



Year 7 - Computing - Office Skills- Knowledge Organiser



Apps in Office 365



Outlook
Email



OneDrive
Cloud
Storage



Teams
Collaboration
workspace



PowerPoint
Presentation
creation
software

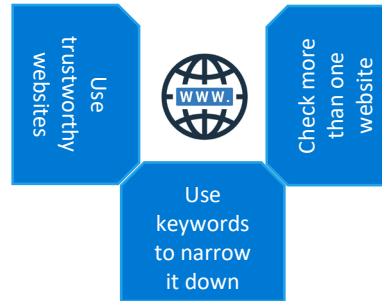


Excel
Spreadsheets



Word
Document
creation
software

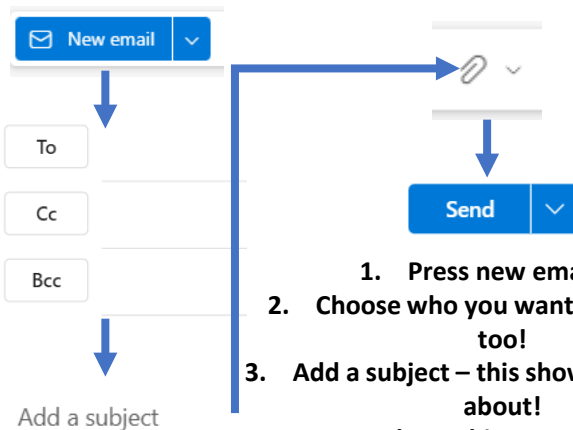
Top tips for searching the web



Key Words

Formatting	Formatting is all about adding visual touches to a document to make it easier to read and look more appealing
Alignment	Where text is positioned on a document. For example left aligned means place to the left margin.
Plagiarism	The practice of taking someone else's work or ideas and passing them off as one's own.
BCC	Blind carbon copy is a message copy sent to an additional recipient, without the primary recipient being made aware.
Teams assignment	Work set for you in Teams. This must be completed and turned in at the end of each lesson.

Steps to send an email



1. Press new email
2. Choose who you want to send it too!
3. Add a subject – this shows what it is about!
4. Attach anything you need to.
5. Press send!

Formatting

Font style

Font size

Bullet points

Bold, italic, underlined

Font colour

Alignment

Formulas & Functions

Formulas & Functions perform calculations. Functions are used for more complex calculations

Formulas

- = All formulas must start with this
- + Use this to add
- Use this to subtract
- / Use this to divide
- * Use this to multiply

Functions

A	
1	521
2	652
3	258
4	635
5	754
6	=sum(A1:A5)

A	
1	521
2	652
3	258
4	635
5	754
6	=AVERAGE(A1:A5)

Keyboard Shortcuts

Ctrl + **C** = **Copy** 

Ctrl + **B** = **Bold**

Ctrl + **V** = **Paste** 

Ctrl + **I** = **Italic**

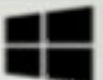
Ctrl + **X** = **Cut** 

Ctrl + **U** = **Underline**

Ctrl + **A** = **Select All**

Ctrl + **S** = **Save**

Ctrl + **Z** = **Undo**

 +  + **S** =
Snipping Tool

Ctrl + **Y** = **Redo**

F5 = **Refresh**

F7 = **Spelling &
Grammar check**

F11 = **Fullscreen Mode**

1. Key Words!

Knowledge Organiser - Cells and Organisation

2. Microscopes!

Cell: The unit of a living organism, contains parts to carry out life processes.

Uni-cellular: Living things made up of one cell.

Multi-cellular: Living things made up of many types of cell.

Tissue: Group of cells of one type.

Organ: Group of different tissues working together to carry out a job.

Diffusion: One way for substances to move into and out of cells.

Structural adaptations: Special features to help a cell carry out its functions.

Cell membrane: Surrounds the cell and controls movement of substances in and out.

Nucleus: Contains genetic material (DNA) which controls the cell's activities.

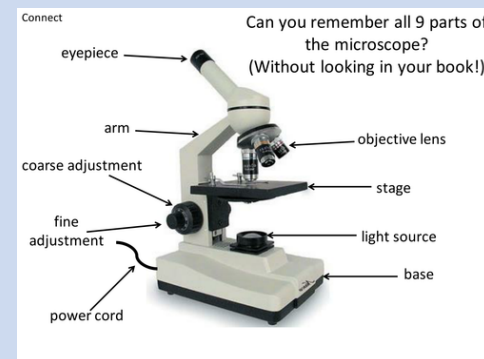
Vacuole: Area in a cell that contains liquid, and can be used by plants to keep the cell rigid and store substances.

