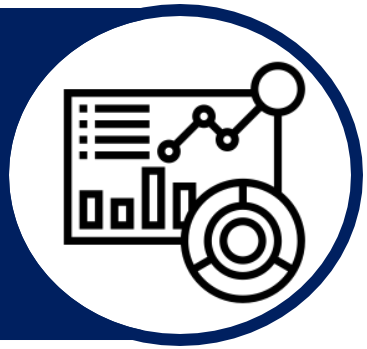
WINTERSTOKE HUNDRED ACADEMY

Knowledge Organisers



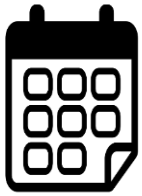
Term 5 and 6

Year 7

Contents

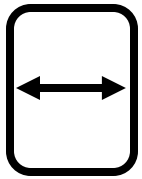
How to revise

Successful Learning Takes Place Over Time

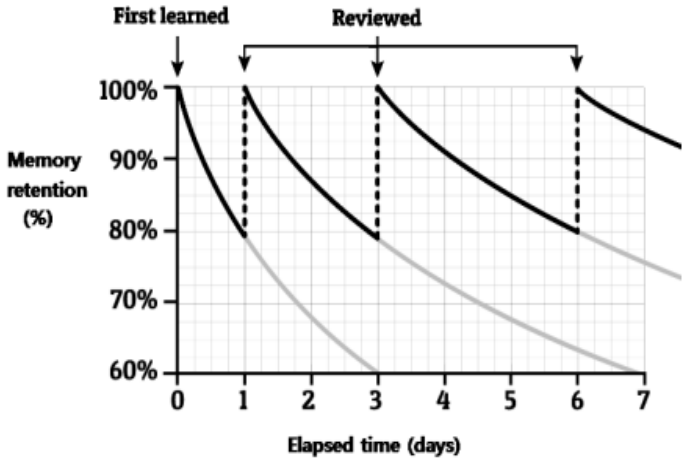


It's rare for anyone to be completely comfortable with something they learn for the first time. This could be a new piece of music, dance move, language or chemistry. We all have to practice. In most instances, the aim is to be at your optimum on the day it matters, e.g. the performance, race or exam. Everything leading up to this point is part of the process of improving. It's about the long-term rather than the short-term, which also means there are no quick fixes. During this period, it's okay to make mistakes; it's okay to feel frustrated. What matters is what you do about it.

Space out your learning on a subject



Spacing out your learning over time is far more effective than last-minute cramming. This is based on research into how we forget and how we remember. The speed at which we forget something will depend on many factors such as the difficulty of the material, how meaningful it was to us, how we learned it and how frequently we relearn or remember it. The last factor tells us that when we learn something for the first time, we need to review it quickly afterwards. The more times we force ourselves to remember something, the longer the gap between reviews, which the diagram below illustrates nicely. The Leitner system and Cornell Notes mentioned earlier provides a wonderful way of achieving this, but the principle applies to all of the learning strategies mentioned in this booklet



Revision strategies

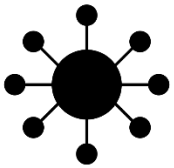
List It

This is a simple free recall task that is very versatile. It can feel challenging, but this is a good thing, and it provides clear feedback on what you do and don't know. Choose a topic, set yourself a time limit and…

- List as many keywords as you can
- List as many facts as you can
- List as many key events/quotes/individuals as you can
- List as many causes of X as you can
- List as many consequences of Y as you can

Flashcards

Flashcards have the potential to be a powerful learning aid. However, how successful this is will depend on the thought you put into making them in the first place and then how they're used. It's very important to remember that they're for testing, not summarising



Mapping

Mapping is a brilliant way of organising and learning information, demonstrated on various pages in this booklet. It helps you break down complex information, memorise it, and see the connections between different ideas.

Self-testing

Research has shown that every time you bring a memory to mind, you strengthen it. And the more challenging you make this retrieval, the greater the benefit. Self-testing improves the recall of information, transfer of knowledge and making inferences between information. Equally, there are many indirect effects, such as a greater appreciation of what you do and don't know, which helps you plan your next steps.

Flashcards

Flashcards are small sheets of paper or card with matching pieces of information on either side. They are a useful tool for learning facts and allow you to quickly check whether you have remembered something correctly.

When making and using flashcards:

Do:

- ✓ …make flashcards quickly.
- ✓ …put a single piece of information of each flashcard.
- ✓ …sort your flashcards according to your confidence with them (see below).
- ✓ …test yourself on the flashcards from memory.

Don't:

- X …spend more time making flashcards than actually using them.
- X …put lots of information onto each flashcard.
- X …revise the flashcards in the same order every time that you use them.
- X …only read through flashcards.

1861	groynes	osmosis	Where is the pharmacy?
Pasteur published his paper about germ theory.	A low wall on the coastline which slows longshore drift	Net movement of water from a high concentration to low concentration across a partially permeable membrane	Où est la pharmacie?

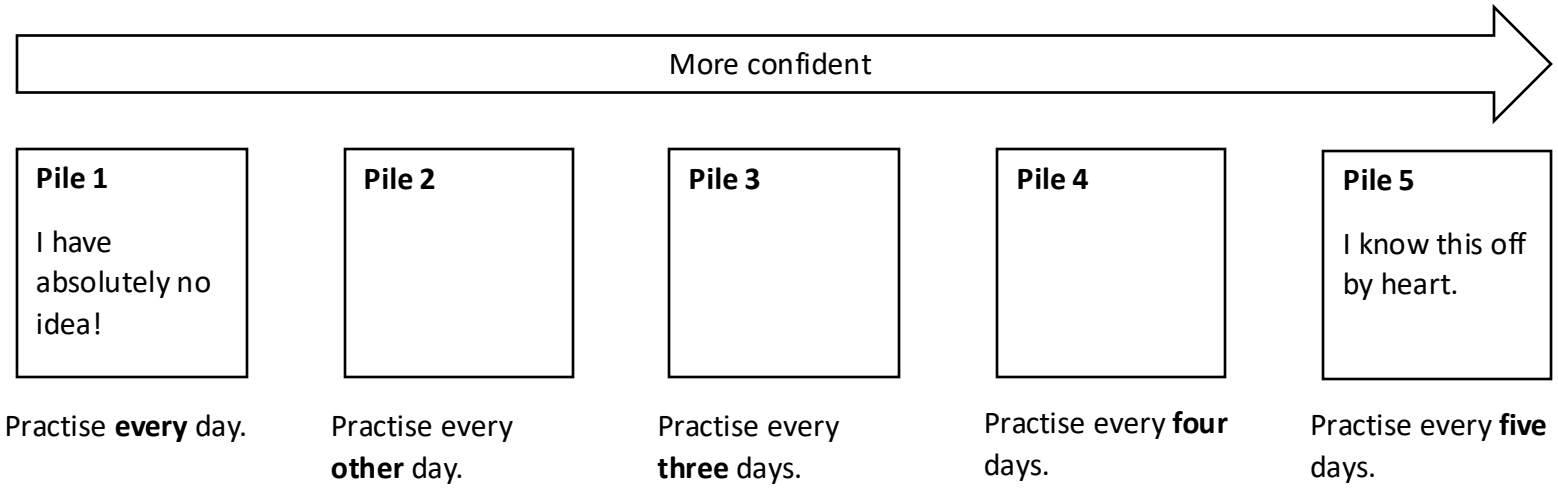
How to make flashcards:

- You can by a set of flashcards or use a free website such as Quizlet.
- Find the information you want to put onto flashcards using your existing revision resources (e.g. a knowledge organiser).
- Fold a piece of A4 paper into 10.
- Write the questions on the top half of the paper.
- Write the answers on the bottom half of the paper.
- Cut the paper along the dotted lines shown here.
- Fold the strips of paper so that the writing is on either side.

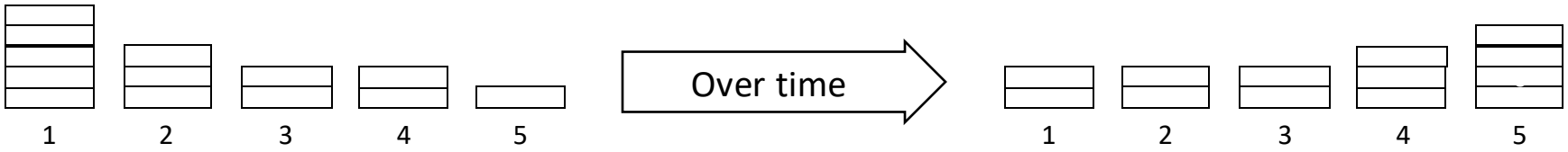
Definition 1	Definition 2	Definition 3	Definition 4	Definition 5
Answer 1	Answer 2	Answer 3	Answer 4	Answer 5

How to use flashcards:

1. Test yourself using the flashcards.
2. As you test yourself, sort the flashcards into up to five piles according to how confident you are with the content.
3. Put the piles into numbered envelopes (1-5).
4. Test yourself on the different piles on different days (see below):



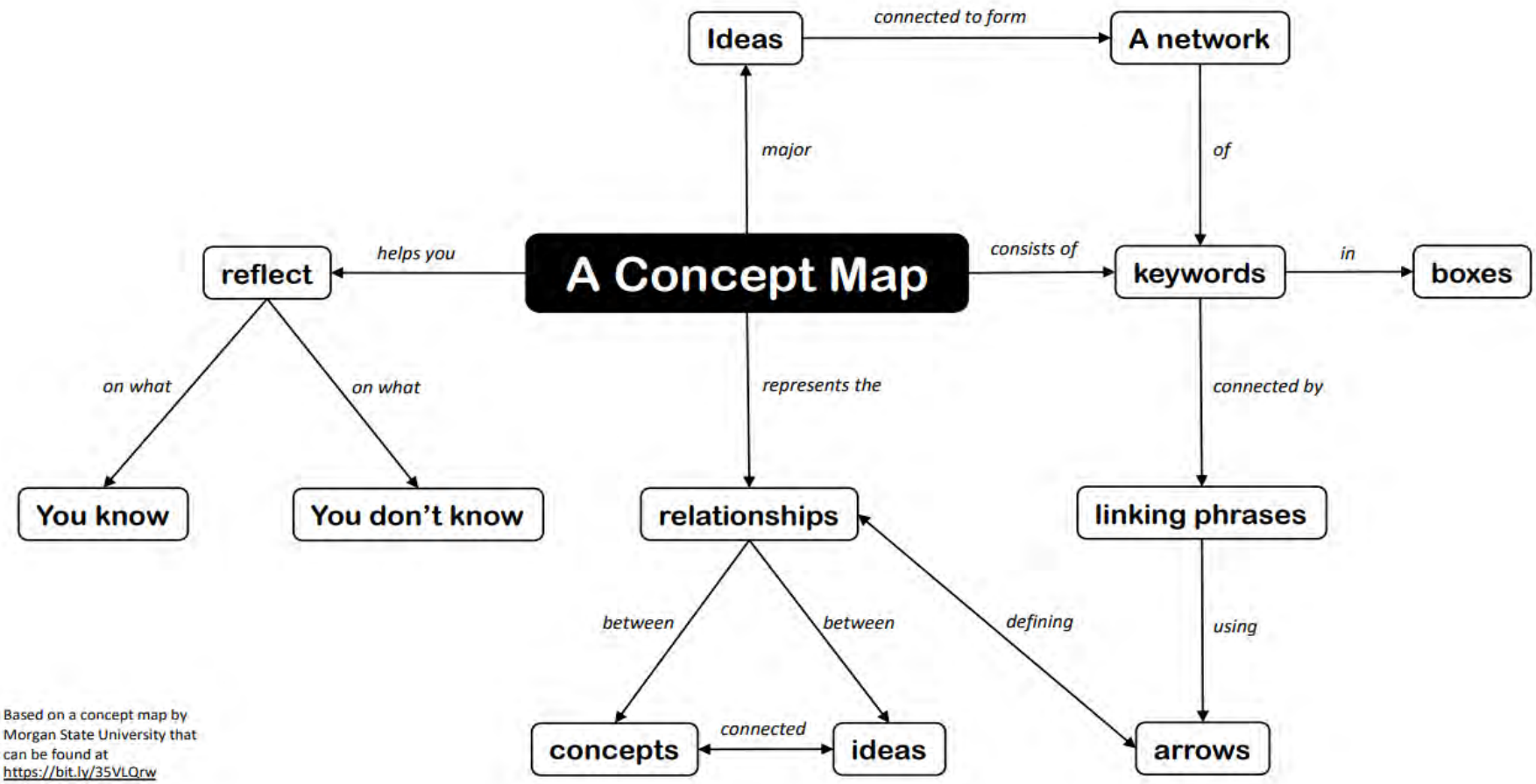
5. As you test yourself on the different piles, move the cards into different piles as you become more confident



Useful resources:

www.quizlet.com – This free website allows you to quickly create flashcards which you can print, use on a computer, or use on your phone.

