, explains how anyone who inflicts violence on unarmed people will endure consequences like going mad or the death of loved ones.

KEY VOCABULARY/ TERMS

Excommunication, Poverty, Karma, Old Testament, New Testament, Capital Punishment, Holocaust, Forgiveness, Unethical, Reflection, Reform, Parable, Eternal life, Pope, Repent

RE Knowledge Organiser
Crime and Punishment

Quiz questions

What is capital punishment also known as?	
Why might prison concern some Christians?	
What is Excommunication?	
Who said “If Christians don't dig deep and generously open up their wallets, they do not have genuine faith”?	
Which gospel would you find the parable of sheep and goats?	
Give an example of a country that uses capital punishment	
Which parable teaches equality for all people?	
How many capital offences does the Old Testament list?	
What do Buddhists believe might happen as a result of a person committing murder?	
In Christianity, what is meant by ‘eternal life’?	
According to Christians, what should be the main aim of prison?	
What does the Dhammapada explain?	
Who is Elie Wiesel?	
Why do Buddhists believe people should be forgiven?	
Who can decide if a person is excommunicated or not?	
What do Buddhists believe punishment is dictated by?	
How would someone become unexcommunicated?	
What do Buddhists believe murder might result in?	

INNOVATION

FCAT The best we can be

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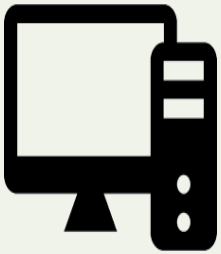
Design and Technology Knowledge Organiser
Year 9 : Term 3:1

Festival logo project

Computer aided design (CAD) is the software used to draw, design and adapt images using a computer. CAD is used in design and technology to create logos and graphical images, develop product ideas and link to the computer aided manufacturing machines. 2D design, Serif and Sketchup are popular programmes used at Unity.

Advantages of CAD



- It can be more accurate than hand-drawn designs – it reduces human error.
- You can save and edit ideas, which makes it easier and cheaper to modify your design as you go along.
- You can modify existing ideas, which saves time.

Disadvantages of CAD

- The software itself can be expensive so initial costs are high. There are free software packages though.
- Staff need to be trained how to use the software, which also adds to costs.
- Requires a PC or Mac

Why are logos important?

A company **LOGO** is very important as it is a symbol of success. Successful companies such as Microsoft, Nike, Apple and many others rely on a logo to put over an image of achievement to the general public. A logo will also give a company an original **identity** and allow it to stand out amongst its competitors. It is important that a logo is simple as logos are created to be memorable.

There are 3 important factors to consider when designing a logo – **Typography – Colour – Imagery.**

Typography - When looking at almost any magazine it is obvious that there are a wide and varied number of letter **styles / fonts** available for everyday use. There is a style of writing for almost every occasion from celebrations to formal events.

Colour - Graphic designers need to use the power of colour to express the main feelings around graphics such as posters, adverts and in particularly logo design. The most popular colour combinations focus around the colour wheel. Primary colours, complementary colours and related colours are regularly used in logo design Because they are aesthetically pleasing.

Imagery - Using images to communicate ideas is essential to achieve successful graphic designs. Imagery is very common throughout the majority of graphic design areas.

Imagery is a great tool in communication world wide as it can express feeling in information without using a language.

KEY VOCABULARY

Computer aided design (CAD)- Computer software used to design and develop design ideas.

Accuracy - The quality or state of being correct or precise.

Communication – the ability to clearly explain and share information.

ASSESSMENT CRITERIA

Competence - How you complete and improve your work using the project activities.

Technical ability – How yow have used your CAD skill accurately to create a successful logo.

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Design and Technology Knowledge Organiser
Year 9 : Term 3:1

FCAT
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CAD questions

Give three advantages of CAD.
-
-
-

Give three disadvantages of CAD
-
-
-

What CAD software will you use to create your logo ?

What are the three key factors to consider when designing a logo?

-
-
-

-In the boxes below create a colour scheme that uses colours that work well together.

-Explain why the colours you used work well.
-

-Give three reasons why a logo is important.
-
-
-

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Textiles Knowledge Organiser
1.2 Year 8 – Decorative techniques

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Key Vocabulary Learn the spelling and meaning of each word.	
Appliqué	A method where shapes are cut from fabric and sewn by hand or by machine onto a background to create an image or picture.
Transfer paint	– a special paint that is used to paint a design onto paper and then transferred onto fabric using the heat press.
Hand Embroidery	The art of working raised and ornamental designs on fabric with a needle.
Heat press	Large metal plates that lock together and are used instead of an iron to transfer the design from paper to fabric.
Fabric pens	Like felt tip pens but can be used on fabric.
Resist dyeing	A resist is something added to the fabric to stop it from absorbing the dye. Wax is used in batik, while string or rubber bands are used in the tie-dye process.
Machine embroidery	To use the sewing machine to create decorative stitching.
Free machine embroidery	To use the sewing machine to draw designs freehand.
Embellish	To add other decoration to the fabric.