Mitochondria: Part of the cell where energy is released from food molecules.

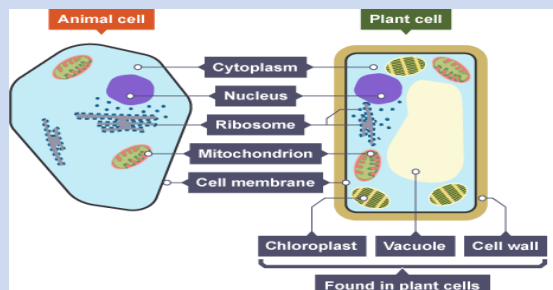
Cell wall: Strengthens the cell. In plant cells it is made of cellulose.

Chloroplast: Absorbs light energy so the plant can make food.

Cytoplasm: Jelly-like substance where most chemical processes happen.



A microscope is used to examine very small specimens. Place the slide on the stage.. Look through the eyepiece. A light from the light source shines through the specimen allowing you to see the image. The adjustment wheels are used to bring the sample into focus.



3. Plant and Animal Cells!

Animal cells usually have an irregular shape, and plant cells usually have a regular shape. Cells are made up of different parts.

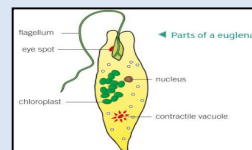
Structure	Function	Organisms found in
Cytoplasm	Chemical reactions happen here	Animal and Plant
Nucleus	Contains genetic material	Animal and Plant
Cell membrane	Controls the movement of substances in and out of the cell	Animal and Plant
Mitochondria	Where most energy is released in respiration	Animal and Plant
Chloroplasts	Absorb light energy for photosynthesis	Plant Only
Cell Wall	Strengthens the cell and supports the plant	Plant Only
Vacuole	Filled with cell sap to help keep the cell turgid	Plant Only

6. Uni-Cellular Organisms



An amoeba is a single celled organism that live in water or damp places. Although it is just one cell, it has adaptations that let it behave a bit like an animal.

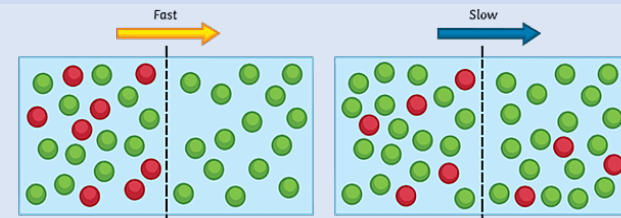
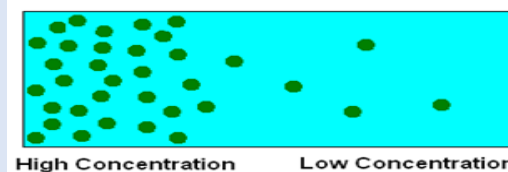
Unicellular algae are plant like organisms that contain chlorophyll and so make their own food using sunlight.



Yeast have a cell wall, like plant cells, but no chloroplasts. This means they have to absorb sugars for their nutrition, rather than being able to make their own food by photosynthesis. Yeast can reproduce by producing a bud. The bud grows until it is large enough to split from the parent cell as a new yeast cell.

Diffusion

In animals, oxygen diffuses in and carbon dioxide diffuses out. In plants, carbon dioxide diffuses in and oxygen diffuses out.



The greater the difference in concentration, the quicker the rate of diffusion.

4 Diffusion

5. Levels of organisation

The fifth level of organisation is a multi-cellular organism. A multi-cellular organism is made up of several organ systems working together to perform all the processes needed to stay alive.



Plants and animals consist of different types of cell that work together. Animal and plant cells have certain structures in common. Many cells are specialised and are adapted for their function.

7. Further Reading



Organisms

Plant and Animal Cells	https://www.youtube.com/watch?v=IH3kVOch9nU
What are cells?	https://www.bbc.com/bitesize/articles/zr69dxs
Using a Microscope	https://www.youtube.com/watch?v=xzjowD1KN20
Cells to Systems	https://www.bbc.com/bitesize/guides/z9hyvcw/revision/3
Diffusion	https://www.bbc.com/bitesize/articles/znqbcj6
Uni-cellular Organisms	https://www.bbc.com/bitesize/guides/z9hyvcw/revision/5

Key Words!

Knowledge Organiser - Science - Year 7 - Describing Forces and Motion

Types of force

Equilibrium: State of an object when opposing forces are balanced.

Speed: How much distance is covered in how much time.

Average speed: The overall distance travelled divided by overall time for a journey.

Relative motion: Different observers judge speeds differently if they are in motion too, so an object's speed is relative to the observer's speed.

Acceleration: How quickly speed increases or decreases.