Mapping



Based on a concept map by Morgan State University that can be found at https://bit.ly/35VLQrw

English

The Tempest

Key Vocabulary 1

Tempest - a violent, windy storm 	**Liberty** - being free and able to act as one pleases
Tempestuous – word to describe strong or conflicting emotions	**Supernatural –** something beyond scientific understanding
Obedience - demonstrating submission to another's authority	**Vengeance** - harming someone because they have harmed you
Rebellious - showing a desire to resist authority	**Betrayal** - breaking someone's trust
Authority – the power to give orders	**Colonialism** –the process of taking over a land and its people
Savage - fierce, violent, uncontrolled	**Vindictive**- an unreasonable desire for revenge
Usurp – to take over someone's position of power without having a right to do so	**Exile** – to be sent away from an area and not allowed to return

Language Features
Adverbial phrases - a phrase that modifies other words by explaining why, how, where, or when an action occurred e.g. At the beginning of the story, Raphael makes a discovery.
Adjectives - describes a noun.
Tenses - past: I lived in the UK; present: I live in the UK; future: I will live in the UK.'
Exclamations - sentences that show strong feelings. They often use an exclamation mark. !
Verbs - a doing word.
Adverbs - describes a doing word.
Interrogative sentences - these ask a question e.g. How are you?

Literary Techniques
Motif- an image or idea that repeats itself in a text or piece of music
Symbolism- when an image represents an idea
Metaphor – a comparison between two things where one item is identified as being something else
Rhetoric – the art of persuasive speaking
Imagery- when words and phrases make you visualise
Metre- the rhythmic structure to a line of poetry
Rhyme- when words sound the same

Key Vocabulary 2	
Forgiveness- to release feelings of vengeance or resentment; to show mercy	**Patriarchy –** a system of society where men are in power e.g. fathers, brother, husbands rule over women
Native –a person born in a place and is designated as coming from there	**Civilised-** considered to be more acceptable in society than others in terms of behaviour and manners
British Empire – countries colonised by Britain and ruled by Britain from the 1400s to 1940s	

Context

- The Age of Exploration (also called the Age of Discovery) began in the 1400s when the European nations began exploring the world. They discovered new routes to India, much of the Far East, and the Americas and was an example of **colonialism (where countries took over control of the new countries they discovered).**
- *The Tempest* probably was written in 1610–1611 and is most likely the last play written entirely by Shakespeare.
- In *The Tempest* almost every character thinks about how he would rule the island if he were its king. Shakespeare seems also to have drawn on an essay called "Of the Cannibals," for Prospero's servant-monster, Caliban, seems to be an anagram of "Cannibal."

English

The Tempest

Play Terminology 1			
Shakespeare - Famous playwright and poet who lived in the 16th Century 	**Theatre** - a building/area where plays are performed	**Character** - a person in a story, play or film 	**Audience** - the people who watch a play or performance 
Playwright - someone who writes plays	**Stage Directions** - instruct how an actor should act	**Stage** - the raised floor where the actors perform	**Costume** - a set of clothes worn by an actor for a certain roll
Act - a section of a play (sort of like a chapter)	**Scene** - a section of an act. Takes place in one fixed time or setting.	**Performance** - the act of presenting a play to an audience	**Rehearsal** - practice run through of a play

English

The Tempest

Play Terminology 2

Soliloquy - a speech a character makes to the audience

Aside - a remark a character makes to the audience that the other characters don't hear

Dialogue - when two or more characters speak to each other

Monologue - a long speech by a character

Epilogue - the final scene of a story; a section or speech at the end of a book or play that serves as a comment on or a conclusion to what has happened.

Masque -a type of festival or entertainment involving singing, dancing, costume, complex staging and the giving of gifts. Popular in the 16th Century.

Rhyming couplets – Two adjacent lines of verse where the final words of each line rhyme

Shakespearean Theatre

- Plays that have the features of a Shakespeare play, such as gender swapping, bawdy jokes and soliloquys.

Characters	
Prospero	The play's protagonist and father of Miranda. He was once the Duke of Milan but was **usurped** by his brother.
Miranda	Prospero's daughter who has not lived amongst people since she was **exiled** with her father at the age of three.
Ariel	Prospero's spirit helper. He is an inhabitant of the magical island. He was imprisoned in a tree by Sycorax the witch until Prospero arrived and freed him. Ariel has to be Prospero's servant in return.
Caliban	He is another inhabitant of the island and Sycorax's son who is not fully human.
Ferdinand and Alonzo	Ferdinand is Alonzo's son who is separated from his father during the tempest. Alonzo is the King of Naples.
Antonio	Prospero's brother. He took over Milan and wanted Prospero and his daughter killed
Stephano and Trinculo	Trinculo is a jester and Stephano is a servant of Alonzo's. They take advantage of Caliban and want him
Gonzalo	An honest old lord and old friend of Prospero's

English

The Tempest

Plot

- A ship carrying the Duke of Milan and the King of Naples and his son is shipwrecked.
- All the crew and passengers survive but are lost on different parts of a magical island.
- Prospero, who uses the power of Ariel, a magical sprite, to create the tempest explains to his daughter that the people on the ship are old enemies of his who exiled him and his daughter many years ago.
- After his daughter falls in love with the King of Naples' son, Ferdinand, Prospero decides to forgive those who wronged him. He reveals himself to them and explains what happened to him when they exiled him.
- The King of Naples agrees that his son can marry Prospero's daughter and that Prospero can return to his previous life as Duke of Milan. Prospero frees his servant, Ariel and breaks his magic staff.

Maths

Units of measure

Length

1km = _____metres	1km = 1000 metres
1m = _____centimetres	1m = 100 centimetres
1cm = _____millimetres	1cm = 10 millimetres
5 miles = _____ kilometres	5miles = 8 kilometres

Mass/Weight

1kg = _____grams	1kg = 1000 grams
1 gram = _____milligrams	1 gram = 1000 milligrams
1 tonne = _____kilograms	1 tonne = 1000 kilograms

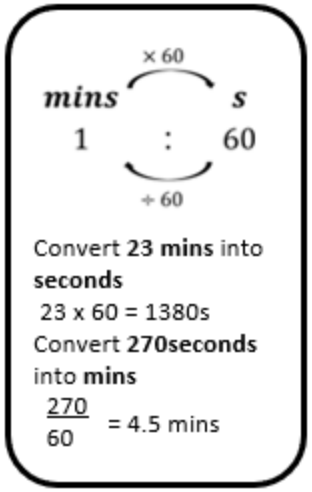
300g in kilograms	0.3kg
4050g in kilograms	4.05kg

Capacity/Volume

1 litre = _____ millilitres	1 litre = 1000 millilitres
1 litre = _____centilitres	1 litre = 100 centilitres
1 litre = _____cm^3	1 litre = 1000 cm^3

Time

30 minutes in hours	$\frac{30}{60}=\frac{1}{2}$ =0.5 hours
15 minutes in hours	$\frac{15}{60}=\frac{1}{4}$ =0.25 hours
20 minutes in hours	$\frac{20}{60}=\frac{1}{3}=0.\dot{3}$
2.5 hours in minutes	60+60+30=150 minutes
1 hour = ___ minutes	60
2 hours = ___ minutes	120
Seconds in a minute	60
Seconds in an hour	3600
Hours in a day	24
Days in a week	7

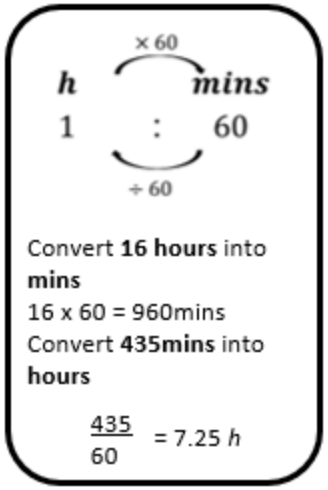


Convert **23 mins** into **seconds**

23 x 60 = 1380s

Convert **270seconds** into **mins**

$\frac{270}{60}$ = 4.5 mins



Convert **16 hours** into **mins**

16 x 60 = 960mins

Convert **435mins** into **hours**

$\frac{435}{60}$ = 7.25 *h*

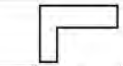
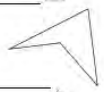
Maths

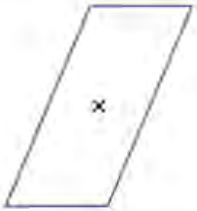
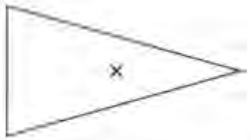
Properties of Shape & Symmetry

Equilateral triangle	All lengths equal All angles 60°
Isosceles triangle	2 lengths equal Base angles equal
Right angled triangle	1 right angle Can be isosceles too
Scalene	No equal lengths or angles

What properties does a rectangle have?	2 pairs of parallel sides 4 right angles
What properties does a square have?	4 equal sides 4 right angles
What properties does a parallelogram have	2 pairs of equal lengths No right angles
What properties does a rhombus have?	4 equal sides No right angles
What properties does a trapezium have?	1 pair of parallel sides Sometimes has a right angle
What properties does a kite have?	2 pairs of adjacent (next to) equal lengths Diagonals cross at a right angle

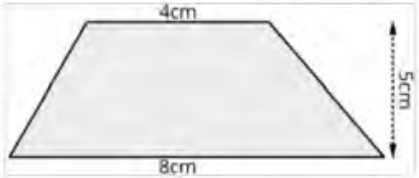
A _____ has four sides	Quadrilateral
A _____ has five sides	Pentagon
A _____ has six sides	Hexagon
A _____ has seven sides	Heptagon
A _____ has eight sides	Octagon

A _____ has nine sides	Nonagon
A _____ has ten sides	Decagon
This shape is… 	An irregular hexagon
This shape is… 	An irregular quadrilateral
This shape is… 	An irregular pentagon
A polygon is **regular** if…	All lengths and angles are equal

A symmetry line acts like a…	Mirror
A shape is symmetrical if…	after a reflection or a rotation it looks exactly the same.
The order of rotational symmetry is…	how many times the shape looks identical to the original in a full turn.
State how many lines of symmetry and the order of rotational symmetry for this shape. 	No lines of symmetry Order 2 rotational symmetry
State how many lines of symmetry and the order of rotational symmetry for this shape. 	1 line of symmetry (horizontal) Order 1 rotational symmetry

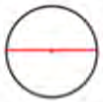
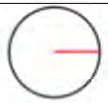
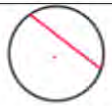
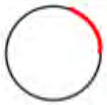
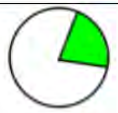
Maths

Perimeter and area

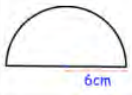
The perimeter of a shape is	The total of the lengths around the shape
The area of a shape is	The space the shape covers
The perpendicular height of a shape forms …	Right angle with the base
Area of a rectangle	Base x perpendicular height
Area of a triangle	Base x perpendicular height ÷ 2
Area of a parallelogram	Base x perpendicular height
Which number is the perpendicular height?  	12 (it forms a right angle with the base)
Area of a trapezium (given on exam aid)	$A = \frac{1}{2}(a+b)h$
Using the formula for the trapezium above which lengths are a, b and h?  	a=4 b=8 h=5
What calculation would you do to find the area of the trapezium above?	a+b 8+5 = 13 x h 13 x 5 = 65 ÷ 2 65 ÷ 2 = 32.5cm^2