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Textiles Knowledge Organiser
1.2 Year 8 – Decorative techniques

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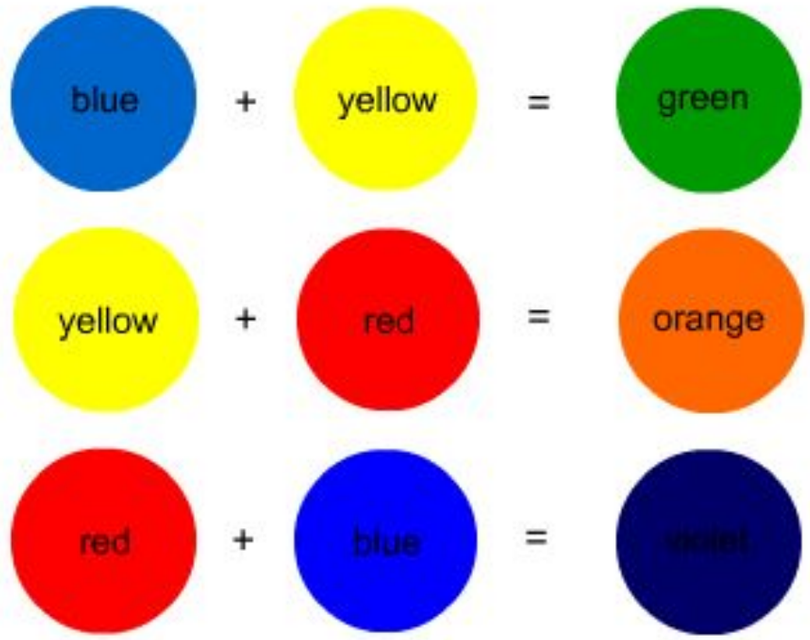
Key Vocabulary Write out the definition of the keywords.	
Appliqué	
Transfer paint	
Hand Embroidery	
Heat press	
Fabric pens	
Resist dyeing	
Machine embroidery	
Free machine embroidery	
Embellish	



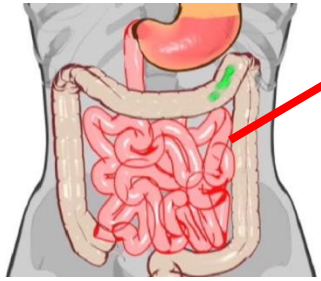
You will dye your fabric using two primary colours.
Your final colour will be green, orange or purple.

Which colour will you pick?

Year 8 Food – Knowledge Organiser 1.2 Nutrition - Fibre and water

Fibre – essential but <u>not</u> a nutrient.

Provided by – fruit, vegetables and cereals.
Function – prevents constipation, helps the passage of food through the digestive system (transit time).
Lack of – causes constipation, diverticulitis.



Diverticulitis is caused when **undigested** food or faecal matter gets stuck in the pouches, which in turn causes discomfort. This stops the circulation of blood to this particular section making the area vulnerable to an invasion by bacteria. This affects the bowels capacity to remove waste which results in constipation, diarrhoea, and cramps.

Water - essential but <u>not</u> a nutrient.

Provided by – fruit, vegetables and drinks.
Needed for – it helps get rid of waste and regulates temperature.
Lack of – dehydration, chapped lips.

Dehydration is a condition that occurs when the loss of body fluids, mostly water, is greater than the amount that is taken in. With dehydration, more water is moving out of our cells and then out of our bodies than the amount of water we take in through drinking.

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Year 8 Food Knowledge Organiser
Nutrition: Fibre and Water

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Use the information to answer the questions in your reflection log.
Use full sentences.

1. What foods provide fibre in the diet?
2. What is the function of fibre in the diet?
3. What happens if you do not get enough fibre in the diet?
4. Along with constipation and cramps, what other symptoms may you have if you are suffering from diverticulitis?
5. Why is water important in the diet?
6. What foods provide water?
7. State two functions of water in the diet.
8. What happens if you do not have enough water?
9. Explain what dehydration is.

KEY VOCABULARY/ TERMS
Learn the spelling of each word and look up any you do not know.

Fibre	Function	Constipation	Diverticular
Hydrated	Regulate	Dehydration	Fluid

Music Knowledge Organiser
Year 8: Digital Composition

Structure and Form

Structure - the different sections of a piece of music and how they are ordered.

