YEAR 7 – ALGEBRAIC THINKING...

Equality and Equivalence

@whisto_maths

What do I need to be able to do?

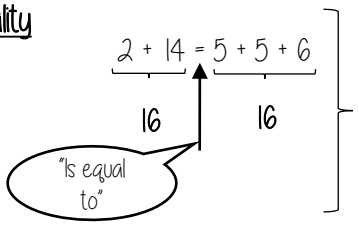
By the end of this unit you should be able to:

- Form and solve linear equations
- Understand like and unlike terms
- Simplify algebraic expressions

Keywords

Equality: two expressions that have the same value
Equation: a mathematical statement that two things are equal
Equals: represented by '=' symbol – means the same
Solution: the set or value that satisfies the equation
Solve: to find the solution
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Term: a single number or variable
Like: variables that are the same are 'like'
Coefficient: a multiplicative factor in front of a variable e.g. 5x (5 is the coefficient, x is the variable)
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

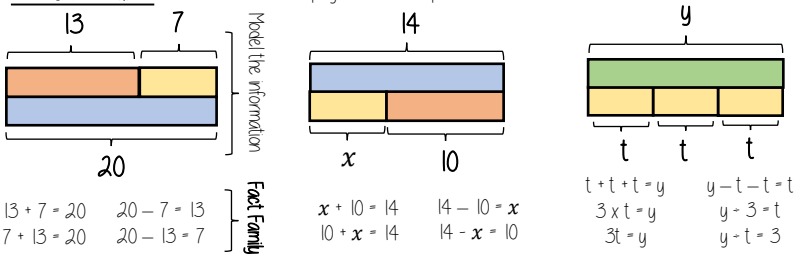
Equality



Saying it out loud sometimes helps you to understand equality

Fact Families

Use a bar model to display the relationships between terms and numbers



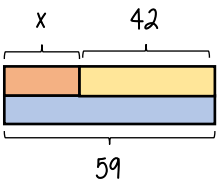
Solve one step equations (+/-)

There is more to this than just spotting the answer

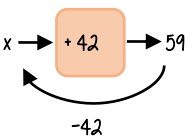
x + 42 = 59

x + 42 = 59
42 + x = 59

59 – x = 42
59 – 42 = x



Don't forget you know how to use function machines

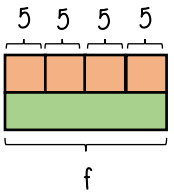


Solve one step equations (x/÷)

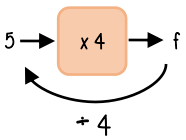
$\frac{f}{4} = 5$

f ÷ 4 = 5
f ÷ 5 = 4

5 x 4 = f
4 x 5 = f

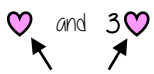


Don't forget you know how to use function machines



Like and unlike terms

Like terms are those whose variables are he same



are **like** terms

are **unlike** terms

Examples and non-examples

Like terms	Un-like terms
y, 7y	y, 7x
$2x^2$, x^2	$2x^2$, $2c^2$
ab, 10ba	ab, 10a
5, -2	5, -2t

Note here ab and ba are commutative operations, so are still like terms

Equivalence

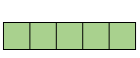
Check equivalence by substitution
e.g. m= 10

5m	2 x 2m	7m – 3m
5 x 10	2 x (2x 10)	(7x 10) – (3x 10)
= 50	= 2 x 20	= 70 – 30
	= 40	= 40

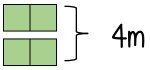
Equivalent expressions

Repeat this with various values for m to check

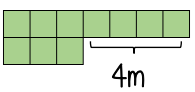
5m



2 x 2m



7m – 3m

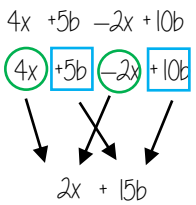


Collecting like terms ≡ symbol

The ≡ symbol means equivalent to.
It is used to identify equivalent expressions

Collecting like terms

Only **like terms** can be combined



Common misconceptions

$2x + 3x^2 + 4x \equiv 6x + 3x^2$

Although they both have the x variable, x2 and x terms are un-like terms so can not be collected

YEAR 7 — PLACE VALUE AND PROPORTION

Ordering integers and decimals

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Understand place value and the number system including decimals
- Understand and use place value for decimals, integers and measures of any size
- Order number and use a number line for positive and negative integers, fractions and decimals;
- use the symbols $=, \neq, <, >$
- Work with terminating decimals and their corresponding fractions
- Round numbers to an appropriate accuracy
- Describe, interpret and compare data distributions using the median and range

Keywords

Approximate: To estimate a number, amount or total often using rounding of numbers to make them easier to calculate with
Integer: a whole number that is positive or negative
Interval: between two points or values
Median: A measure of central tendency (middle, average) found by putting all the data values in order and finding the middle value of the list
Negative: Any number less than zero, written with a minus sign
Place holder: We use 0 as a place holder to show that there are none of a particular place in a number
Place value: The value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right
Range: The difference between the largest and smallest numbers in a set
Significant figure: A digit that gives meaning to a number. The most significant digit (figure) in an integer is the number on the left. The most significant digit in a decimal fraction is the first non-zero number after the decimal point

Integer Place Value

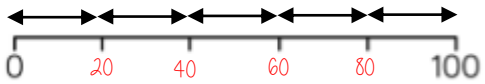
Billions			Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O	H	T	O
		3	1	4	8	0	3	3	0	2	9

Placeholder

Three billion, one hundred and forty eight million, thirty three thousand and twenty nine

1 billion 1, 000, 000, 000
1 million 1 000, 000

Intervals on a number line



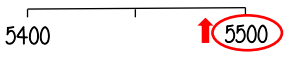
Divide the difference by the number of intervals (gaps).
E.g. 100 ÷ 5 = 20

Rounding to the nearest power of ten

If the number is halfway between we "round up"

5495 to the nearest 1000

5475 to the nearest 100



5475 to the nearest 10

Compare integers using $<, >, =, \neq$

$<$ less than
$>$ greater than
$=$ equal to
$\neq$ not equal to

Two and a half million ○ 2 500 000
300 000 000 ○ Three billion
Six thousand and eighty ○ 68 000

Range

Spread of the values

Difference between the biggest and smallest

3 9 8 12

Range: Biggest value – Smallest value
12 – 3 = 9

Range = 9

Median

The middle value

Example 1

4 3 9 8 12

Median: put the in order 3 4 8 9 12
find the middle number 3 4 (8) 9 12

Example 2

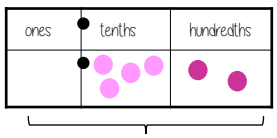
150 154 148
137 160 158

Median: put the in order
137 148 (150 154) 158 160
There are 2 middle numbers
Find the midpoint
152

Decimals

We say "nought point five two"

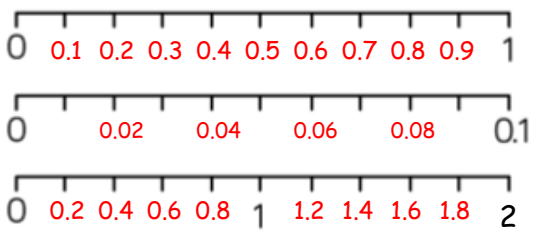
Five tenths and two hundredths



0 ones, 5 tenth and 2 hundredths
0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01
= 0 + 0.5 + 0.02
= 0.52

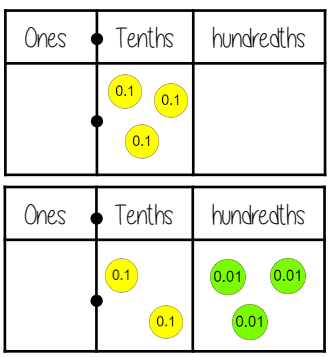
Decimal intervals on a number line

One whole split into 10 parts makes tenths = 0.1
One tenth split into 10 parts makes hundredths = 0.01



Comparing decimals

Which the largest of 0.3 and 0.23?



$0.3 > 0.23$

"There are more counters in the furthest column to the left"

0.30
0.23

Comparing the values both with the same number of decimal places is another way to compare the number of tenths and hundredths

Round to 1 significant figure

370 to 1 significant figure is 400
37 to 1 significant figure is 40
3.7 to 1 significant figure is 4
0.37 to 1 significant figure is 0.4
0.00000037 to 1 significant figure is 0.0000004

Round to the first non zero number

YEAR 7 – PLACE VALUE AND PROPORTION...