Maths

Circles

The perimeter of a circle is called	Circumference
	Diameter – passes through the centre
	Radius – half of the diameter
	Chord – cuts through the circle
	Tangent – touches the circle
	Arc – a fraction of the circumference
	Segment – area between a chord and the circumference
	Sector – area between 2 radii and the circumference

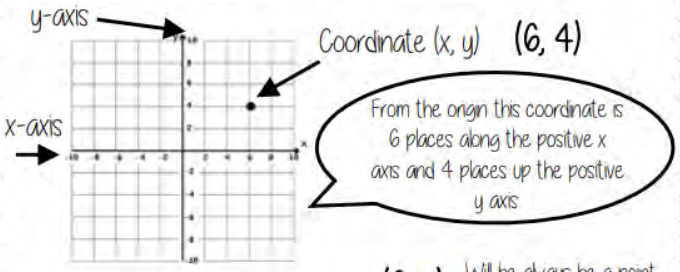
To find the circumference of a circle	$\pi \times diameter \quad C = \pi d$
To find the area of a circle	$\pi \times radius^2 \quad A = \pi r^2$
If the radius is 5, the diameter is	10
If the diameter is 12, the radius is	6
"Leave your answer as a multiple of Pi or in terms of Pi" means…	Leave the Pi symbol in your answer
Find the circumference of this circle in terms of Pi 	r = 6 d = 12 $\pi \times 12 = 12\pi$ cm
Calculate the area of this circle as a multiple of Pi 	d=12 r =6 $\pi \times 6^2 = 36\pi\ cm^2$
The formula to find an arc length of a circle is…	$\frac{angle}{360} \times \pi \times diameter$
The formula to find the area of a circle sector is…	$\frac{angle}{360} \times \pi \times radius^2$
Calculate the arc length of this sector to 1 dp 	Angle = 120 r = 8 d= 16 $\frac{120}{360} \times \pi \times 16 = 16.7$ cm
Find the area of this circle sector 	Angle = 120 r = 8 d= 16 $\frac{120}{360} \times \pi \times 8^2 = 66.98 = 67.0$ cm^2

When finding the perimeter of sectors don't forget to…	Add the radii or dimeter on at the end
Find the perimeter of this semi circle in terms of Pi 	Angle = 180 r=6 d=12 $\frac{180}{360} \times \pi \times 12 = 6\pi$ Add on the diameter $6\pi + 12$

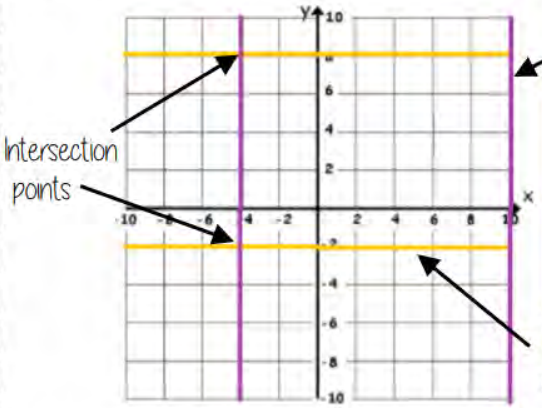
Coordinates

Quadrant: four quarters of the coordinate plane.
Coordinate: a set of values that show an exact position.
Horizontal: a straight line from left to right (parallel to the x axis)
Vertical: a straight line from top to bottom (parallel to the y axis)
Origin: (0,0) on a graph. The point the two axes cross
Parallel: Lines that never meet

Coordinates in four quadrants



Lines parallel to the axes



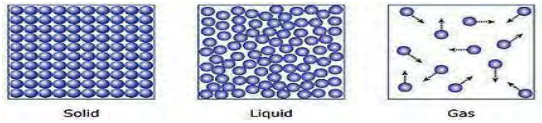
Science

Science

Physical and Chemical Change

1. Particle Theory

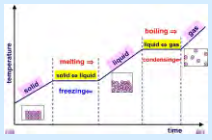
All matter is made up of particles.



- Solids - arranged in a regular pattern and can only vibrate in a fixed position.
- Liquids - arranged randomly but are still touching each other, can move.
- Gases, particles are far apart and are arranged randomly.

2. Physical Changes

In a physical change, the matter's physical appearance is changed, but no chemical bonds are broken or formed. For example, when water is heated from liquid water to gaseous steam, only the appearance of water is changed – both steam and liquid water have the chemical formula H_2O.



3. Chemical Changes

- Chemical reactions create **new** substances.
- Chemical reactions can also be used to **transfer energy** by burning fuels.
- In a chemical reaction the atoms **rearrange** themselves and then **join back together** in a different way.

4. Conservation of Mass

The Law of Conservation of Mass states that mass cannot be created or destroyed.
Therefore, mass stays the same before and after a change of state. For example, 10g of ice melts into 10g of water and 10g of water evaporates into 10g of water vapour. The same applies to other substances.

5. Conservation of mass in chemical change

No **atoms** are created or destroyed in a chemical reaction. Instead, they just join together in a different way than they were before the reaction, and form **products**. This means that the total **mass** of the products in a chemical reaction will be the same as the total mass of the **reactants**.

6. Diffusion

Diffusion is the movement of particles from a higher concentration to a lower concentration.

Diffusion will stop when particles spread themselves evenly. Diffusion occurs in liquids and gases but not in solids, because particles in a solid are not free to move.

Diffusion

7. Factors affecting Diffusion

There are 2 factors affecting the rate of diffusion:

- Temperature: When temperature increases, particles gain more energy. They can then move and spread out at a higher rate.
- Concentration: When concentration increases, the rate of diffusion increases because there is a steeper concentration gradient.

8. Brownian Motion

Particles in fluids (liquids and gases) move randomly. This is called Brownian motion. They do this because they are bombarded by the other moving particles in the fluid. Larger particles can be moved by light, fast-moving molecules.
Brownian motion is named after the **botanist Robert Brown**, who first observed this in 1827. He used a microscope to look at pollen grains moving randomly in water. At this point, he could not explain why this occurred.

Science

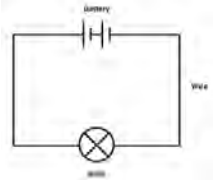
Science

Electricity and Circuits

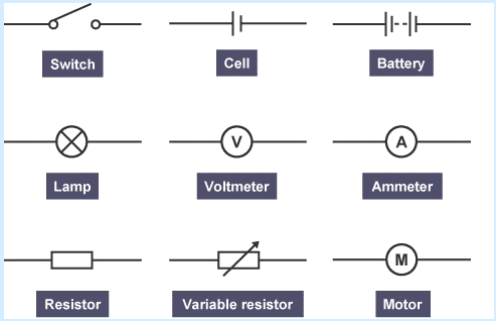
1. Electric current

An **electric current** is a flow of charge, and in a wire this will be a flow of electrons. We need two things for an electric current to flow:

- something to transfer energy to the electrons, such as a battery or power pack
- a complete path for the electrons to flow
- To do something useful with the electric current, you need to put an electrical component into the circuit (such as a lamp), that can use the current in a useful way

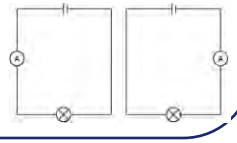


2. Circuit symbols



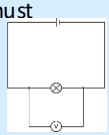
3. Current

Current is a measure of how much electric charge flows through a circuit. The more charge that flows, the bigger the current.
Current is measured in amperes (amps), the symbol is A.
To measure the current flowing through a component in a circuit, you must connect the ammeter **in series** with it.
Current is not used up in a circuit



4. Potential difference

Potential difference is a measure of the difference in energy between two parts of a circuit. The bigger the difference in energy, the bigger the potential difference.
Potential difference is measured in **volts**, the symbol is V.
Potential difference is measured using a device called a **voltmeter**, unlike an ammeter, you must connect the voltmeter **in parallel** to measure the potential difference across a component in a circuit.

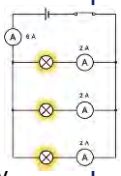


5. Series circuits

A series circuit contains components connected one after the other, like the episodes of a series on TV.
In series circuits, if one component fails, all the components stop working.
Current is the same everywhere in a series circuit.
Current is shared between the Components in a series circuit.
Series circuits use less wire than parallel circuits.

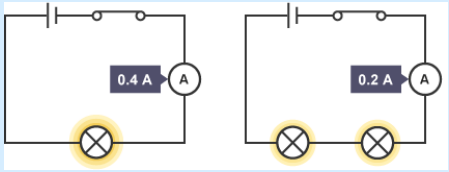
6. Parallel Circuits

Components in parallel circuits are connected on different branches of the circuit.
If one component connected in parallel fails, the other components are not affected.
Current is shared between the components in a parallel circuit.
Parallel circuits are useful if you want to switch components on and off independently, our homes are wired this way.



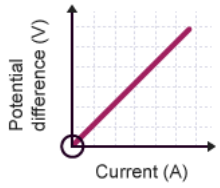
7. Resistance

The wires and the other components in a circuit reduces the flow of charge through them. This is called resistance.
The unit of **resistance** is the **ohm**, and it has the symbol Ω
Resistance increases if you add more components to a circuit.



8. Calculating resistance

The equation for calculating resistance is:
Resistance = potential difference / current
If you plot a graph of current against potential difference for a wire, you get a straight line.



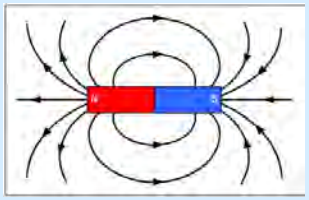
Science

Science

Magnetism

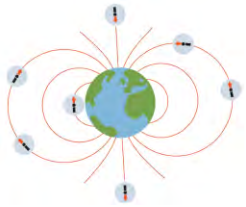
4. Magnetic fields

A magnet creates a **magnetic field** around it. You cannot see a magnetic field, but you can observe its effects. A force is exerted on a magnetic material brought into a magnetic field. The force is a **non-contact force** because the magnet and the material do not have to touch each other.



6. The Earth's Magnetic Field

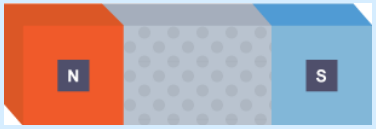
The Earth behaves as if it contains a giant magnet. It produces a magnetic field in which the field lines are most concentrated at the poles. This magnetic field can be detected using magnetic materials or magnets.



2. Permanent magnets

A bar magnet is a **permanent magnet**. This means that its magnetism is there all the time and cannot be turned on or off. A bar magnet has two magnetic poles:

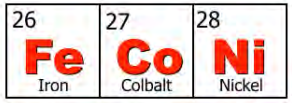
- **north pole** (or north-seeking pole)
- **south pole** (or south-seeking pole)



1. Magnetic Materials

Most materials are not **magnetic**, but some are. A magnetic material can be magnetised or will be attracted to a magnet. These metals are magnetic:

- Iron
- Cobalt
- Nickel



Steel is mostly iron, so steel is magnetic too.

7. Navigating with a compass

A compass comprises:

- a magnetic needle mounted on a pivot (so it can turn freely)
- a dial to show the direction

The north pole (north-seeking pole) of the compass needle points towards the Earth's north pole. If the needle points to the N on the dial, you know that the compass is pointing north. This lets you navigate outdoors using a map.

3. Attract or repel?

Magnets have two poles, a North pole (N) and a South pole (S).

- **opposite poles attract** (N and S)
- **like poles repel** (N and N, OR S and S)

How can you test if a piece of metal is actually a magnet? Seeing if it sticks to a magnet is not a good test, because unmagnetised iron, steel, cobalt and nickel objects will also do this. So you can only show that an object is a magnet if it **repels a known magnet**.

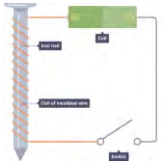
5. More Magnetic Fields

Although we cannot see magnetic fields, we can detect them using iron filings and plot them with a plotting compass

- field lines point from north to south pole
- field lines are more concentrated at the poles.
- The magnetic field is strongest at the poles, where the field lines are most concentrated.