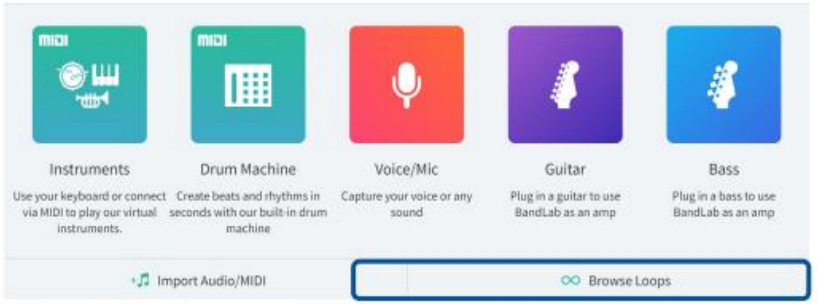
- **Binary Form** - Music that has two sections. These are labelled A and B. (**AB**)

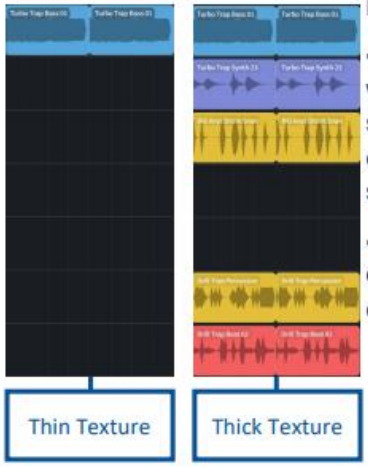
- **Ternary Form** - Music that has three sections. A is repeated after B (**ABA**)

- **Rondo Form** - A recurring theme (**A**) contrasted by different sections in between. (**ABACADA)**

- **Pop Song** - An introduction followed by verses and a repeating chorus. Usually with an instrumental or bridge section after the second chorus.

- BandLab is a form of software used to create, compose and produce music.
- Music software that is similar to BandLab, such as GarageBand, Pro Tools, Logic Pro, Ableton, Cubase and Audacity.
- By pressing on 'Browse Loops' once launching BandLab, or clicking 'Loops' in the bottom right corner, you can use various premade samples to create your own beats.
- Choose a certain style of samples and click on one to play it.





Double click to add the track to your composition.

- Mix various samples together and experiment with different sounds. You may end up producing something that is very innovative when you experiment. Use a variety of drums, bass, synthesisers and keyboard sounds.
- Build up the textures slowly from thick to thin in order to contrast the sections. This means creating and building a variety of layers.

Tutorial at: https://youtu.be/72zRWpmlrr8

Music Knowledge Organiser
Year 8: Digital Composition

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KEYFACTS

Copy the following into your reflection log and answer:

What is a Digital Audio Workstation?

How many sections does Binary Form have?

Which part of a pop song usually repeats?

Access Bandlab at home

Bandlab can be accessed from any electronic device (phones, computers, tablets etc.

You can get on your Bandlab account through google classroom or signing in to Bandlab directly with your school Google account.

Find your own

Find 3 examples of D.A.Ws (apart from Bandlab)

Draw an illustration to show Binary, Ternary and Rondo form. For example different biscuits for each section. (See other side)

Ideas you could use:
Fruit
Logos
Animals
Make your own!

Listening Tasks

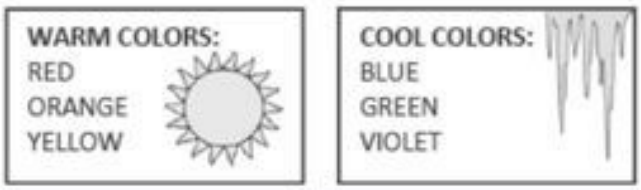
Listen to your favorite song and list the order of the Verses, Chorus and other sections.

KEY VOCABULARY - Digital Composition

Digital audio workstation (D.A.W), MIDI, Piano Roll, Automation, Record, Playback, Loops, Effects, Binary, Ternary, Rondo, Verse, Chorus, Bridge, Instrumental, Structure

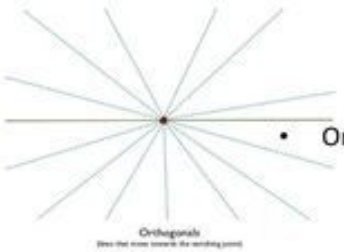
Art Foundation
Knowledge Organiser

'Warm' colours, attract attention and are generally perceived as energetic or exciting.
'Cool' colours, are generally perceived as soothing and calm



One point perspective:

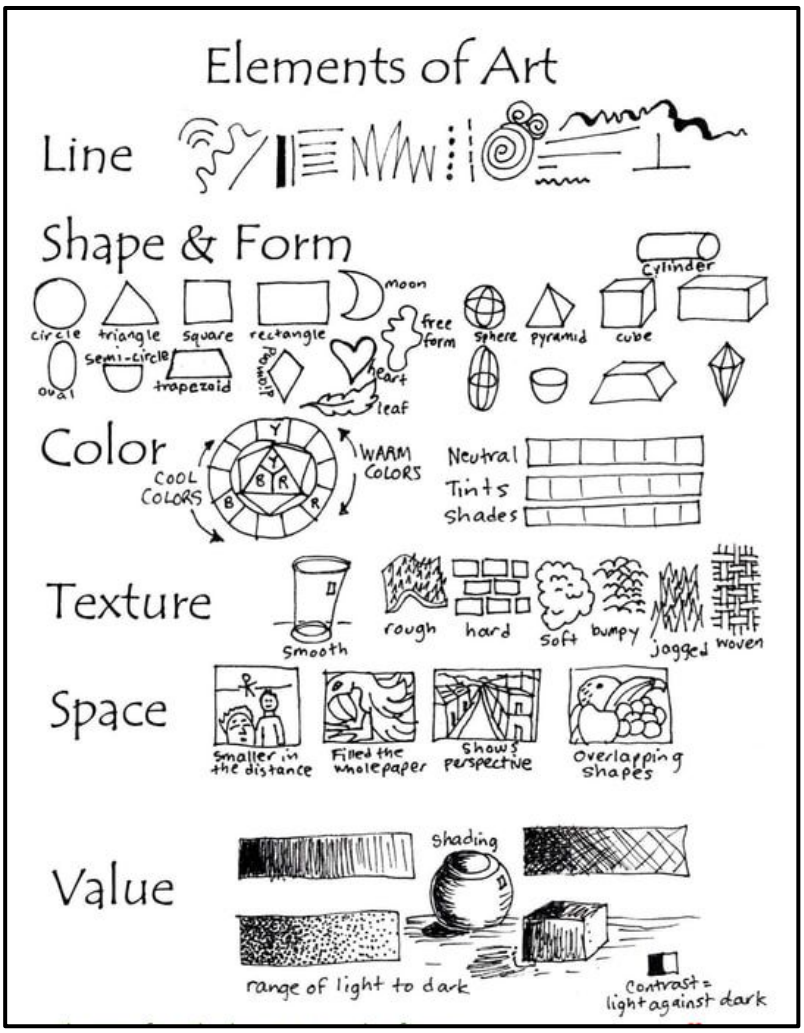
- Horizon Line
  - The place where the land and the sky meet.
- Vanishing Point
  - The single point on the horizon where all the lines on the ground level seem to come together
- Orthogonal Line
  - Lines that connect to the vanishing point



Colour Theory::
The primary colours are the three main colours. They cannot be made but when mixed together they make all other colours.
The secondary colours are made by mixing two primary colours together
The tertiary colours are made by mixing a primary and secondary colour together

Complementary colours are opposite on the colour wheel they contrast each other to have a vibrant look
To make a colour lighter you add white, this is called a tint.
To make a colour darker you add black, this is called a shade.

Intensity: The brightness or dullness of a color
Value: The lightness or darkness of a color



Key Literary Vocabulary:

Media/Medium
The materials and tools used by an artist to create a piece of art.
Technique
The skill in which an artist uses tools and materials to create a piece of art.
Abstract
A piece of art which is not realistic. It uses shapes colours and textures.
Style
The technique an artist uses to expressive their individual character of there work.
Composition
The arrangement and layout of artwork/objects.
Highlight
The bright or reflective area within a drawing/painting where direct light meets the surface of the object or person.
Shadow, shade, shading
The tonal and darker areas within a drawing/painting where there is less light on the object or person.
Texture
The feel, appearance or the tactile quality of the work of art
Mark making
Mark making is used to create texture within a piece of art by drawing lines and patterns.
Perspective
Perspective allows artists to trick the eye into seeing depth on a flat surface. This creates the illusion of 3D drawing

Art Foundation

Please write the questions out and answer the questions or complete the tasks accordingly.	
1	What is the definition of complementary colours? Please give 3 examples of pairs of complementary colours.
2	Draw and colour a colour wheel.
3	Draw out a row of 10 boxes an complete a tonal ladder shading in each box. Start with the darkest shade at one end and get lighter in each box. It should be a gradual change from one box to the next.  - Draw this first. - Here is an example of what it should look like
4	What is the difference between primary and secondary colours?
5	List 3 different printmaking techniques.
6	What is a *'Vanishing Point'* ?
7	What are the 7 formal elements?
8	Define the term *'Abstract'* with regards to art.
9	Give 3 examples of cold images and explain what colours might be in those images.
10	What is the difference between *'Highlight'* and *'Shading'* ?

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