FDP equivalence

@whisto_maths

What do I need to be able to do?

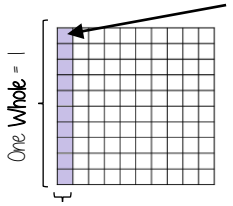
By the end of this unit you should be able to:

- Convert fluently between fractions, decimals & percentages

Keywords

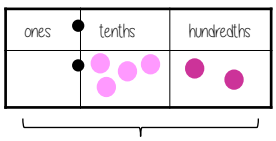
Fraction: how many parts of a whole we have
Decimal: a number with a decimal point used to separate ones, tenths, hundredths etc.
Percentage: a proportion of a whole represented as a number between 0 and 100
Place value: the numerical value that a digit has decided by its position in the number
Placeholder: a number that occupies a position to give value
Interval: a range between two numbers
Tenth: one whole split into 10 equal parts
Hundredth: one whole split into 100 equal parts
Sector: a part of a circle between two radius (often referred to as looking like a piece of pie)
Recurring: a decimal that repeats in a given pattern

Tenths and hundredths



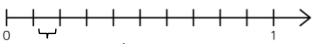
One **hundredth** (one whole split into 100 equal parts) = $\frac{1}{100}$ = 0.01

One **tenth** (one whole split into 10 equal parts) = $\frac{1}{10}$ = 0.1



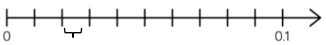
0 ones, 5 tenth and 2 hundredths
0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01
= 0 + 0.5 + 0.02
= **0.52**

On a number line



One whole – split into 10 equal parts

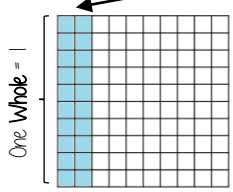
One tenth = $\frac{1}{10}$ = 0.1

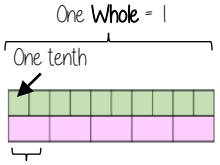


One tenth – split into 10 equal parts

One hundredth = $\frac{1}{100}$ = 0.01

Fifths

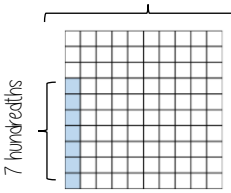




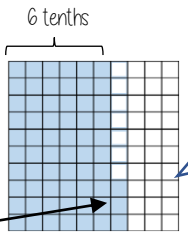
One **fifth** (one whole split into 5 equal parts) = $\frac{1}{5}$ = 0.2

Percentages on a hundred grid

100% = a whole = 100 hundredths



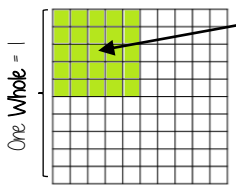
7 hundredths
7 out of 100
7%

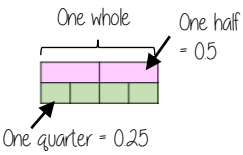


6 tenths and 3 hundredths
63 hundredths
63%

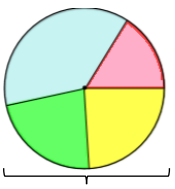
Quarters

One **quarter** (one whole split into 4 equal parts) = $\frac{1}{4}$ = 0.25





Simple pie charts



A pie chart has 360° so all FDP calculations are out of 360

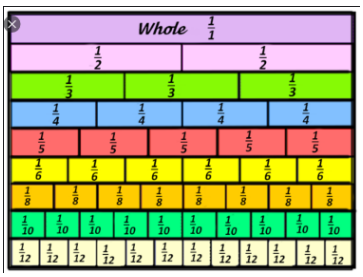
Split into 10 parts = 10% = 36°

Split into 2 parts = 50% = 180°

Split into 5 parts = 20% = 72°

Equivalent fractions

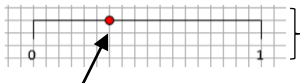
Represent equivalence with fraction walls



Fractions – on a diagram

The denominator is represented by EQUALLY sized parts – this is split into quarters

Fractions – on a number line



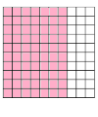
This point is at the 6th part
6 is the **numerator**

One whole split into 18 equal parts
18 is the **denominator**

$\frac{6}{18} \leftarrow \frac{3}{9} \leftarrow \frac{1}{3}$

Convert FDP

$\frac{70}{100}$ → This also means 70 ÷ 100 → 70 out of 100 squares → 70 "hundredths" = 7 "tenths" = 0.7



→ 70 hundredths = 70%

Using a **calculator**

→ S⇌D → Convert to a decimal

This will give you the answer in the simplest form

× 100 converts to a percentage

Be careful of recurring decimals
e.g $\frac{1}{3}$ = 0.3333333 = $0.\dot{3}$
The dot above the 3

Year 7 Science Autumn Term Knowledge Organiser Particles

Key Vocabulary:

1	**States of matter**	They are solids, liquids and gases.
2	**Melting**	A substance changes from a solid to a liquid.
3	**Freezing**	A substance freezes when it changes from a liquid to a solid.
4	**Melting Point**	The temperature at where the melting and freezing of a substance happens.
5	**Boiling**	A substance changes from a liquid to a gas.
6	**Condensation**	When a substance changes from a gas to a liquid.
7	**Boiling Point**	The temperature at which boiling and condensing happens.
8	**Diffusion**	Diffusion is the movement of particles from a high concentration to a low concentration.
9	**Independent Variable (IV)**	The variable you want to change/ investigate.
10	**Dependent Variable (DV)**	The variable you measure because it depends on the IV.
11	**Control Variable (CV)**	The variables you keep the same because they could affect the dependent variable.
12	**Density**	Defined as the mass per unit volume of a substance.
13	**Density**	Density = mass ÷ volume
14	**Volume**	Volume = mass x width x height

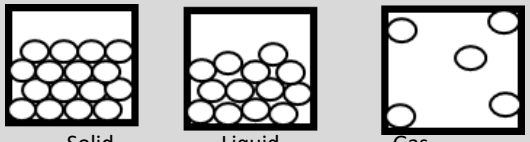
15 Properties of State of Matter

The three states of matter have different properties.

Property	Solid	Liquid	Gas
Does the object flow?	No	Yes	Yes
Can the object be compressed?	No	No	Yes
Does the object fill to fit the container?	No	No	Yes
Does the object have a fixed shape?	Yes	No	No
Does the object have a fixed volume?	Yes	Yes	No

16 The Particle Model

- All matter is made from tiny particles.
- The arrangement of particles affects the properties of the substance.
- The three states of matter can be represented by a simple model.



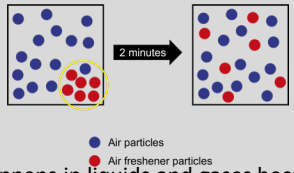
Solid Liquid Gas

- Particles in a solid are arranged in a regular pattern, touch each other and vibrate on the spot
- Particles in a liquid are arranged randomly, are touching and move freely
- Particles in a gas are arranged randomly, do not touch and move freely
- Some substances expand when heated. This is because when heated, particles have more energy. They vibrate more. The space between particles is bigger.

17 Changing State

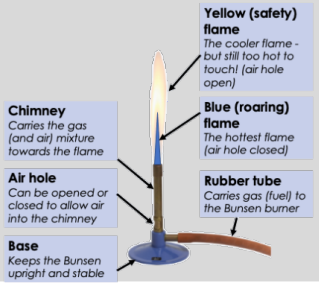
- When a solid melts, the particles gain **energy** from the surroundings, so they begin to **vibrate faster**. The particles move away from their places in the arrangement and start to move around more.
- When a liquid starts to freeze, its particles move more slowly as they **lose** energy to the surroundings. The particles form a **regular arrangement** and vibrate on the spot.
- During boiling, a liquid is heated. The particles gain energy. They move further apart. This forms a gas.
- During condensation, a gas cools. The particles lose energy. They move closer together until they are touching. This forms a liquid.
- When boiling occurs, Bubbles of the substance rise up to the surface and escape into the air.
- The particles in a solid can vibrate in a fixed position and cannot move from place to place because there are strong forces, which attract the particles towards each other
- The particles in a liquid are able to move around each other because the bonds are strong enough to keep the particles close together, but weak enough to let them move around each other

18 Diffusion



- Diffusion happens in liquids and gases because particles are free to move.
- Diffusion cannot happen in solids because particles in a solid are not free to move.
- Diffusion happens faster when the particles in a liquid or gas are moving faster after heating.