8. Electromagnets – extra content

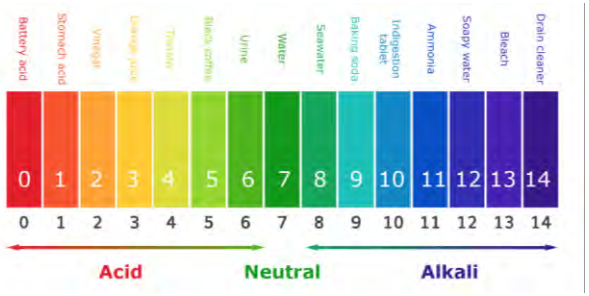
When an electric current flows in a wire, it creates a magnetic field around the wire. This effect can be used to make an **electromagnet**. A simple electromagnet comprises a length of wire turned into a coil and connected to a battery or power supply.



Science

Science

Acids & Alkalis



1. Safety


Irritant


Corrosive

- When handling acids and alkalis in the lab we need to take safety precautions, for example wearing goggles.
- Concentrated Acid is corrosive, and will destroy skin cells.
- Dilute acids have lots of water added, they are an irritant and cause redness or blistering of the skin.

2. Acids (pH 1-6)

- **Acids** are a family of chemicals, examples are lemon juice, vinegar and Coca Cola. There is also acid in our stomach.
- Acids contain Hydrogen (H^+) ions.
- **Strong acids** like hydrochloric acid are very corrosive this means they destroy skin cells and cause burns.
- **Weak acids** like vinegar are safe to eat but are still irritant to sensitive parts of the body.

3. Alkalis (pH 8-14)

- Alkalis, are a family of chemicals that have a soapy feel, they are also corrosive, examples of these are toothpaste, soap and oven cleaner.
- Alkalis contain Hydroxide (OH^-) ions.
- Alkalis are bases that dissolve in water. Therefore not all bases are alkalis.

4. pH Scale

- The pH scale measures the strength of acids and alkalis, it runs from 0-14
- neutral solutions are pH 7 exactly
- acidic solutions have pH values less than 7
- alkaline solutions have pH values more than 7
- the closer to pH 0 you go, the more strongly acidic a solution is
- the closer to pH 14 you go, the more strongly alkaline a solution is

5. pH Indicators

- **Indicators** are chemicals that show whether a substance is an **acid or an alkali**
- There are many different indicators, for example **litmus paper and universal indicator**
- There are also natural indicators such as **red cabbage**

6. Neutralisation

- A chemical reaction happens if you mix together an acid and a base. The reaction is called **neutralisation**. A neutral solution is made if you add just the right amount of acid and base together.
- Neutralisation reactions form **salts** the name of the salt depends on the name of the acid, and the metal in the base
- Hydrochloric acid makes **"chlorides",** Nitric acid make **"nitrates",** Sulphuric acid makes **"sulphates"**

General equations for neutralisation reactions:
Acid + Metal Hydroxide → Salt + Water
Acid + Metal Oxide → Salt + Water
Acid + Metal Carbonate → Salt + Water + Carbon dioxide

Farmers use lime (calcium oxide) to neutralise acid soils.
Your stomach contains hydrochloric acid, too much of this causes indigestion. Antacid tablets contain bases to neutralise the extra acid.
Wasp stings are alkaline, they can be neutralised using vinegar.

7.4 Free time
FRENCH

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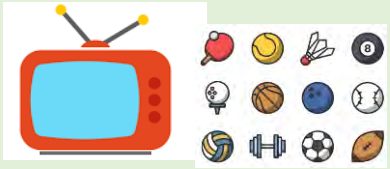

Qu'est-ce que tu aimes faire?	What do you like to do?
Regarder la télévision	To watch TV
Écouter de la musique	To listen to music
Aller au cinéma	To go to the cinema
Lire un livre	To read a book
Faire du shopping	To go shopping
Aller au parc	To go to the park
Aller au gymnase	To go to the gym
Rencontrer des amis/copains	To meet up with friends
Jouer du piano	To play the piano
Visiter ma famille	To visit family
Aller en ville	To go to town
Faire de la cuisine	To cook
Chanter	To sing
Nager	To swim
Faire mes devoirs	To do my homework
Télécharger de la musique	To download music
Surfer sur Internet	To surf the Internet
Jouer aux jeux-vidéos	To play video games
Tchatter avec mes amis	To chat with my friends
Prendre des photos	To take photos
Regarder des vidéos marrantes	To watch funny videos
Envoyer des textos	To send texts
Acheter en ligne	To buy online
Regarder des clips YouTube	To watch YouTube videos
Écrire un email	To write an email
Utiliser mon portable	To use my mobile phone

Quel sport aimes-tu?	What sport do you like?
Jouer au foot	To play football
Jouer au rugby	To play rugby
Jouer au tennis	To play tennis
Jouer au golf	To play golf
Jouer au volley	To play volleyball
Jouer au basket	To play basketball
Faire du vélo	To do some cycling
Faire du ski	To do some skiing
Faire du patin à glace	To do some ice skating
Faire de la natation	To do some swimming
Faire de la gymnastique	To do some gymnastics
Faire de l'équitation	To do some horse-riding
Faire de l'athlétisme	To do some athletics

Qu'est-ce que tu regardes?	What do you watch?
J'aime regarder	I like to watch
Les actualités	The news
Les comédies	Comedies
Les dessins animés	Cartoons
Les documentaires	Documentaries
Les émissions	Programmes
Les feuilletons	Soap operas
Les films d'amour	Romantic films
Les films d'action	Action films
Les films d'horreur	Horror films
Les films policiers	Detective films
Les jeux télévisés	Game shows
Les séries	Series

Quand ?	When?
Normalement	Normally
D'habitude	Usually
Tous les jours	Every day
Deux fois par semaine	Twice a week
De temps en temps	From time to time
Rarement	Rarely
Souvent	Often
Quelquefois / parfois	Sometimes

Quel temps fait-il?	What is the weather like?
Il fait beau	It is good weather
Il fait chaud	It is hot
Il fait froid	It is cold
Il fait 25 degrés	It is 25 degrees
Il fait mauvais	It is bad weather
Il pleut	It is raining
Il neige	It is snowing
Il y a du vent	It is windy
Il y a des nuages	There are clouds
Il y a des orages	There are storms
Il y a du brouillard	It is foggy
Il y a du soleil	It is sunny

Free Time Year 7 FRENCH 7.4 Knowledge Organiser

Sports and other hobbies with opinions + infinitives including jouer and faire Weather.

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Finir, jouer & vendre are regular verbs which follows the patterns below; which we have seen before. The verb "faire" is irregular but important, especially for this topic with sports.

Pronouns	**Finir**– to finish	**Jouer** – to play	**Vendre**– to sell
je (I)	Je fin**is**– I finish	Je jou**e** – I play	Je vend**s**– I sell
tu (you)	Tu fin**is**– you finish	Tu jou**es** – you play	Tu vend**s**– you sell
il (he), **elle** (she), **on** (we)	il/elle/on fin**it** - He/she/we finishes	il/elle/on jou**e** - He/she/we play	il/elle/on vend– he/she/we sell
nous (we)	Nous fin**issons**– we finish	Nous jou**ons** – we play	Nous vend**ons**– we sell
vous (you) (pl. or formal)	Vous fin**issez**– you finish (pl. or formal)	Vous jou**ez** – you play (pl. or formal)	Vous vend**ez**– you sell (pl. or formal)
ils/elles (they)	ils/ elles fin**issent**– they finish	ils/ elles jou**ent** – they play	ils/elles vend**ent**– they sell

Faire – to do

Je fais - I do
Tu fais – you do
Il/elle/on fait – he/she does/we do
Nous faisons –we do
Vous faites – you (pl) do
Ils/elles font – they do

Now you should be able to create some of your own questions using the question words below.

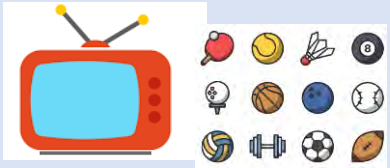
Quand? – When?
Qui? – Who?
Où? – Where?
Combien? – How many?
Qu'est-ce que…? What?
Comment? – How?
Pourquoi? – Why?
Que? – What?
Quel(le)? – Which?

How to improve your writing?
When writing in French, you can make your sentences better by adding the following:

- Range of opinions and reasons
- Connectives to extend your sentences
- Qualifiers e.g. très, assez
- Comparisons
- Rather than just using 'je', write verbs using other pronouns

7.4 Free time
German

Cabot Learning Federation



Was machst du gern?	What do you like to do?
fernsehen	To watch TV
Musik hören	To listen to music
ins Kino gehen	To go to the cinema
ein Buch lesen	To read a book
einkaufen gehen	To go shopping
in den Park gehen	To go to the park
ins Fitnesszentrum gehen	To go to the gym
mit Freunden treffen	To meet up with friends
Klavier spielen	To play the piano
Familie besuchen	To visit family
in die Stadt gehen	To go to town
kochen	To cook
singen	To sing
schwimmen	To swim
meine Hausaufgaben machen	To do my homework
Musik herunterladen	To download music
im Internet surfen	To surf the Internet
Videospiele spielen	To play video games
mit meinen Freunden chatten	To chat with my friends
Fotos machen	To take photos
lustige Videos ansehen	To watch funny videos
SMS schicken	To send texts
online einkaufen	To buy online
Youtube-Videos ansehen	To watch YouTube videos
eine Email schreiben	To write an email
mein Handy benutzen	To use my mobile phone

Welchen Sport magst du?	What sport do you like?
Fussball spielen	To play football
Rugby spielen	To play rugby
Tennis spielen	To play tennis
Golf spielen	To play golf
Volleyball spielen	To play volleyball
Basketball spielen	To play basketball
radfahren	To do some cycling
skifahren	To do some skiing
eislaufen	To do some ice skating
schwimmen	To do some swimming
turnen	To do some gymnastics
Reiten	To do some horse-riding
Athletik treiben	To do some athletics

Was magst du ansehen?	What do you like to watch?
Ich mag ... ansehen	I like to watch
die Nachrichten	The news
Komödien	Comedies
Zeichentrickfilme	Cartoons
Dokumentare	Documentaries
die Sendungen	Programmes
Seifenoper	Soap operas
Liebesfilme	Romantic films
Actionfilme	Action films
Horrorfilme	Horror films
Krimis	Detective films
Spielshows	Game shows
Serien	Series

Wann ?	When?
normalerweise	Normally
gewöhnlich	Usually
jeden Tag	Every day
zweimal	Twice a week
selten	Rarely
oft	Often
manchmal	Sometimes

Wie ist das Wetter?	What is the weather like?
Es ist schön	It is good weather
Es ist heiß	It is hot
Es ist kalt	It is cold
Es ist 25 Grad	It is 25 degrees
Es ist schlecht	It is bad weather
Es regnet	It is raining
Es schneit	It is snowing
Es ist windig	It is windy
Es ist wolkig	There are clouds
Es donnert und blitzt	There are storms
Es ist neblig	It is foggy
Es ist sonnig	It is sunny

Year 7 German ARE 3 Knowledge Organiser

(1) Pronouns

ich	*I*
du	*you (singular)*
er	*he*
sie	*she*
es	*it*
wir	*we*
ihr	*you (plural/ informal)*
Sie	*you (plural/formal)*
sie	*they*

(2) THE RULES : Regular verbs

1. Write down the infinitive (spielen / wohnen / trinken)
2. Chop off the ending EN
3. Write down what's left (the stem).
4. Add the correct ending. Use the boxes below to find the correct ending

(3) THE ENDINGS

ich	-e
du	-st
er/sie/es	-t
wir	-en
ihr	-t
Sie	-en
Sie	-en

(4) Time Expressions

am Wochenende	at *the weekend*
am Montag/Dienstag	*On Monday/Tuesday*
nach der Schule	*After school*
in der Pause	*At break*
in der Woche	*During the week*
normalerweise	*Normally*
manchmal	*Sometimes*
selten	*Rarely*
gewöhnlich	Usually
jeden Tag	*everyday*
immer	*always*

(5) sein – to be

ich bin	*I am*
du bist	*you are*
er/sie/es ist	*He/she/it is*
wir sind	*we are*
ihr seid	*you are*
Sie sind	*you are*
sie sind	*they are*

(6) Regular ER verbs

kaufen	*to buy*
trinken	*to drink*
lieben	*to love*
ankommen	*to arrive*
chatten	*to chat*
singen	*to sing*
suchen	*to look for*
beginnen	*to start*
tanzen	*to dance*
fragen	*to ask*
zeichnen	*to draw*
malen	*to paint*
hören	*to listen*
lernen	*to learn*
feiern	*to celebrate*
gewinnen	*to win/earn*
spielen	*to play*
wandern	*to hike*
gehen	*to walk*
schwimmen	*to swim*
sagen	*to say*
finden	*to find*
arbeiten	*to work*
benutzen	*to use*
besuchen	*to visit*
reisen	*to travel*
machen	*to do*

(7) essen – to eat

ich esse	*I eat*
du isst	*you eat*
er/sie/es isst	*he/she/it eats*

(8) lesen – to read

ich lese	*I read*
du liest	*you read*
er/sie/es liest	*he/she/it reads*

(9) fahren – to travel / go

ich fahre	*I travel / go*
du fährst	*you travel / go*
er/sie/es fährt	*he/she/it goes*

(10) mögen – to like

ich mag	*I like*
du magst	*you like*
er/sie/es mag	*he/she/it likes*

(11) Key Phrases

Was machst du?
What do you do/are you doing?