Weight: The force of gravity on an object (N).

Mass: The amount of stuff in an object (kg).

Gravitational field strength, g: The force from gravity on 1 kg (N/kg).

Field: The area where other objects feel a gravitational force.

Upthrust: The upward force that a liquid or gas exerts on a body floating in it.

Newton (N): Unit for measuring forces (N).

Magnetic force: A magnetic force is experienced by any magnetic material.

Electrostatic force: An electrostatic force is experienced by any charged particle.

Gravitational force: A gravitational force is experienced by any mass.

A **force** can be a **push** or a **pull**. For example, when you push open a door you have to apply a force to the door. You also have to apply a force to pull open a drawer. You cannot see a force but often you can see what it does. When a force is exerted on an object, it can change the object's speed, direction of movement or shape.

Reaction force: An object at rest on a surface experiences .

Tension: Force extending or pulling apart.

Friction: Force opposing motion which is caused by the interaction of surfaces moving over one another. It is called 'drag' if one is a fluid.

Air resistance: An object moving through the air experiences

Balanced and unbalanced

When two forces acting on an object are equal in size but act in opposite directions, we say that they are **balanced** forces.

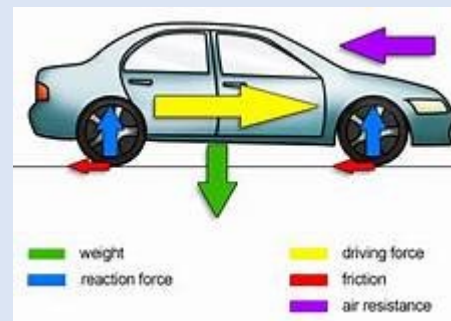
If the forces on an object are balanced (or if there are no forces acting on it), this is what happens:

- a stationary object stays still
- a moving object continues to move at the same speed and in the same direction

Remember that an object can be moving, even if there are no forces acting on it.

When two forces acting on an object are not equal in size, we say that they are unbalanced forces.

They may cause an object to start moving, speed up, slow down or change direction.



Force Diagrams

We can show the forces acting on an object using a force diagram. In a force diagram, an arrow represents each force. The arrow shows:

- The size of the force (the longer the arrow, the bigger the force)
- The direction in which the force acts

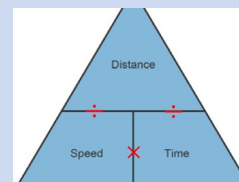
Speed

Speed is a measure of how fast an object is moving. To work out an object's speed you need to know the distance it has travelled and the time taken. Calculate speed using the equation

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

Speed cameras are used to find out if a motorist is travelling faster than the speed limit for the road.

The camera takes two photos of the vehicle. The two photos can be taken: at a certain time apart so the distance travelled in that time can be measured, or a certain distance apart so the time taken can be measured.



Units of time: (s)

(h)

Units of distance:

(m) (Km)

Units of speed:

m/s, Km/s

m/h, Km/h

If you have travelled in a car on the motorway, you may have noticed that other cars passing by appear to move slowly past you, even though you know the actual speeds of the two cars are very high. This is because of their relative motion to each other.

A distance-time graph is a way of representing a journey.

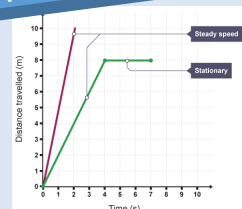
Each straight line segment of the journey represents one part of the whole journey.

An oblique segment represents a **moving** part of the journey.

A horizontal line segment represents **no movement** - this is the part of the journey where the object is stationary.

The gradient of a distance-time graph gives the constant speed for that part of the journey. The **steeper** the line, the **faster** the speed.

Distance Time Graphs



Weight, mass & Gravity

Weight can change different on different planets as they have different gravitational field strengths

The gravitational force **pulls** in the direction towards the centre of any object. So we are pulled towards the **centre of the Earth**.



Measuring Forces

- Forces can be measured using a force meter, also called a newton meter.
- Force meters contain a spring connected to a metal hook. The spring stretches when a force is applied to the hook. The bigger the force applied, the longer the spring stretches and the bigger the reading.



The unit of force is called the **newton**, and it has the symbol N. The greater the force, the bigger the number, so 100 N is a greater force than 5 N.

Key Words!

Knowledge Organiser - Year 7 - Energy and Fuels

Energy stores

Power: How quickly energy is transferred by a device (watts).

Energy resource: Something with stored energy that can be released in a useful way.

Non-renewable: An energy resource that cannot be replaced and will be used up.

Renewable: An energy resource that can be replaced and will not run out.

Fossil fuels: Non-renewable energy resources formed from the remains of ancient plants or animals.