19 Heating Substances



20 Gas Pressure

- Gas pressure happens because of particles colliding with the walls of a container
- Increasing the size of the container decreases the gas pressure as there will be less collisions.
- Decreasing the size of the container increases the gas pressure as there will be more collisions.
- The deeper underwater you travel, the greater the pressure.
- The higher up you go into the atmosphere, the less the pressure.
- Greater pressure compresses gas particles so they are closer together and have a smaller volume.

21 Density and Volume

- If an object has an irregular shape, the volume can be measured using a displacement can, or Eureka can.
- The displaced water in the cylinder occupies the same amount of space as the irregular object. The volume of water in the graduated cylinder is equal to the volume of the object.

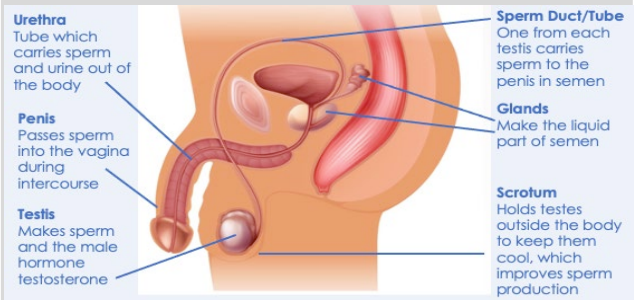
Year 7 Knowledge Organiser - Reproduction

Key Vocabulary:

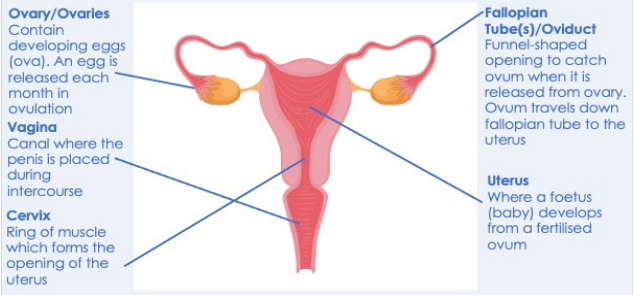
1	Asexual Reproduction	When an organism makes an exact copy of itself to make a new individual.
2	Sexual Reproduction	When sex cells from two individuals fuse to form a new individual
3	Gametes	Sex cells
4	Hormone	A chemical messenger transported in the blood
5	Ovulation	When an egg is released by the ovary
6	Fertilisation	When the gametes meet and the nuclei fuse to make a new cell
7	Implantation	When the embryo embeds into the uterus wall.
8	Amniotic sac	Contains fluid which protects the foetus from knocks and bumps
9	Placenta	Where the exchange of substances between the mother and embryo occurs
10	Umbilical cord	Connects the foetus to the placenta
11	Pollination	The transfer of pollen from the anther of one plant to the stigma of another plant
12	Germination	The process of a plant growing from a seed
13	Seed dispersal	Where seeds are transported away from the parent plant by various means; Animals externally (stuck to fur), animals internally (eaten), wind and explosion and water.

Reproductive Systems

14 Male Reproductive System



15 Female Reproductive System



16 Puberty

- The body goes through changes during puberty or adolescence (e.g. body and pubic hair grow).
- This prepares the body for sexual maturity and the production of gametes.
- These changes are controlled by sex hormones.
- A hormone is a chemical messenger transported in the blood

17 Menstrual Cycle

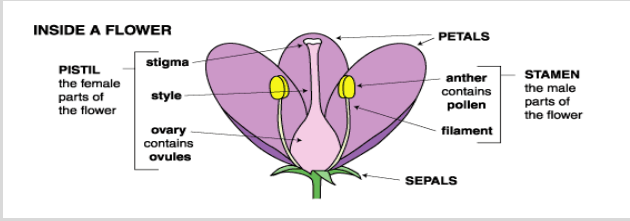
The female reproductive cycle is called the menstrual cycle.
The menstrual cycle prepares a woman's body for pregnancy.
The menstrual cycle is controlled by sex hormones.
On average, one menstrual cycle lasts 28 days.
Ovulation is when the egg is release.
Ovulation occurs on day 14.
The uterus lining builds up to allow the embryo to develop.
If fertilisation does not take place then the uterus lining is shed between days 1-5. This is called menstruation

Fertilization and Sexual Reproduction in Plants

18 Fertilisation and Gestation

- Fertilisation is when the gametes meet and the nuclei fuse to make a new cell.
- After fertilisation, the cell multiplies to make an embryo.
- Implantation is when the embryo embeds into the uterus wall.
- After implantation, the embryo grows and develops into a foetus until it is ready to be born. This is called gestation.
- The amniotic sac contains fluid which protects the foetus from knocks and bumps.
- The placenta is where the exchange of substances between the mother and embryo occurs.
- The umbilical cord connects the foetus to the placenta.

19 Sexual Reproduction in Plants

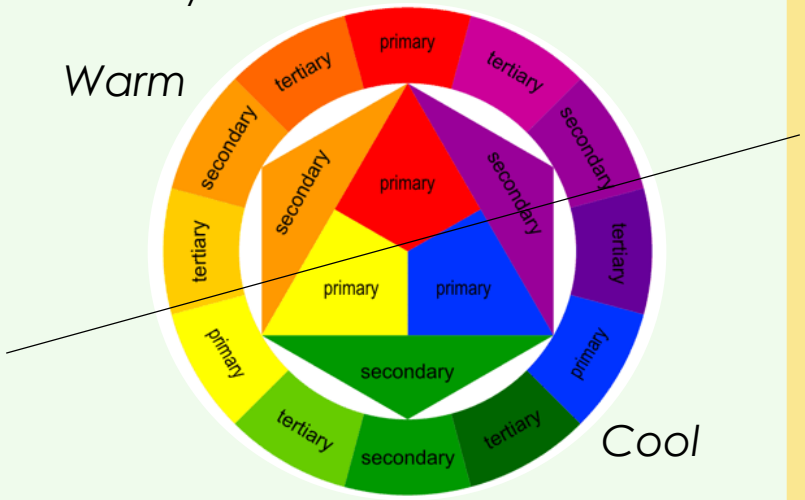


- The male gamete is the pollen grain.
- Pollen is produced by the anther.
- The female gamete is the egg found in the ovule. The ovule is in the ovary.
- Pollination is the transfer of pollen from the anther of one plant to the stigma of another plant.
- Pollination can be carried out by insects, animals or the wind.
- Seed dispersal is needed so that the new plant grows far away from the parent plant so they don't compete for water and light.

Year 7 ART HT1 Knowledge Organiser

Colour Theory

- **Primary** colours – R B & Y
- **Secondary** colours – G P & O
- Primary colours are mixed together to make secondary colours
- Primary colours cannot be mixed.



- B + R = Purple
- Y + R = Orange
- B + Y = Green
- The colour wheel is split into two halves: **warm and cool colours.**
- **Harmonious** colours look well together and are pleasing to the eye. These are next to each other on the colour wheel.
- **Complementary** colours are opposite each other – these are not so pleasing to the eye.

Keywords

Formal Elements - The parts used to make a piece of artwork.

Line - Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.

Shape - A shape is an area enclosed by a line. It could be just an outline or it could be shaded in. Shapes can be geometric or irregular.