Was machst du in deiner Freizeit ?
What do you do in your free time?

Es ist/ es ist nicht	*It's / It's not*
sehr	*very*
ziemlich	*quite*
ein bisschen	*a (little) bit*
zu	*too*
total	*totally*
extrem	*extremely*
gar nicht	*not at all*

7.4 Spanish Free Time Knowledge Organiser

Sports and other hobbies with opinions + inf. including. jugar and hacer
Weather.

Cabot Learning Federation

Llevar, vivir & comer are a regular verbs which follow the pattern below. The verbs "jugar" and "hacer" are irregular but important verbs, especially for this topic on sports.

Pronouns	**Estudiar** – to study	**vivir**– to live	**comer**– to eat
Yo (I)	Estud**io** – I study	Viv**o**– I live	Com**o** – I eat
tú (you)	Estudi**as** – you study	Viv**es** – you live	Com**es** – you eat
el (he), **ella** (she),	Estudi**a** - He/she studies	Viv**e** - He/she lives	Com**e** – he/she eats
nosotros (we)	Estudi**amos** – we study	Viv**imos** – we live	Com**emos** – we eat
vosotros (you) (pl. or formal)	Estudi**áis** – you study (pl. or formal)	Viv**is** – you live (pl. or formal)	Com**éis** – you eat (pl. or formal)
Ellos/ellas (they)	Estudi**an** – they study	Viv**en** – they live	Com**en** – they eat

Hacer– to do

Yo hago - I do
Tu haces – you do
Él/ella hace – he/she does
Nosotros hacemos –we do
Vosotros hacéis – you (pl) do
Ellos hacen – they do

Jugar– to play

Yo juego- I play
Tu juegas – you play
Él/ella juega – he/she plays
Nosotros jugamos –we play
Vosotros jugáis – you (pl) play
Ellos/ellas juegan – they play

How to improve your writing?
When writing in Spanish, you can make your sentences better by adding the following:

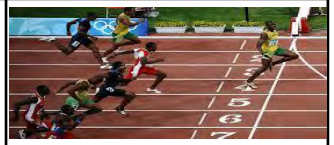
- Range of opinions and reasons
- Connectives to extend your sentences
- Qualifiers e.g. muy, bastante
- Comparisons
- Rather than just using 'yo', write verbs using other pronouns

Now you should be able to create some of your own questions using the question words below. Don't forget the upside down question mark at the beginning of a question.

¿Cuándo? – When?
¿Quién? – Who?
¿Dónde? – Where?
¿Cuántos? – How many?
¿Qué? What?
¿Cómo? – How?
¿Por qué? – Why?
¿Cuál? – Which?

WHA PE

Components of Fitness

	Physical Components	Definition	Sporting example
1	**Aerobic Endurance**	The ability to exercise your cardio respiratory system for a long period of time.	
2	**Muscular Endurance**	The ability to exercise your muscular system for a long period of time.	
3	**Muscular Strength**	The maximum force that a muscle or muscle group can produce.	
4	**Flexibility**	The range of movement around a joint.	
5	**Speed**	The distance covered over time (metres per second	
6	**Body Composition**	The ratio of fat mass to fat free mass in the body.	

	Skill Components	Definition	Sporting example
7	**Balance**	The ability to maintain a centre of mass above a base of support.	
8	**Coordination**	Being able to use two or more body parts at once to complete a motor task efficiently.	
9	**Reaction Time**	The time taken to respond to a stimulus.	
10	**Power (Explosive Strength)**	The combination of speed and strength.	
11	**Agility**	The ability to change direction at speed without losing balance.	

Cabot Learning Federation

WHA DT

Resistant Materials

Year 7 D&T – Gumball Machine Project

Analyse the above Gumball Machines using ACCESS FM.

We use **ACCESS FM** to help us write a **specification** - a list of requirements for a design - and to help us **analyse and describe** an already existing product.

ACCESS FM - Helpshee

- **A** is for **Aesthetics** — **Aesthetics** means **what does the product look like?** What is the: Colour/ Shape/ Texture/ Pattern/ Appearance/ Feel/ Weight/ Style?
- **C** is for **Cost** — **Cost** means **how much does the product cost to buy?** How much does it: Cost to buy? Cost to make? How much do the different materials cost? Is it good value?
- **C** is for **Customer** — **Customer** means **who will buy or use your product?** Who will buy your product? Who will use your product? What is their: Age? Gender? What are their: Likes? Dislikes? Needs? Preferences?
- **E** is for **Environment** — **Environment** means **will the product affect the environment?** Is the product: Recyclable? Reusable? Repairable? Sustainable? Environmentally friendly? Bad for the environment? **6R's of Design:** Recycle / Reuse / Repair / Refinish / Reduce / Refuse
- **S** is for **Size** — **Size** means **how big or small is the product?** What is the size of the product in millimetres (mm)? Is this the same size as similar products? Is it comfortable to use? Does it fit? Would it be improved if it was bigger or smaller?
- **S** is for **Safety** — **Safety** means **how safe is the product when it is used?** Will it be safe for the customer to use? Could they hurt themselves? What's the correct and safest way to use the product? What are the risks?
- **F** is for **Function** — **Function** means **how does the product work?** What is the product's job and role? What is it needed for? How well does it work? How could it be improved? Why is it used this way?
- **M** is for **Material** — **Material** means **what is the product made out of?** What materials is the product made from? Why were these materials used? Would a different material be better? How was the product made? What manufacturing techniques were used?

Target Market

A **target market** is the market segment (group of potential customers) which a particular product or service is marketed (advertised) to.

Testing

Testing a prototype / developed design is a very important part of the design and manufacturing process. Testing and evaluation, simply confirms that the product will work as it is supposed to, or if it needs refinement.

In general, testing a prototype allows the designer and client to assess the viability of a design. Will it be successful as a commercial product? Testing also helps identify potential faults, which in turn allows the designer to make improvements.

Evaluation

Designers evaluate their finished products or prototypes in order to test whether they work well and if the design can be corrected or improved. Whatever you have designed it is important to evaluate your work constantly during the project.
Evaluation can take a variety of forms.

- General discussion with other pupils, staff and others.
- Questionnaires / surveys carried out at any time during the project.
- Your personal views, what you think of existing designs.
- Most important of all - what do you think of your designs, prototypes and finished products ?
- Can you think of any other ways of evaluating your work ?

Remember to always suggest improvements when evaluating!

File

Coping Saw

Tri-Square

Tenon Saw

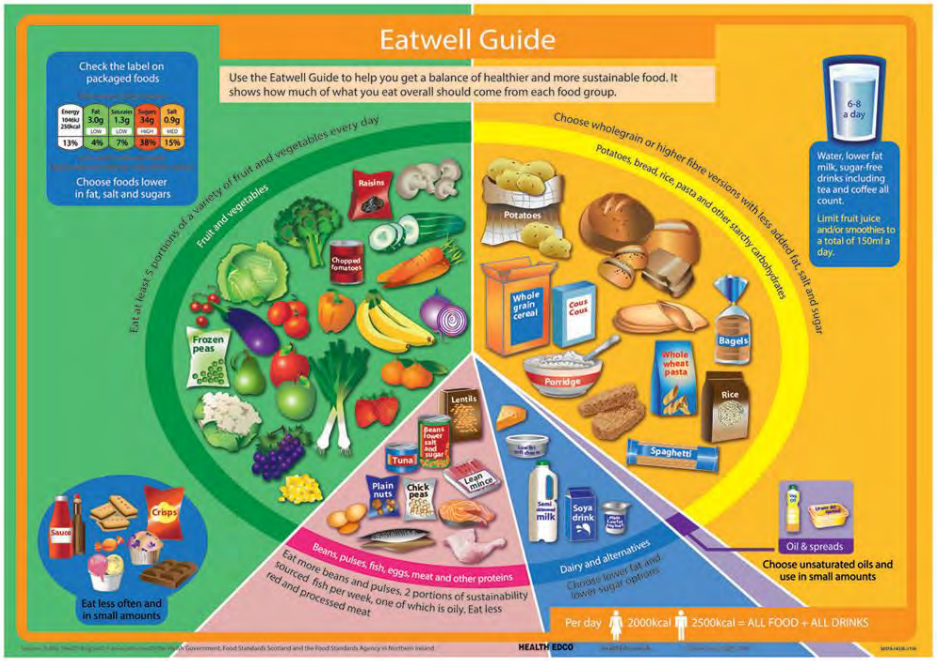
Bench Hook

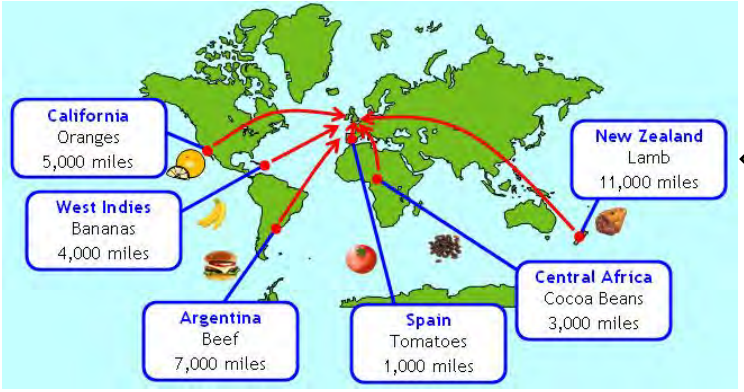
Pillar Drill

Vertical Sander

WHA DT

Food Tech





Food Miles

All food makes a journey from where it is grown or produced to your plate.

How far food has travelled is known as its food miles.

We should be aiming for as few miles as possible. Choosing foods with fewer food miles helps reduce pollution and protect our Planet.

We can reduce food miles by eating food that is in season, and buying food that is produced locally.

Cooking Processes

Radiation
Heat from an oven or grill.

Denaturation
When the protein in cheese unravels (melting).

Gelatinisation
When starch granules swell.

Mis-en-place
A French word to describe preparing Ingredients and getting everything ready for cooking.

Convection
The scientific process that occurs when liquids boil in a pan.

Stock
The juice from cooked meats, fish, and vegetables.

Enzymic Browning
A reaction that occurs in some fruit and vegetables when left to react with air.

Gluten
The protein particles contained in flour.

Shortening
Rubbing flour and fat together to make a crumbly mixture.

Dextrinisation
A chemical process that turns food brown/black when cooking.

WHA DT

Food Tech

Health and Safety

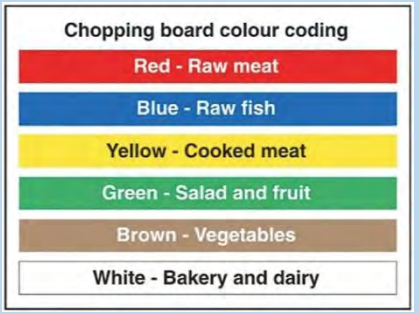
Carry knives pointing down.

Wash up with hot water and washing liquid.

Clean surfaces and equipment to kill bacteria.

Wash hands with soap after touching raw meat.

Wipe up spills straight away to avoid slips.



Knife Skills

- Always carry knives pointing downwards
- Always pass knives by the handle
- Never run or fight with knives
- Keep the knife blade away from your fingers when cutting
- Never cut towards yourself
- Never leave a knife in the sink
- Never try and catch a knife if it falls

When using a knife there are TWO techniques we can use to ensure knife safety when cutting ingredients.

Claw grip

Arch grip

Bacteria

Bacteria are a micro-organisms that multiply in certain conditions.

Where can bacteria be found?
Everywhere!

Are all bacteria bad?
No some are good and essential for normal bodily function.

How can you reduce the risk of bacteria?

- Storing food separately
- Storing and cooking foods at the correct temperatures

The 4 C's

- Cleaning - wash your hands properly.
- Cooking - make sure you cook food properly or you could make someone very ill.
- Chilling - keep it chilly silly.
- Cross contamination - keep raw meat and cooked food apart.

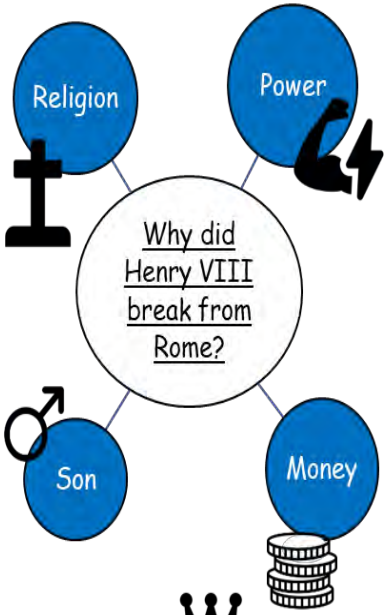
History

Why did the reformation matter?

History - 7.5 Knowledge Organiser

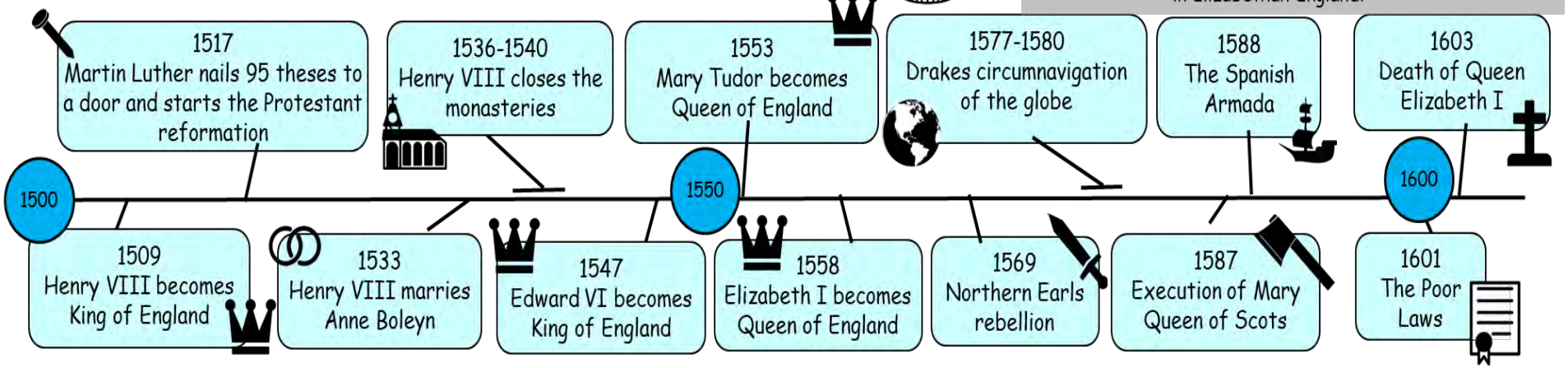
Key People

Martin Luther	A German monk that thought that the Catholic Church was corrupt he set up the new Protestant church.
Pope Clement II	The head of the Catholic Church that refused to give Henry VIII a divorce.
Henry VIII	King from 1509-1547. Head of the Church of England.
Thomas Cromwell	Henry VIII put him in charge of getting rid of the monasteries.
Francis Drake	The first Englishman to circumnavigate the globe.
Mary Queen of Scots	Ruler of Scotland 1542-1547 became a focus for Catholic rebellion in England.
Mary Tudor	Daughter of Henry VIII. Queen of England between 1553-1558
Edward VI	Son of Henry VIII. King between !547-53.
Elizabeth I	Daughter of Elizabeth I. Queen between 1558-1603.
Phillip II	King of Spain married to Mary Tudor.



Key Words

The reformation	Attempts to reform the Catholic Church and the development of Protestant Churches in Western Europe.
heir	Next in line to the throne.
Roman Catholic	The Christian church of which the Pope, or bishop of Rome, is the supreme head.
Protestant	Someone who follows Christianity using beliefs developed from the Reformation.
Break with Rome	When Henry VIII broke away from the Catholic Church and become head of the Church of England.
Dissolution of the Monasteries	The monasteries that were run by the Catholic Church were closed down.
Puritans	An extreme version of Protestantism
Circumnavigation	To go around the world
The Spanish Armada	A fleet of ships launched to attack England by Spain.
Poor Laws	A series of laws brought in to help the poor in Elizabethan England.



WHA History

African Kingdoms: Mali Empire

Summary

The Mali Empire was an empire in west Africa from c.1235 until 1670.

The empire was founded by Sundiata Keita. He incorporated a series of smaller kingdoms into his own, creating a local empire.

From 1240 onwards, the **empire expanded** to include regions that were **rich in gold**. The empire, and its 'Mansas' (rulers) became **famed for its wealth.**

The empire became **one of the largest in the world at the time,** including areas in what is now Mali, Senegal, Guinea, Mauritania and Gambia.

The **Manding** languages were spoken in the empire. The **Mandinka** oral tradition, including **griots** (story-tellers) spread word of the empire.

A map of the Mali Empire c. 1337 CE

Major People and Events

Sundiata Keita (c.1217-c.1255)

-Sundiata Keita was the first Mansa of the Mali Empire. He was believed to have overcome a childhood disability and his family living in exile for many years.
-He defeated the powerful Sosso King at the Battle of Karina to become the first Mansa.

Rise of the Mali Empire

-Throughout the 1230s and 1240s, Keita united a series of smaller kingdoms, to grow the power and wealth of the Mali Empire. Many of these were important locations for trade and gold.
-Local leaders were allowed to lead small areas, but pledged allegiance to the Mansa.

Mansa Musa (c.1280-1337)

-Mansa Musa was the ninth Mansa of the Mali Empire.
-Ruling during the 'golden age' of the Mali Empire, he has become famed as one of the richest people in history, but it is not possible to quantify his exact wealth.
-He became Mansa after his predecessor did not return from exploring the Atlantic.
-He built many schools, universities and libraries, and strengthened the position of Timbuktu as the capital. He also invaded other areas and doubled his territory.

Mansa Musa's Pilgrimage

-Musa was a devout Muslim, and took his pilgrimage to Mecca between 1324-1325.
-He took vast amounts of gold, which were given to the poor on the journey.
-His journey attracted visitors and scholars to Mali.

The Fall of the Mali Empire

-In the centuries after Mansa Musa died, the Mali Empire began to decline in power. It was challenged by the Songhai Empire to the north. Local leaders began to switch their allegiance from the increasingly-violent Malian Mansas.

Mansas

The leaders of the Mali Empire were called 'Mansas.'

The word **'Mansa'** meant 'ruler' or 'King.' Sundiata Keita was the first Mansa of Mali.

Key Features of the Mali Empire

Culture

-Although the empire was made up of lots of different tribes, these were all considered to be a part of the Mande peoples.
-They spoke similar languages and were separated by different castes. Farmers were considered to be a respected caste.
-Other castes included artisans, fishermen, scribes, soldiers and slaves.

Religion

-The Mali Empire from 1300 onwards was built upon the principles of the religion of Islam. There were great mosques and souks, and many of the Mansas were known to be devoutly Muslim.
-However, they did not force their subjects to convert to Islam. Many people followed local religions. Others practiced a hybrid religion that combined elements of Islam and local beliefs.

Niani and Timbuktu

-Niani and Timbuktu were the two most important cities in the Mali Empire.
-At different times, they both functioned as the capital city of the Empire.
-Both cities benefitted from the arrival of scholars and building designers, who helped the architecture and education in the cities to flourish. Timbuktu was considered included the famous Sankore University.

Key Vocabulary

Mali

Empire

West Africa

Mansa

Sundiata Keita

Mansa Musa

Gold

Manding

Mandinka

Griots

Mande

Pilgrimage

Top 10 Facts!

1. The great wealth of Mali came from both gold and salt mines.
2. Aside from Niani and Timbuktu, other important cities included Gao, Djenne and Walata.
3. The Empire controlled important trade routes across the Sahara Desert and Middle East.
4. The Niger River was an important trade route for the Malians.
5. In the 1400s, Mali traders dominated west Africa.
6. In the late 1400s, the Empire started to lose power at its borders. Other empires arose.
7. Timbuktu was seized by the Tuareg people in 1431.
8. By 1550, the Mali Empire was no longer considered to be of importance or power.
9. The last Mansa, Mahmud IV, died in 1610.
10. Mali is now amongst the poorest nations in the world.

Geography

Russia

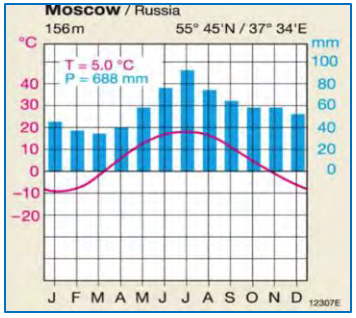
Keyword	Definition
Arctic circle	Line of latitude at 66 degrees north of the equator
Biome	A large community of plants and animal found
Climate	The average weather conditions over a long period of time
Climate graph	A graph showing the temperature and rainfall for a location over a year
Biodiversity	The number of different plant and animal species in an area
Adaptation	How plants and animals have changed to survive in a particular environment
Permafrost	A layer of permanently frozen ground
Population distribution	The number of people on average in a given area (usually 1 square km)
Sparsely populated	Few people live there
Densely populated	Lots of people live there

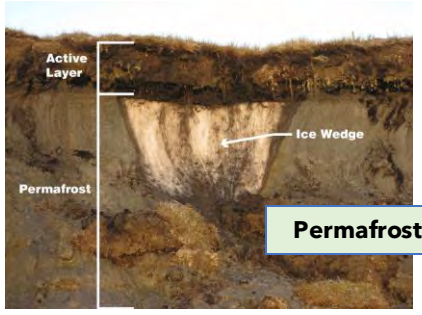
The biomes of Russia

Russia's population density on a map

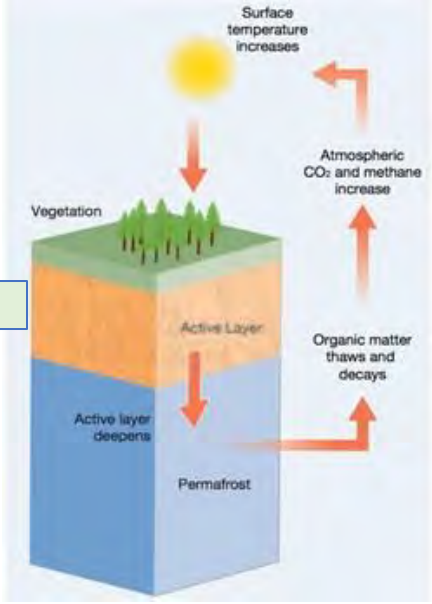
Covering 17 million square kilometres, **Russia is the largest country in the world**. It is 70 times the size of the UK and twice the size of the USA. Russia borders 14 nations and spans 11 different time zones.