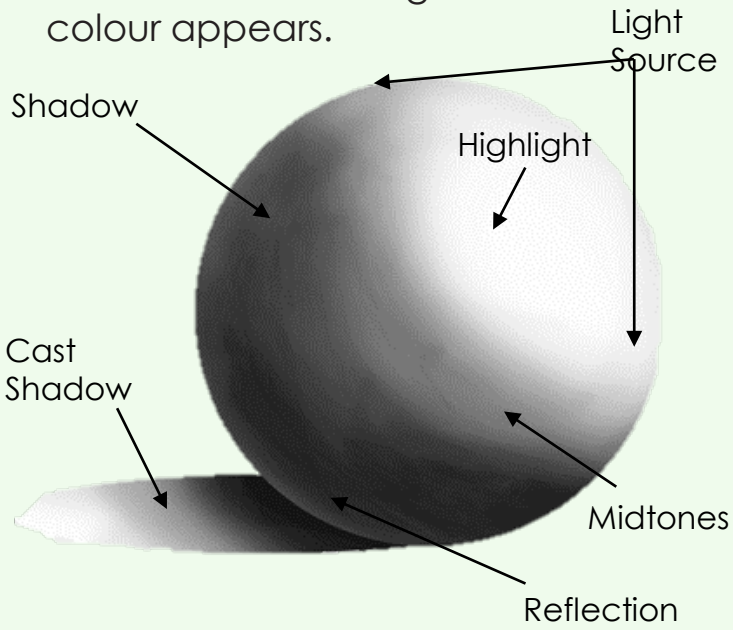
Tone - This refers to the lightness or darkness of something.

Technique – The way tools and media are used to create an artwork.

Space – This refers to the emptiness or area between, around, above, below, or within objects.

Tone

- In art and design, tone refers to how light or dark something is. Tones could refer to black, white and the grey tones between. It could refer to how light or dark a colour appears.



- In real life tone is created by the way light falls on an object.
- The parts of the object on which the light is strongest are called **highlights** and the darker areas are called **shadows**.

Year 7 ART HT1 Knowledge Organiser

Key words

Composition – The arrangement and layout of elements within a work of art.

Still life - A work of art featuring an arrangement of inanimate, everyday objects, often flowers or fruit.

Abstract - Abstract art is modern art which does not represent realistic images of our everyday world.

Patterns – A design in which lines, shapes, forms or colours are repeated.

Landscape - the depiction of natural scenery in art.

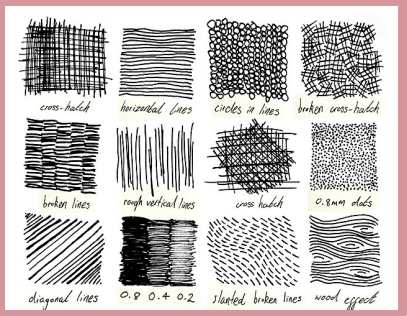
Man-made – Something which was created by humans.

Carolee Clark

Carolee Clark is an artist best known for her vibrant use of colour. Her subject matter tends to be common scenes, such as landscapes and food. She primarily uses acrylic paints.

Mark-making

This describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose or neat.



Observational Drawing tips

Observe – Look at what you are drawing.

Understand **perspective** and **proportion.**

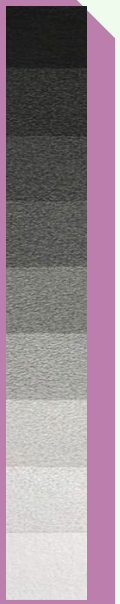
Keep the outlines light.

Use a good **range of tone**.

Use **mark-making** to create texture.

WAGOLLS

Tonal Scale



Year 7 History Term 1 Knowledge Organiser: How did a Frenchman control England?

William, Duke of Normandy was the successful winner of the Battle of Hastings. He was originally from France and became King of England. He was later known as William the Conqueror.

Methods of Control

Castles	William built castles to protect his barons from attacks from unhappy Englishmen and to send a message about who was in charge.
Domesday Book	1085-86: William sent officials to every village in England to ask questions. This was so he could know how many people there was and how much taxes they should pay.
Feudal System	The feudal system was William's way of managing the land in England. He shared the land out in return for people's loyalty.
Harrying of the North	The Harrying of the North was a campaign of brutal violence carried out in the North of England by order of the King.

HEIR	A person who inherits someone's wealth or a throne when the person holding it dies.
OATH	A formal promise, especially a promise to be loyal to a person or country.
SUCCESSION	The order in which individuals are expected to become monarch.
MONARCHY	A system of government with a monarch (king or queen) in charge.
RETREAT	Movement by soldiers away from an enemy.
SHIELD WALL	A protective wall formed by interlocking the shields of foot soldiers.
CAVALRY	The group of soldiers in an army who ride horses.
BARON	An important noble-man or lord who received land from the King.
HARRYING	To attack or to raid.
SURVEY	To ask many people a question or a series of questions in order to gather information .
HIERACHY	A system of organising people into different ranks or levels of importance.
TAX	Money that people have to pay to the government.
PEASANT	A person who owns or rents a small piece of land and grows crops.

TIMELINE OF THE NORMAN CONQUEST

- **Death of Edward the Confessor** — 5th January 1066
- **Battle of Stamford Bridge** — 25th September 1066
- **Battle of Hastings** — 14th October 1066
- **Harrying of the North** — 1069 - 1070
- **Surveying for the Domesday Book begins** — 1085

Year 7 HT2 Drama Knowledge Organiser

Summary of topic

Through exploration the students understand the differences of Victorian education to school today. They also start explore the famous text Oliver Twist and understand the hardship faced during the Victorian period.

Knowledge:

Queen Victoria ruled the United Kingdom from 1837 - 1901.
Textile factories had sprung up across the country, particularly in Lancashire.
Working class people often lived in cramped, back-to-back terraced housing. These houses were often poor quality and families lived in overcrowded conditions, often living in one room in a house.
A lack of proper sewers, clean running water, overcrowding, and heavily polluted air contributed to outbreaks of disease such as cholera, tuberculosis and typhus.

Aims of the topic

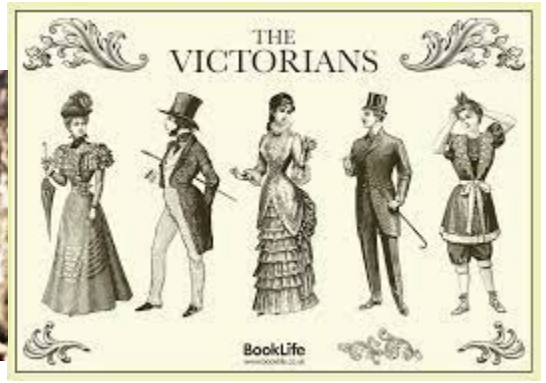
To be introduced to the historical period of the Victorians, play a Victorian character and to explore the famous text of Oliver Twist.

The Victorians/

Oliver Twist Y7

Knowledge Organiser

DRAMA



Key Words

Proxemics
Duologue
Social Class
Scripted
Costume

Orphan
Poverty
Plot

Plot of Oliver Twist

1. **Oliver Twist is sent to the workhouse as he is an orphan – he asks for 'more'**
2. **He is sold to the Sowerberry's and works in a funeral parlour.**
3. **He meets Dodger and Fagin and becomes a pick pocket**
4. **He goes to court and meets Mr Brownlow**

Year 7 Subject Term Knowledge Organiser: Computing: E-Safety

Password:
Have a password that is six or more characters long Include upper and lower letter case letters Include numbers Avoid information that may be easy to guess e.g. pet name

Email: stands for "electronic mail"
This is when a message is sent from one computer to another, usually over the internet.

Netiquette is the term for how you should behave when sending emails and using the internet.

Social media:
interactive technologies that allow the creation and sharing of information, ideas, career interests, and other forms of expression via virtual communities.

Digital footprint:
A trail of information and data that you create whilst you are surfing the internet. If you post any updates on social media, pictures, or videos then you are creating a 'data trail'.

Personal data:
This is any information related to an individual person. Examples include name, address, date of birth, email address

An Internet Troll
People who leave intentionally provocative or offensive messages on the internet in order to get attention, cause trouble or upset someone.

Cyberbullying
This is a form of bullying through mobile phones and the internet. This includes malicious text messages, "happy slapping", sending nasty or threatening messages on websites and chat rooms and setting up fake accounts on somebody else's behalf.

Staying Safe Online:
1) Think Before you post
2) Keep your Personal Data safe/Check your privacy settings
3) Never give out your password
4) Don't accept a friendship request from someone you don't know

A Virus
A Virus is a program that "infects" your computer.
It harms your computer in some way, usually by deleting or altering files and stopping programs from running.

Anti Virus Software
Antivirus software acts as a "vaccine" against virtual viruses. It can identify and eliminate the threat before you were even aware of it

Phishing Scams
When people send you phony emails, pop-up messages, social media messages, texts, calls, or links to fake websites in order to hook you into giving out your personal and financial information.

Year 7 Subject Term Knowledge Organiser

Dance

Knowledge

Explore movements, stylistic features, actions, space and dynamics in dance. Action steps and co-ordination (travel, step, turn, balance, stillness) performance skills (projection and facial expressions) musicality (tempo, speed and timing) jumping. Stretching, bending

Skills

Explore movements, stylistic features, actions, space and dynamics in dance.

Key Words

Stylistic Features – How a dancer or dancers, executes the different dance genres, and their own specific style qualities.
Dynamics – How the dancer moves e.g. fast/ slow, sudden/ sustained
Resilience – The capacity to recover quickly from difficulties; toughness.
Role model – Someone who is worthy of imitation – like your beloved teacher or a well behaved celebrity.
Reflection – Serious thought or consideration.

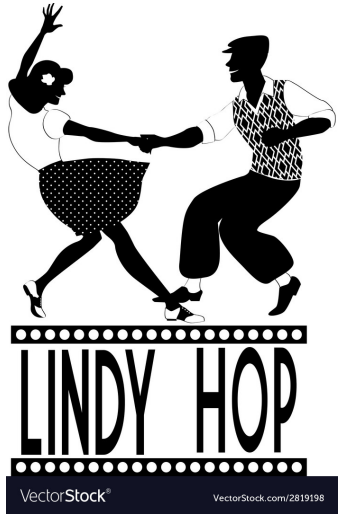
Knowledge

Lindy hop

The Lindy Hop is an American dance which was born in the African-American communities of Harlem, New York City, in 1928 and has evolved since then. It was very popular during the swing era of the late 1930s and early 1940s. Lindy is a fusion of many dances that preceded it or were popular during its development but is mainly based on jazz, tap, breakaway, and Charleston. It is frequently described as a jazz dance and is a member of the swing dance family.

The first dances named as Lindy Hop were born around the time the aviator Charles Lindbergh made his ground breaking flight across the Atlantic Ocean in May 1927. The most famous Lindy Hop dance, which is not connected to the other Lindy Hop dances, was born in the Harlem dance marathon in 1928 where George Snowden and Mattie Purnell reinvented the breakaway pattern by accident.

Skills- steps
Twist Around (for two 8 counts)
Double Break
Break & Hold with Pecking
"Duck" – Swingout from Closed with Leader's Duck
Promenade
Promenade
Flip Flop
Rhythm Break Forward



Year 7 PE Knowledge Organiser- Orienteering

The main aim of orienteering is to complete the set course by finding control markers in the correct order in the shortest time.

Skills and Techniques

Orienteering is a sport that require **navigational skills** using a **map and compass** to **navigate** from point to point in **diverse** and often unfamiliar **terrain** whilst moving at **speed.** Participants are given a **topographical map**, usually a specially prepared orienteering map, which they use to find **control points**.

Running activities: All lessons start with running activities to encourage pace and speed. Cardiovascular fitness is required over different types of terrain.

Observing surroundings: Look at your surroundings (playground/ cage/ grass areas/ tree) and identify key features that help you find your precise location. You need to observe your surroundings before looking for markings on a map.

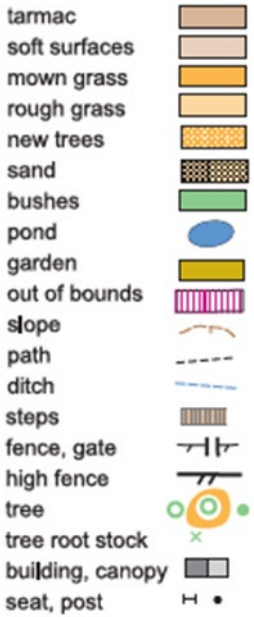
Orientating a Map. You need to orientate your map (move it) to line up with the key features on the ground and check it is the correct way round to the direction you are facing.

Directions: - understand the Cardinal Markers – North, South, East and West and their relation to features on the ground and to places beyond the school site.

Map Reading – Recognise symbols on a map, be able to use a key to recognise symbols and colours on an orienteering map.

Human features: Know that a human feature is influenced by man (buildings, benches, fences, walls)

Physical Features: Know that a physical feature is natural (rivers, beaches, hills, forests)



Key words

Orienteering, Location, Speed, Cardiovascular Fitness, Setting a Map, Navigation, Diverse Direction, Key, Cardinal Markers, Terrain Map Compass, Control point

Rules:

Although it Is based on accurate map reading it is also a test of physical fitness.

You must find all the controls you are told to visit and record them on your score sheet.

You have to consider the terrain you are moving over ensuring your safety and the safety of any team members at all times, taking into account the varying fitness level of all your team members.

Is Jesus Radical?

Key terms

1. **Religion** Religion is an organized system of beliefs, ceremonies, and rules used to worship a god or a group of gods.
2. **Jesus** The son of God and the saviour of humanity.
3. **Radical** Someone that does not conform to the norm (rules, laws and regulations).
4. **Pharisees** A group of Jewish leaders at the time of Jesus who were well respected in society.
5. **Messiah** Meaning anointed one (in Hebrew).
6. **Pacifist** A person who believes that violence is always wrong.
7. **Miracle** A miracle is an event or occurrence which goes against the laws of nature.

Crucial Commands:

Describe: Say in detail what something or someone is like, and the impact it has. E.g. Describe importance of Religious Education in schools and society.

Explain: Say why something or someone is important, and the impact it has. E.g. Explain why Jesus' view towards women in society was radical.

Discuss: Write about at least two points of view and explain why these points of view are valuable or not. E.g. ""Jesus is radical" Discuss.

Who did Jesus heal?

'Those who are well don't need a doctor. Only sick people need a doctor.' Mark 2:17 (The Bible)
In the Bible there are different types of miracles performed by Jesus.

- Raising the dead miracle – Jesus raises someone from the dead.
- Nature miracle – Jesus shows his power over the natural world.
- Healing miracle – Jesus heals someone from a disease/demon or disability.

Who had a problem with Jesus? Why?

Matthew 23:1-12 - Religious Fashion Shows – Jesus taught that expensive silks for clothes was NOT necessary!
Mark 2:15-17 – Jesus dines with sinful guests - In Jewish society (2000 yrs ago) certain people were seen as sinful and you were not to be with. The sick were seen like this and anyone who worked for the Romans. Jesus mixed with all, which upset Jewish people.

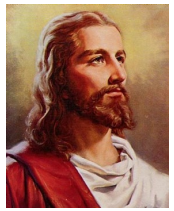
What are Jesus' view to women?

Jesus had many women followers, as well as men. Two particular friends were sisters **Mary and Martha**, whose home he often stayed at with his disciples. One story tells how Mary sat at Jesus' feet – the traditional posture of a disciple with their rabbi (Luke 10:38-42). This was not the usual place of women – they belonged in the home, looking after the men.
But Jesus commended her for her actions, when others tell her off for sitting at his feet.

What was Jesus like?

"He had to be made like them, fully human in every way, in order that he might become a merciful and faithful high priest in service to God." Hebrews 2:17…

Which is the true depiction of Jesus?



Was Jesus a pacifist?

Oscar Romero (Case study)
Oscar Romero was an Archbishop in El Salvador. CAFOD supported his work for people living in poverty.
Romero became a voice for those who had no power against the violence they suffered, often though his radio broadcasts. Even when his radio station got bombed! He didn't use violence to fight back, he chose peace and simply rebuilt it!

What would Jesus do?

Jesus is asked "Who is my neighbour?" – (who am I responsible for?) He tells a story of **The Good Samaritan.**
The parable of the Good Samaritan is told by Jesus. It is about a Jewish traveller who is beaten, and left half dead alongside the road. First, a Jewish priest and then a Levite come by, but both avoid the man. Finally, a Samaritan happens upon the traveller. Although Samaritans and Jews hate each other, the Samaritan helps the injured man.