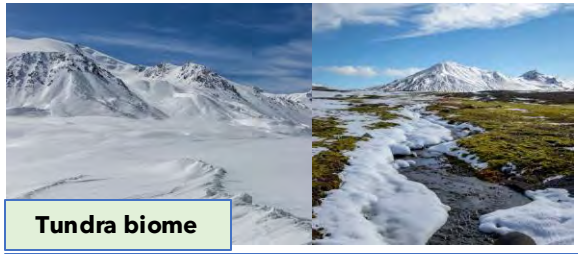
Moscow's climate graph





Permafrost





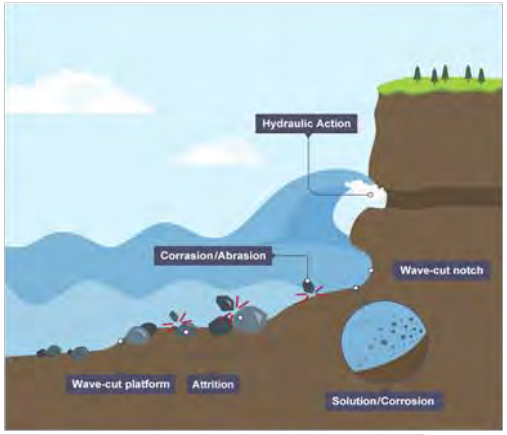
Tundra biome

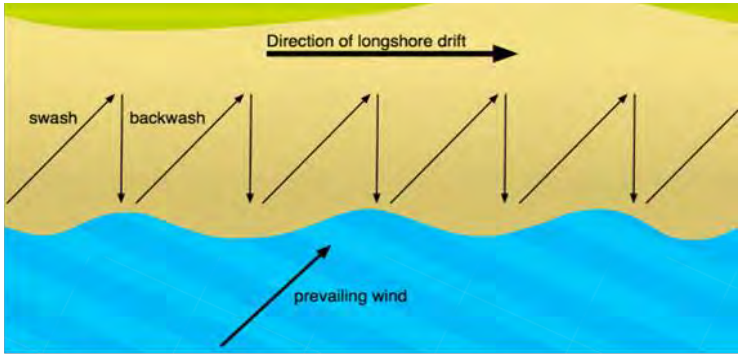
- Tundra comes from the Finnish 'tunturia', which means barren or treeless land.
- Trees do not grow in the tundra because the ground is permanently frozen 25-100cm down.
- Tundra is a biome where the ground stays frozen for most of the year and there is very little precipitation.
- Tundra environments are found in the Northern hemisphere surrounding the Arctic Circle – where temperatures stay below 0°C most of the year.

Geography

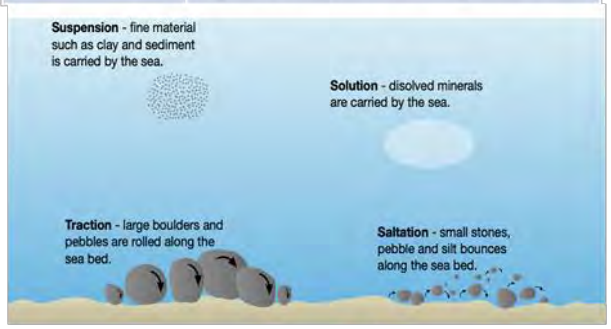
Coasts

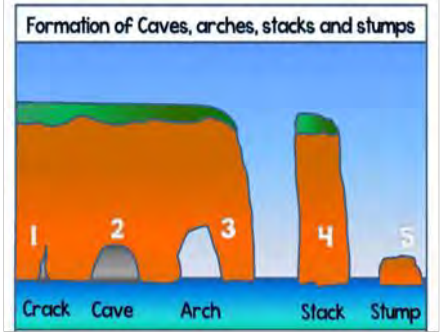
Keyword	Definition
Erosion	The wearing away of land
Deposition	The dropping of land
Transportation	The movement of material along the coast
Hydraulic Action	The sheer force of water crashing against the coastline causing material to be dislodged and carried away by the sea
Abrasion	When rocks carried by the sea are picked up by waves and thrown against the coastline causing more material to be broken off and carried away by the sea
Solution	When the water dissolves certain types of rocks, eg limestone
Attrition	When material such as rocks and stones carried by waves hit and knock against each other wearing them down





Hard engineering	This involves building structures to protect the coast.
Soft engineering	This involves working with nature by using natural materials or allowing nature to take back areas





1. Waves attack the cliff face using hydraulic action and abrasion. The **crack** is formed.
2. Over time, crack is eroded further to create a **cave**.
3. The cave is widened and deepened and pushes through the headland to form a natural **arch**.
4. Undercutting and weathering leads the arch to collapse leaving a **stack.**
5. Weathering and erosion wear the stack down to a **stump.**

Examples of coastal management	Advantages	Disadvantages
Sea Walls 	Protects the base of cliffs	Expensive to build
Groynes 	Prevents the movement of beach material along the coast by longshore drift	Costly to build and maintain
Rock Armour 	Absorbs the energy of waves	Can be expensive to obtain and transport the boulders
Beach nourishment 	Cost is low	Requires constant maintenance to replace the beach material as it is washed away
Managed retreat 	'Low value land' left to be eroded by the sea	

What do the Dharmic faiths believe?

Buddhism Knowledge Organiser

NEED TO KNOW WORDS

Buddha	It means 'the One who knows'.
Dhamma	Teachings. The things that Buddha and Buddhism teach about life.
Sangha	Community. The community of Buddhists across the world. Made up of lay people and monks and nuns.
Enlightenment	Waking up to what life is really like. This is what happened to Siddhartha Gautama.
Anicca	The idea that everything changes & decays. Nothing remains the same.
Dukkha	Suffering. Much of life is pain & suffering. It is just how life is.
Anatta	No self or soul. If *everything* changes, then there is nothing permanent in a human, like a soul.

Overview

Buddhism is one of the world's major religions. It is the **world's 4th largest religion**, with about 520 million followers.

Buddhists are the people who follow Buddhism. They follow the teachings of a man named **Siddhartha Gautama**, who became known as the **Buddha**.

The religion began when Gautama, a prince who had lived a life of luxury, realised that there **was suffering in the world**, and committed himself to understanding why.

This happened in **India** around **2,500 years ago**.

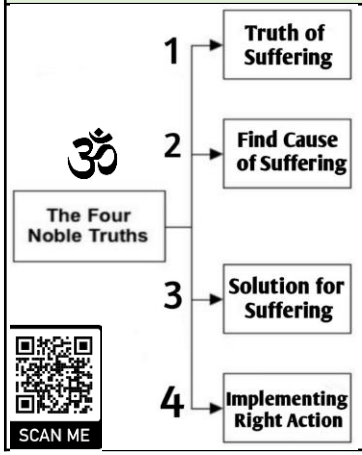
The holy book in Buddhism is called **Tipitaka. Buddhist Temples** are buildings designed for Buddhist worship.

Image of the Buddha, known in life as Siddhartha Gautama, whose teachings founded Buddhism.

SCAN ME

Buddhist beliefs:

The Buddhist teachings are known as Dharma. They include the Four Noble Truths and the Eightfold-Path. Buddhism's Noble Truths are:



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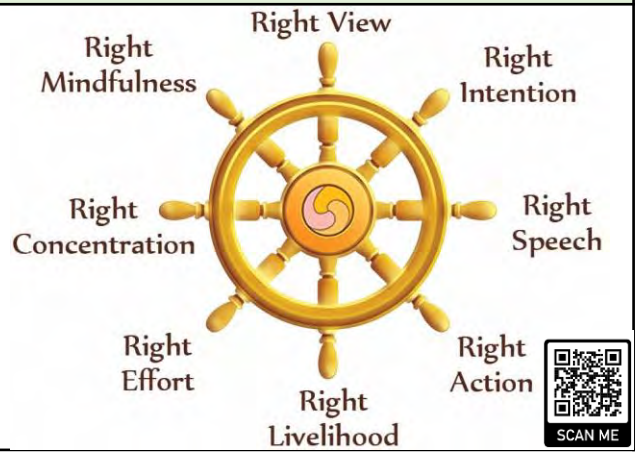


SCAN ME

Top 10 Facts!

1. Buddhists don't believe in a God who made the world and everything in it.
2. Siddhartha's family was Hindu.
3. The lotus flower is an important symbol in Buddhism. It is a symbol of enlightenment.
4. The name 'Buddha' means 'the enlightened one' or 'the one who knows.'
5. Some Buddhists have shrines at home where they are able to worship.
6. The teachings of Siddhartha Gautama were not written down until about 400 years after his death.
7. Siddhartha Gautama died around age 80.
8. 'Puja' is the name for worship in Buddhism. People often light candles as they worship.
9. In images of Buddha, faces are always made to look calm and serene, to show that he has a peaceful mind.
10. Wesak is an important festival in Buddhism.

What do the Dharmic faiths believe?

Sikhism Knowledge Organiser

NEED TO KNOW WORDS	
Caste System	A class structure that is determined by birth
Guru	Teacher
Guru Granth Sahib	Holy book of sikhism
Guru Nanak	The founder of sikhism
Hukam	Meaning the will or command of god
Kirat Karni:	Meaning to work honestly, live honestly, and practice honesty
Naam Japna	Meditating on god's name
Sikhism	A religion based on belief in a single god and on the teachings of guru nanak
Three foundations of Sikhism	Duties which all sikhs must carry out
Vand Chakna	Means to share the fruits of one's labour with others
Waheguru	Used in sikhism to refer to god

Sikh nature of God.

Sikhs have many words to describe God. The name most widely used for God by Sikhs is Waheguru, which means 'wondrous enlightener'. Sikhs believe that there is only one God, who created everything.

Sikhs believe that Waheguru is:

The creator - The act of creating everything was God's will (Hukam).
Ineffable - Waheguru's essence cannot be adequately described in words.
Genderless - Waheguru is neither male nor female.
Eternal - Waheguru is outside time and space and beyond the

Who was Guru Nanak?

Guru Nanak founded Sikhism. He was born to a Hindu family over 500 years ago in the Punjab (an area that is now in Pakistan, but at the time, it was part of India).

Throughout his life, Guru Nanak experienced key events that led him to:

- reject the caste system within Hinduism
- teach that everybody is equal through the belief in the oneness of humanity
- teach the three foundations of Sikhism.

The three foundations of Sikhism

Naam Japna: Meditate on God	Sikhs must keep God in their mind at all times. As well as prayer and meditation, Sikhs will also practise chanting and singing of God's name – Waheguru.
Kirat Karni: Live honourably	All Sikhs must seek to live honestly and to have high moral values. This doesn't just mean avoiding crime. Sikhs also avoid gambling or working in immoral industries.
Vand Chakna: Share and give	Sikhs must commit to giving to charity and caring for others.

Guru Granth Sahib

The Guru Granth Sahib is a holy book of Sikhism. It's a collection of songs, poems, and prayers written by different Sikh gurus and other holy people. The book was edited by the fifth Sikh guru, Guru Arjan Dev. Skihs believe that the book is the eternal living guru of the Sikhs. The Guru Granth Sahib has writings in different languages, such as Punjabi, Sanskrit, and Persian. The book teaches that there is only one God, and it's important to live a good life by doing good things.

What do the Dharmic faiths believe? Hinduism Knowledge Organiser

NEED TO KNOW WORDS	
Polytheist	Belief in many gods
Monotheist	Belief in one god
Deities	Gods
Brahman	Supreme god in Hinduism
Dharma	duty – fulfilling these duties are the first step towards breaking the samsara cycle.
Reincarnation	being 'reborn
Moksha	The spiritual aim for Hindus is to achieve freedom from the samsara cycle
Mandir	Community temple
Karma	The belief that actions have consequences
Samsara	The cycle of birth and rebirth.
Trimurti	— 3 main aspects of Brahman (Brahma / Vishnu / Shiva)

Hinduism overview:

Hinduism is over 4,000 years old, making it one of the world's oldest religions. It is made up of a variety of different religious beliefs and practices. It originated near the Indus River in India. The name 'Hindu' comes from the word Indus

Hindu nature of God.

Hindus believe in one God (Brahman) and they believe he comes in many forms. Hindus believe that there are three gods called the Trimurti who display the 3 aspects of the universal supreme God, Brahman.

Where do Hindus worship?

Hindus worship in a temple called a Mandir. Mandirs vary in size from small village shrines to large buildings, surrounded by walls.

People can also visit the Mandir at any time to pray and participate in the bhajans (religious songs).

Hindus also worship at home and often have a special room with a shrine to particular gods.

Hindu belief in The Trimurti:

Brahman takes many forms. Especially three forms called the Trimurti:

Brahma	is the creator of the world and all creatures. He is usually shown with four heads.
Vishnu	is the preserver of the world. His role is to return to the earth in troubled times and restore the balance of good and evil. He has blue skin and four arms.
Shiva	is the destroyer of the universe. Shiva destroys the universe in order to re-create it. Shiva has blue skin, a third eye and carries a trident.

What are Hinduism's holy books?