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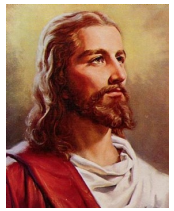

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Year 7 Subject Term Knowledge Organiser- PE orienteering

<u>Skills and Techniques</u>

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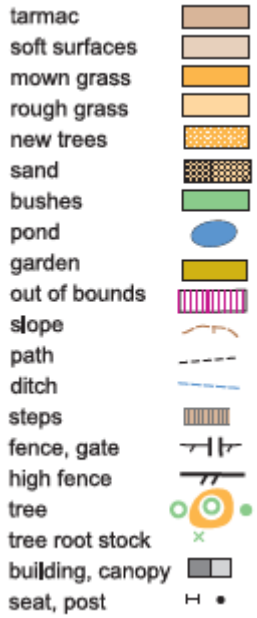
<u>Physical Features</u>: Know that a physical feature is natural (rivers, beaches, hills, forests)

.Skills and techniques

KEY: know the symbols used in the key for the school and fields Maps



Glossary

Orienteering, Location, Speed, Cardiovascular Fitness, Setting a Map, Navigation, Diverse, Direction, Key, Cardinal Markers, Terrain, Map, Compass, Control point, Thumbing

<u>Pictures</u>

Orienteering flag

Working as a team

Rules:

<u>Tactics</u>

.

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Although it Is based on accurate map reading it is also a test of physical fitness.

You must find all the controls you are told to visit and record them on your score sheet.

You have to consider the terrain you are moving over ensuring your safety and the safety of any team members at all times, taking into account the varying fitness level of all your team members.

If you are working in a team, you must share the responsibility of finding the controls and make sure that all members of your team have an opportunity to problem solve to find each of the controls.

Team work is necessary when you are completing an orienteering course with others. You must communicate and discuss each decision before navigating to the next control point. Mistakes can easily be made through poor communication.

All control marker are outside, you must not go inside the school building to cut through to find controls.

You and your team must find the controls yourself and not shout out control symbols to others

In order to be given a finish time for finding controls the whole team has to finish together

A key tactic to use is pace. You must make sure that you don't sprint off too quickly without orientating yourself and your map. You need to be able to keep a steady pace up all the way round the course.

You need to be able to orientate your map quickly by finding key features on the ground and then lining yourself and your map up to face the same direction

Each time you change direction whilst you are running you should change your grip on the map so that the map is re-orientated and remains facing the same direction as the features on the ground.

Star exercises: In a start exercise you have to run out from a central start point to a control and remember the answer on the control marker, if you are in a team you should each remember a different answer if you have to run to more than on control marker.

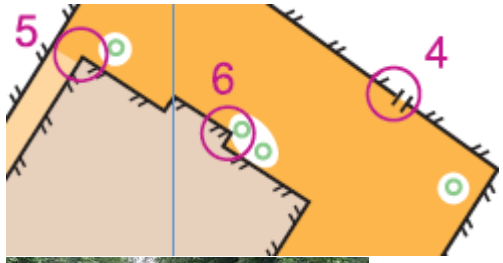
Courses, sometimes you will be given more than one control to find at a time which makes up a course. You may do a different course to another team and as it's a race you should not shout out your answers.

Thumbing- to help you know where you are on the map, you mark your position with your thumb. As you move along the ground, you should move your thumb to your new position on the map.

Line features – you can use features on the ground to help you run towards the control marker, (e.g. edge of the cage/ line of trees / fence) so that you can run in the general direction towards a control and then be more precise in your navigation as you get closer to the control.

Orienteering Control

Orienteering Map



Racing to the finish

MFL Knowledge Organiser

KO. Yr7 Introducing myself

Tenses-Present

TENER = to have	
Tengo	I have
Tienes	You have
Tiene	He/She/It has
Tenemos	We have
Tenéis	You all have
Tienen	They have

¿Cómo te llamas? = What is your name?

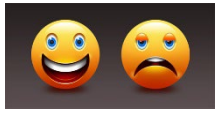
¿Cuándo es tu cumpleaños? = When is your birthday?

dos (2)	nueve (9)	quince (15)
tres (3)	diez (10)	dieciséis (16)
cuatro (4)	once (11)	diecisiete (17)
cinco (5)	doce (12)	dieciocho (18)
seis (6)	trece (13)	diecinueve (19)
siete (7)	catorce (14)	veinte (20)
ocho (8)		

Opinions & Pronouns

Fenomenal Regular

Muy bien mal



Bien

Connectives

- **También= also**
- **Y= and**
- **Pero= but**
- **Sin embargo = however**
- **Porque = because**

Adjectives

Enero	*January*
Febrero	*February*
Marzo	*March*
Abril	*April*
Mayo	*May*
Junio	*June*
Julio	*July*
Agosto	*August*
Septiembre	*September*
Octubre	*October*
Noviembre	*November*
Diciembre	*December*

Me llamo… = my name is…
Se llama = he/she/it is called…

Mi cumpleaños es el… = My birthday is…
El cumpleaños de mi amigo es el… = My friend's birthday is…

Su = his/her

Weather & Climate Knowledge Organiser

Weather & Climate

Weather: describes the current condition of the atmosphere.

e.g. the weather today in London is sunny and warm.

Climate: means the average weather conditions in a particular location.

e.g. Ghana has a tropical climate

Why is weather important?

Weather affects us in many ways. It affects what we do and what we wear, how we travel and even our moods.

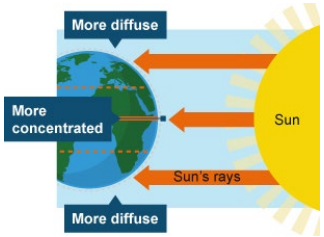
- Farming
- Transport
- Clothing
- Tourism
- Health
- Sport
- Industry
- Work/jobs
- Water supply

Measuring weather

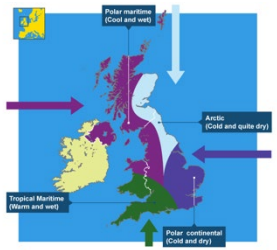
Meteorologists measure weather conditions in different places and use this information to report and make forecasts about future weather conditions. This is useful because people can be warned about hazardous weather conditions such as storms and floods.

Instrument	What does it measure?
Rain gauge	*Amount of rainfall*
Thermometer	*Temperature*
Barometer	*Air pressure*
Anemometer	*Wind speed*
Wind vane	*Wind direction*
Sunshine recorder	*Amount of sun*

Factors affecting climate



Latitude - Locations that are further north receive less concentrated energy from the Sun. The equator lies directly underneath the Sun and so countries that fall on the equator receive the strongest solar energy.



Air masses - A large body of air with similar characteristics is called an air mass. The temperature of the air and the amount of rainfall partly depend on where the air has come from. Looking at where the air has come from helps to explain the characteristics of the weather.

Altitude - Temperatures decrease with altitude. There is a 1°C drop in temperature for every increase of 100 m in height. This is because the air is less dense in higher altitudes.

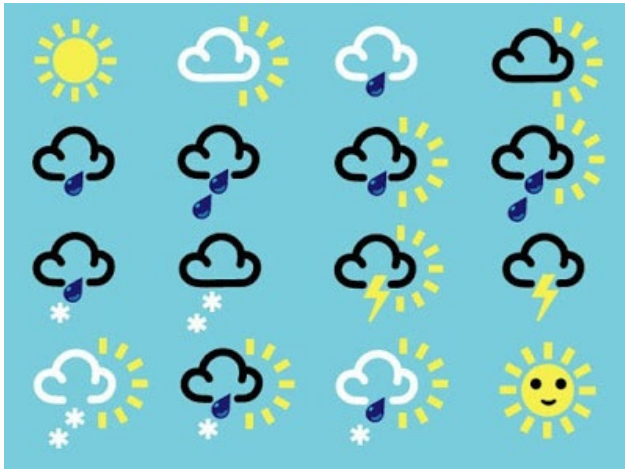
Distance from the sea - Coastal areas are most affected by the sea. The sea takes longer to heat up and cool down than land. So, in the winter the sea keeps coastal areas warm and in summer, it cools them down.

Ocean currents - The effect that **ocean currents** have on the temperature depends on whether the ocean current is hot or cold. Britain is on the same latitude as Siberia and parts of Russia, yet it does not suffer the same long, harsh winters. Britain's mild climate is partly due to the Gulf Stream, a large Atlantic Ocean current of warm water from the Gulf of Mexico.

Weather & Climate Knowledge Organiser

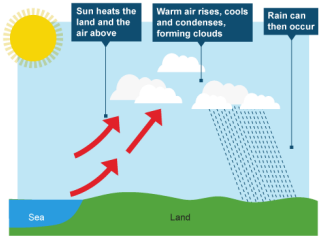
Weather symbols

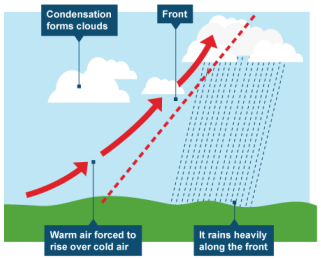
Weather forecasts use symbols to show what the weather is like in certain areas across the country.