Hinduism does not have a single holy book, but many ancient texts and scriptures.

The Vedas - a collection of hymns praising the Vedic gods. Veda means 'knowledge'.
The Ramayana - long epic poems about Rama and Sita.
The Mahabharata - which includes the Bhagavad Gita.
The Puranas - a collection of stories about the different incarnations and the lives of saints..

Art

UNDER THE SEA

Content: In this project you will…
Understand- how other artists are inspired to create their work and how to write about it.
Develop skills- drawing, shading, painting, and showing the influence of other artists in your own work and presentation.
Outcome- A self made sketchbook and body of work that explores the element of water and the things you find under the sea.

Watercolour Techniques

Artist who made art inspired by water (to name a few…)

- David Hockney
- William Turner
- Jason Taylor
- Claude Monet
- Hokusai
- Casper David Fredrich
- Rembrandt

IMPORTANT COLOUR TERMS AND THEIR MEANING

Keywords:

Annotation: a note by way of explanation or comment added to a text or diagram.
Collage - a piece of art created by combining photos, clippings or small objects onto a surface
Nautical - concerning navigation, sailors, or the sea; maritime.
Typography - is the art of arranging letters and text in a way that makes the copy legible, clear, and visually appealing to the viewer.
Sketchbook -a book or pad with blank pages for sketching and is frequently used by artists for drawing or painting as a part of their creative process
Line Drawing - any image that consists of distinct straight or curved lines to represent two-dimensional or three-dimensional objects.
Render - Colouring your art, shading it, or adding texture to it to add realism and a 3D quality
Observational Drawing - drawing what you see
Value Drawing - a black and white drawing

Assessment:

(D) Demonstrate a deepening- knowledge, understanding and skills
(O+)On Track- Demonstrate some- knowledge, understanding and skills
(O-)On Track- Demonstrate some- knowledge, understanding and skills
(Y)Yet to be on Track- developing some- knowledge, understanding and skills
(A)Earlier Stage-minimal knowledge, understanding and skills

Analysis

All artist research pages should be annotated. You must include the following:

Other artists artwork

- Describe the work - what does it look like? Use the formal elements i.e. colour, line etc.
- What techniques/ materials were used?
- What is your opinion of the work? How is it relevant to your own idea?

Sentence starters

- I like/dislike the way the artist has used…because
- I think the colour scheme used is effective because…
- I think the artist has been inspired
- by…because

Evaluation of Your Artwork-

- What inspired you to create the piece?
- What techniques did you use and why?
- What does it mean to you?
- How is it relevant to your
- idea?

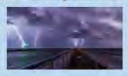
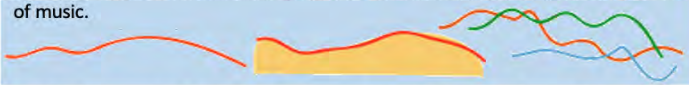
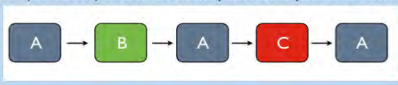
Sentence starters

- The technique I have used is…
- The skill/technique I found most difficult was…because…
- I think my work is successful because…

Music

Glastonbury

Elements of Music

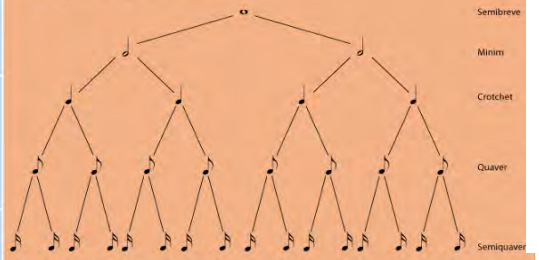
Program Music	A piece of music which either **tells a story** or **describes something**.   
Pitch	Pitches is how high or low a piece of music, or a particular note, is.  
Rhythm/ Duration	Duration/rhythm means how long or short a note is.  
Dynamics	Dynamics are how loud or quiet the music is played.  
Tempo	Tempo is how fast or slow a piece of music is played.  
Texture	Texture describes how melodies, rhythms and harmonies are layered in a piece of music. 
Timbre/ Sonority	Timbre (or sonority) describes the particular sound quality of an instrument or voice.   
Structure	Structure (or form) is the overall plan of a piece of music.  

It's Theory Time!

Note Values

This is a *Rhythm Tree* – it is designed to help you identify what the symbols for different note values are, and how they relate to one another. Here are the note values!

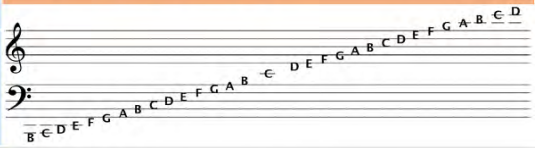
Semibreve = 4 beats
Minim = 2 beats
Crotchet = 1 beat
Quaver = ½ beat
Semiquaver = ¼ beat



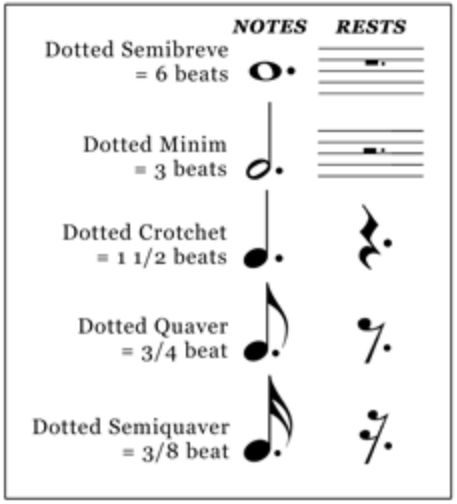
Notes on the Stave

Here are the notes of the **treble** (top line) and **bass** (bottom line) clefs. When the notes fall outside the five lines of music paper, we add extra lines called **ledger** lines. Here are some phrases to help you remember where the notes go!

Treble Clef Lines: **E**very **G**reen **B**us **D**rives **F**ast
Treble Clef Spaces: **F A C E** (in the space!)
Bass Clef Lines: **G**reen **B**uses **D**rive **F**ast **A**lways
Bass Clef Spaces: **A**ll **C**ows **E**at **G**rass

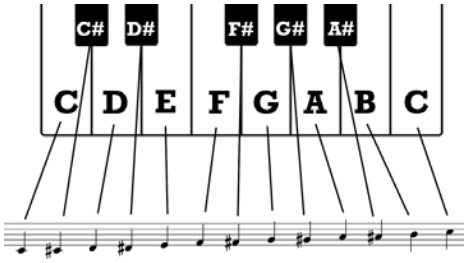


Dotted Note Values



Chromatic Scale

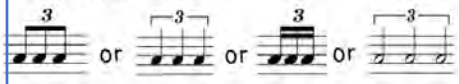
(piano)



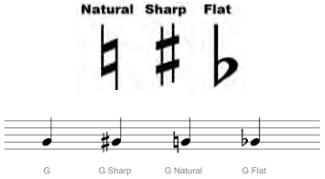
Triplets

A triplet is group of three notes, or notes and rest that are played in the same time as two notes of the same value. Triplets are only found in simple time.

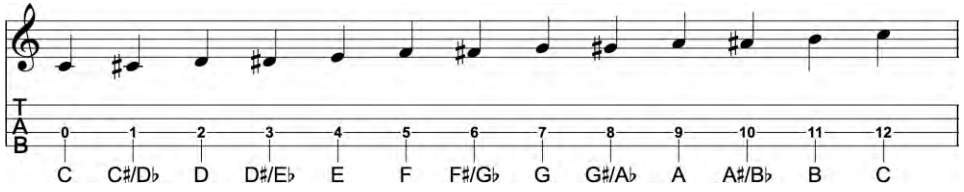
They can look like this...



Accidentals



(Ukulele)

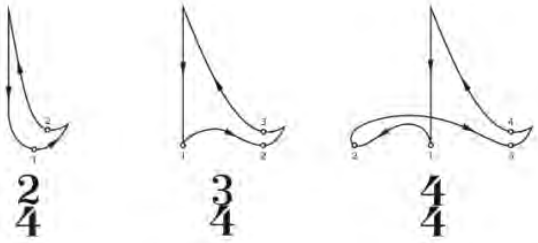


Music

Glastonbury

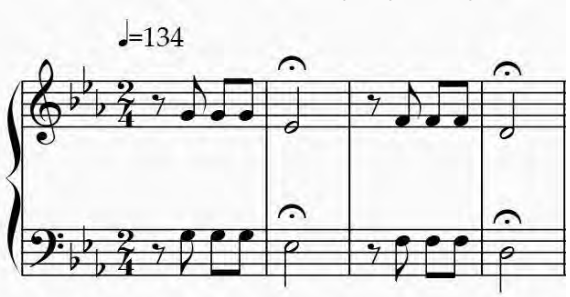
The **conductor** leads the orchestra of musicians.

Conducting patterns

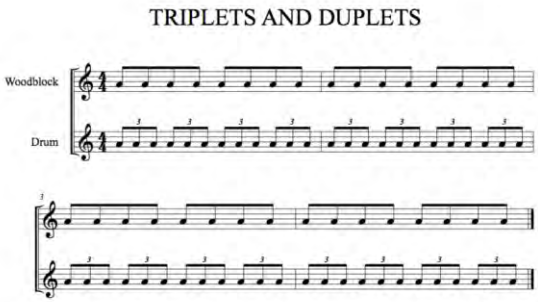


Motif

(Beethoven's 5th symphony)



Polyrhythm



Computer Science

DATA REPRESENTATION

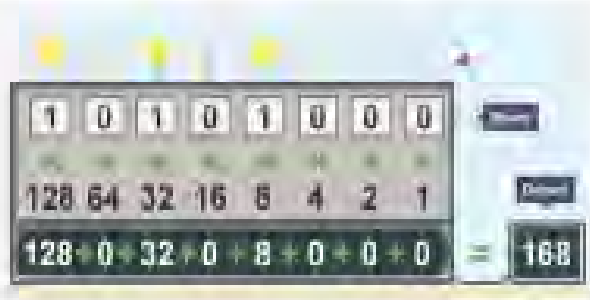
7.4 - Data Representation: Knowledge Organiser @HPAComputing #ReadyToCode

Keywords	Bit	Nibble	Byte	Kilobyte	Megabyte	Gigabyte	Terabyte
	A single 1 or 0	4 bits	8 bits	1024 Bytes	1024 Kilobytes	1024 Megabytes	1024 Gigabytes

Binary	Denary/Decimal	Place Value	Base 2	Base 10	ASCII
A number system that contains two symbols: 0 and 1. Also known as base 2.	The number system most commonly used by people. It contains 10 unique digits 0 to 9. Also known as decimal or base 10.	The value of the place of a digit in a number.	The binary counting system, uses two symbols 0 and 1	The denary counting system, uses ten symbols 0 to 9	A 7-bit character set used for representing English keyboard characters.

DATA	INFORMATION
Raw facts of things	Data with exact meaning
No contextual meaning	Processed data
Just numbers and/or text	Organised context

Computers need **DATA**, humans need **INFORMATION**



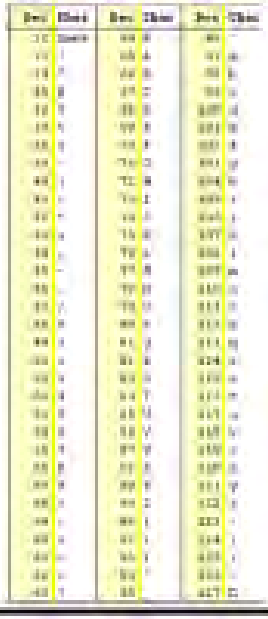
Computer Science

DATA REPRESENTATION

7.4 - Data Representation: Knowledge Organiser @HPAComputing #ReadyToCode

Useful Links	Converting Binary	What are Binary numbers?	Character Sets	Units of data
	CLICK HERE	CLICK HERE	CLICK HERE	CLICK HERE

ASCII Table



How to convert ASCII to BINARY

ASCII value:	Cat

C=67 (01000011) a=97 (01100001) t=116 (01110100)

Cat (ASCII) 01000011 01100001 01110100 (Binary)

How to convert BINARY to DENARY

Binary value:	01100101

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

64+32+4+2+1=103
01100101=103