Types of rain

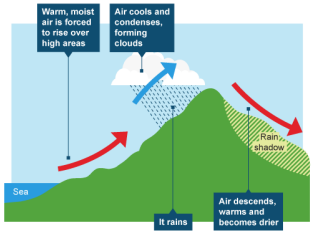
Convectional rainfall – when the land warms up, it heats the air above it. This causes the air to expand and rise. As the air rises, it cools and condenses. If this continues, clouds will form & rain will fall.





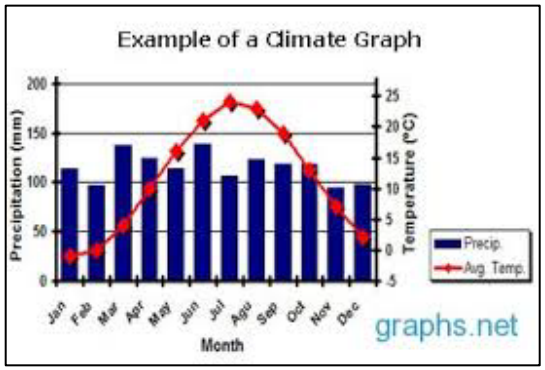
Frontal rain - When a cold polar air mass meets a warm tropical air mass they do not mix - they form fronts. The colder air mass is heavier than the warmer air mass, therefore the lighter, warmer air rises over the top of the heavier, colder air. As the warm air is forced to rise it cools. Also, the warm air is in contact with the cold air along the fronts, and this also cools. Condensation occurs and clouds form. Rain occurs along the front.

Relief rainfall - Prevailing winds bring warm, moist air to the western British Isles. Air is forced to rise over high areas. As air rises, it cools and condenses. Clouds form and it rains. Air descends on the other side of the mountains. This air is dry and a rain shadow is created this side of the mountains.



Climate graphs

Climate graphs show the average **temperature** and **precipitation** (rainfall) in a place/country over a year.



Temperature = line graph

Precipitation = bar graph

Global warming

Global warming – *the gradual increase in the Earth's average temperature*

Causes	Effects
• **Transport** – fossil fuel-based fuels e.g. cars, planes • **Landfill** – decomposing rubbish • **Deforestation** – reduces carbon absorbed by trees • **Burning fossil fuels** – for energy and in factories • **Agriculture** – cattle and use of nitrogen-based fertilisers	• Melting glaciers & ice sheets • Sea level rise • Increased tropical storms, flooding & drought • Extinction of species • Climate refugees • Coral bleaching • Decrease in fresh water supplies • Desertification

Year 7 Design Knowledge Organiser

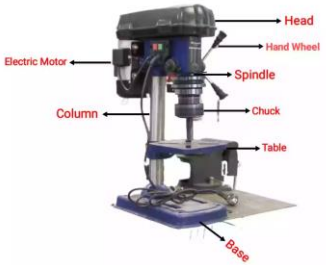
Longdendale High School

Design Process

Design Brief	A statement outlining what is to be designed and made.
Specifications	A list of design criteria.
Research	Sourcing information and inspiration to help with design work
Ideas	A range of potential solutions to the Problem.
Development	Further improving an idea.
Final Design	A presentation drawing of chosen idea.
Manufacture	Making the final outcome.
Evaluation	Reviewing strengths and weaknesses of final product and design work.

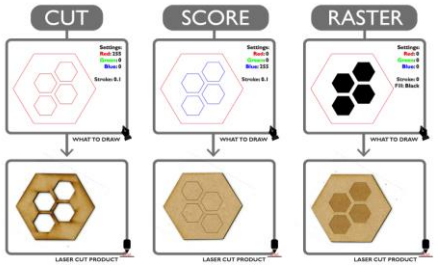
Health and Safety

Pillar Drill



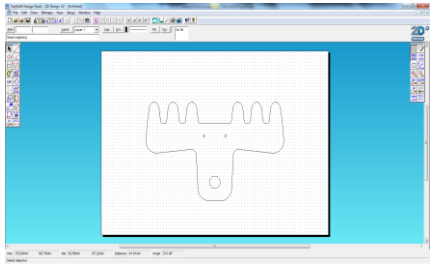
Pillar drills are free standing machine tools used by engineers that use high powered motors to rotate drill bits at varying speed.

Laser Cutter



Laser cutting is a method of cutting shapes or designs into sheet metal or other structural materials.

CAD / CAM

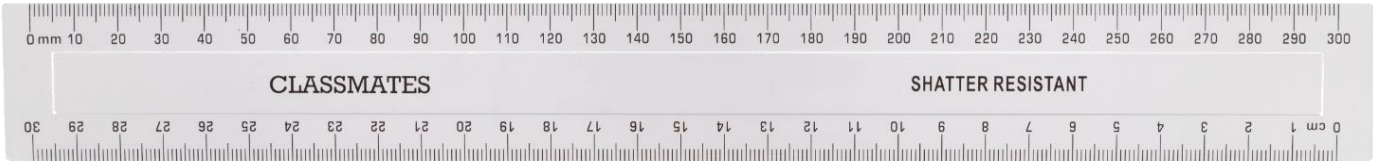


CAD stands for Computer aided design and refers to any design that is created through the use of computer software.

Plywood

Sheet materials manufactured from layers or particles of wood. Reddish brown or white in colour. Layered in odd numbered sheets. Strong. Susceptible to splintering Used in sheds and cladding, furniture, flooring, boats (marine ply).

Measure



Measuring in millimetres is more accurate than measuring in centimetres. 1cm = 10mm

Year 7 Design Knowledge Organiser

Longdendale High School

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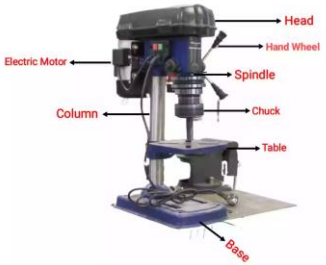

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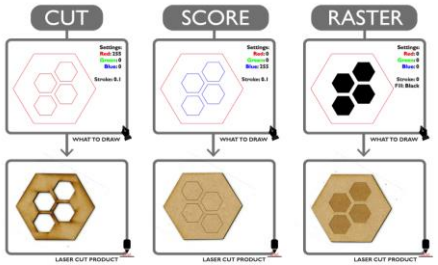

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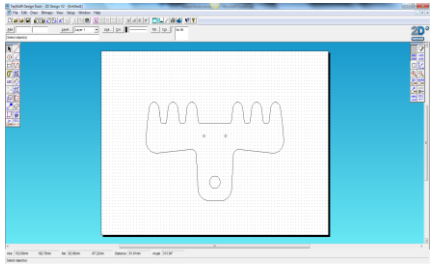

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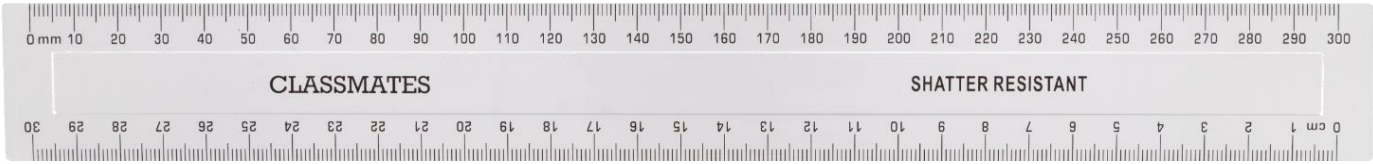

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Once by Morris Gleitzman - Knowledge Organiser

Inference: using your own knowledge to work out what is being suggested in the text.

First Person Narrative: When a character – often the protagonist – is narrating the story using first person pronouns.

Context: Information about the world when a story was written/set and how this has influenced the writer.

Protagonist: The main character in the story, whose side we are on and whose 'mission' we support.

Pronoun: A word used to replace a noun for fluency: he / she / they / it / we / I / me / my / you / your

Noun: The name of a person, place or thing.

Analysing an Extract

- Write as **succinctly** as you can, without letting your point get lost in lots of wasteful words.
- Try to **embed** your **quotations**: choose the shortest, most precise phrase from the text as you can and try to let it **flow naturally** in the paragraph you're writing.
- **Zoom in to key words**, particularly explaining **connotations.**
- Don't rely on knowing what the text means, focus instead on **working out** what Gleitzman is **implying**.

Adjective: A word which describes a noun.

Adverb: A word which describes a verb; often ends in -ly (but not always).

Connotation: Links or associations we have with a word or concept; what it makes you think of.

Verb: An action or a doing word. Every sentence needs a verb.

Quotation: A short section of a text which you copy – word-for-word – in quotation marks to help you prove your point.

Subject: The person/thing in a sentence completing an action; all sentences need a subject.

Analysing the Full Text

- Don't try to quote when you're writing about the full text, instead, try to describe a **specific moment, scene or event** in the novel which proves your point.
- It's important you don't just find yourself retelling the story; instead, after each event you describe, **explain** and **infer** what you think Gleitzman was trying to **imply** or **suggest.**
- Remember the **context** and what you think Gleitzman was trying to say about the Holocaust and, most importantly, **why**.

Imagery: When the writer describes something in detail so it makes a clear image in your mind.

Rhetorical question: A question which does not require an answer; often an obvious answer, or can show hesitance or self-doubt.

Possessive Apostrophe: An apostrophe used to show something belongs to someone.

Climax: The most tense moment of the story, where the plot starts to move towards resolving.

Dramatic Irony: When the character in the story understands *less* about the story than the reader does.

Omissive Apostrophe: An apostrophe used to show a contraction of two words into one: do + not = don't

Plot: The order in which the writer *plots* the storyline in a novel.

Reliability of Narrator: Whether or not the reader can trust the narrator's telling of the story.

Creative Writing

- You can control the mood and tone of your writing by choosing **vocabulary** with the right **connotations**.
- Imagery creates a powerful image in the reader's mind if you write in enough detail; consider what you can see (**visual imagery**), hear (**auditory imagery**), smell (**olfactory imagery**), taste (**gustatory imagery**), and touch (**tactile imagery**).
- It's important to understand the features of different writing formats: a newspaper will have **temporal phrases**, a largely **chronological** order, a **headline** and a **strapline** and will be written in **prose**.
- **Proof reading** is a key skill; no writer publishes their first draft of anything! Check your **punctuation**, particularly **apostrophes**, **capital letters** and that your **sentences** are complete.

Year 7 Textiles Knowledge Organiser

Longdendale High School

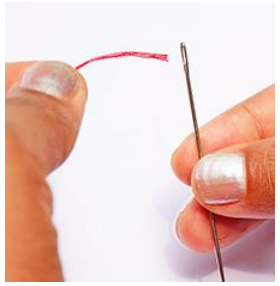
Equipment

Needle	A piece of metal with a point at one end and a hole or eye for thread at the other, used in sewing.
Pins	A piece of metal with a point at one end for holding fabric together.
Sheers	Used for cutting fabric.
Fabric	Cloth produced by weaving or knitting textile fibres.
Unpicker	A small piece of equipment with a sharp pointy end used to unpick stitches.
Tailors Chalk	Chalk used to mark fabric.
Thread	A strand of cotton, used in sewing or weaving.
Pattern	A template used to cut out the fabric.

Health & Safety

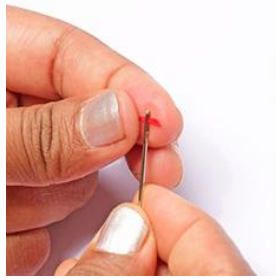
1. Work slowly to avoid sticking yourself with the needle.
2. Keep your eyes on your work.
3. Use the right tool for the job.
4. Store tools and equipment properly.
5. Cut with care.
6. Before you walk away, put things away!

How to Thread a Needle

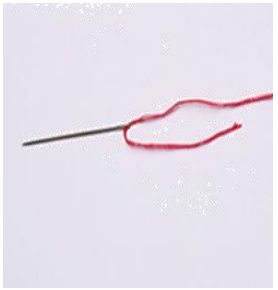


Step 1
Hold the needle in your non dominant hand and the thread in your dominant hand.

Step 2
Hold the needle in the one hand and take the eye of the needle closer to the tip of the thread in the other hand.



Step 3
Keep pushing the needle further until the end of the thread emerges well enough through the other side of the eye. Pull the end of the thread out.



Step 4
Pull the end of the thread through the eye of the needle and tie of the end of the thread in a knot.

Hand Sewing Stitches

Running Stitch

Back Stitch

Whip Stitch

Blanket Stitch

Chain Stitch

Sewing Techniques

Embroidery

Appliqué

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Longdendale High School

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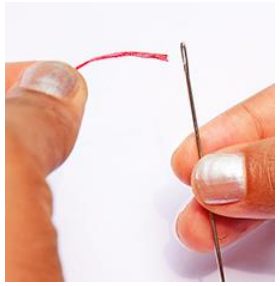

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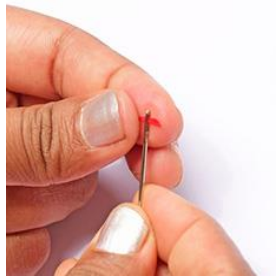

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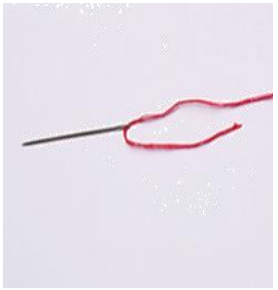

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Sewing Techniques

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Appliqué

Year 7 MUSIC HT2 Knowledge Organiser

Keywords:

Ostinato – A repeated pattern

Rhythm – A pattern of beats

Improvisation – Making it up on the spot

Imitation – Leader plays then others copy

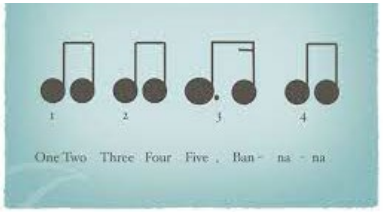
Polyrhythm – Combining different rhythms together

SURDO

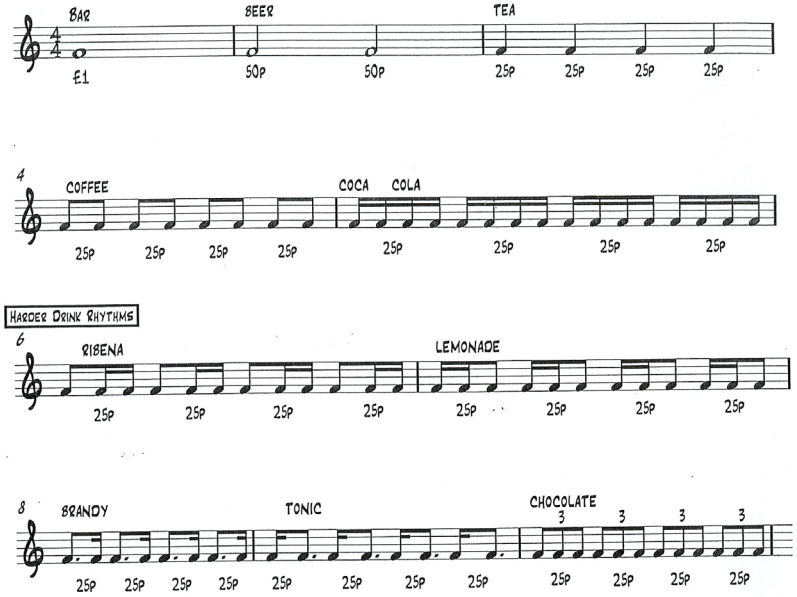
Tambourine

AGOGO

TAMBORIM

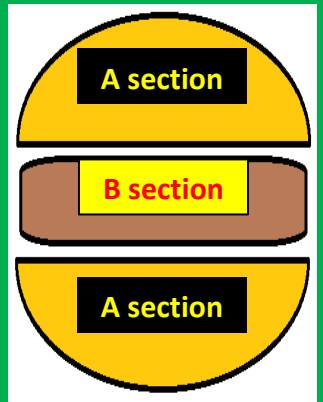


CAIXA (snare drum)



Drink rhythms

Ternary form



Samba whistle