Thermal energy store: Filled when an object is warmed up.

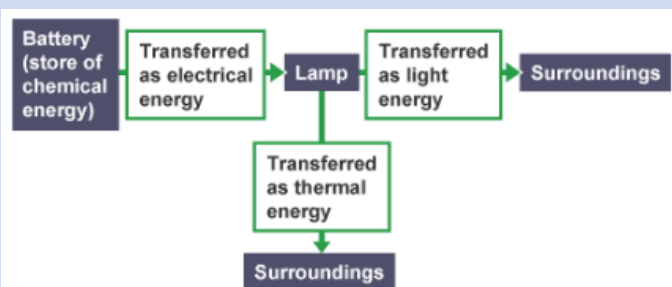
Chemical energy store: Emptied during chemical reactions when energy is transferred to the surroundings.

Kinetic energy store: Filled when an object speeds up. Gravitational potential energy store: Filled when an object is raised.

Elastic energy store: Filled when a material is stretched or compressed.

Dissipated: Become spread out wastefully.

Energy cannot just disappear, and you cannot end up with more than you had at the start. Energy cannot be created or destroyed, only transferred. This is the **law of conservation of energy**.



We can see that not all the energy transferred is useful, and some is wasted, typically by increasing the temperature of the surroundings.

Energy transfers

Energy can transfer from one store to another in different ways:

- By heating
- Mechanically
- Electrically
- By radiation
- By waves

← We can represent energy transfers as a flow diagram.

Renewable and non-renewable fuels

Non-renewable energy includes coal, gas and oil. Most cars, trains and planes use non-renewable energy. They are made by burning fossil fuels to create energy.

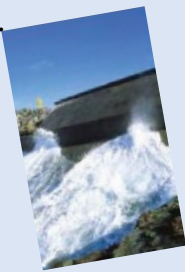
Renewable energy includes solar, hydro and wind energy. Wind energy is made when the wind moves the blades on a wind turbine. This movement creates wind energy which is converted into electrical energy.



Wind



Tidal



Wave



Hydroelectric



Solar

Energy is measured in J and kJ.

There are different forms of energy stores, including:

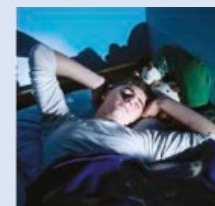
Energy to do with...	Type of energy store
food, fuels, batteries	chemical energy store
hot objects	thermal energy store
moving objects	kinetic energy store
position in a gravitational field	gravitational potential energy store
changing shape, stretching, or squashing	elastic energy store

How much energy?

Different foods are stores of different amounts of energy. Food labels tell you how much energy is in the store associated with food.

You need different amounts of energy depending on what you do each day.

Food	Energy (kJ) per 100 g
apple	200
banana	340
peas	250
chips	1000
cooked beef	1000
chocolate	1500



Sleeping uses around 300 kJ of energy per hour.

Energy in food

Power

You can calculate power using this formula:

$$\text{power (W)} = \frac{\text{energy (J)}}{\text{time (s)}}$$

Most appliances in your house will have a power rating. The higher the power rating - the more the appliance costs to use.

→ The bulbs are the same brightness, but the one on the right has a much lower power rating.

Energy suppliers use a different unit. This is the kilowatt hour, shown as kW hour or kWh. You can calculate the cost of energy using the following equations.

$$\begin{aligned} \text{energy in kWh} &= \text{power in kW} \times \text{time in hours} \\ \text{cost} &= \text{energy used in kWh} \times \text{cost of 1 kWh} \end{aligned}$$



Further Reading

Energy

Energy stores/transfers	https://www.bbc.co.uk/bitesize/guides/z99jq6f/revision/1
Fuels and resources	https://www.bbc.co.uk/bitesize/guides/zgqk87h/revision/1
Energy in the home	https://www.bbc.co.uk/bitesize/guides/zyfgr82/revision/1
Domestic energy	https://www.bbc.co.uk/bitesize/articles/zfm48mn
Solar energy	https://www.bbc.co.uk/bitesize/articles/zk9sv9q



Key Words!

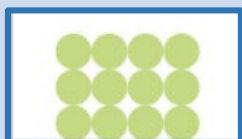
Knowledge Organiser - Year 7 - Matter

States of Matter

Particle: A very tiny object such as an atom or molecule, too small to be seen with a microscope.
Particle model: A way to think about how substances behave in terms of small, moving particles.
Diffusion: Random movement of particles (liquid or gas) from a region of high to low concentration
Density: How much matter there is in a particular volume, or how close the particles are.
Evaporate: Change from liquid to gas at the surface of a liquid, at any temperature.
Boil: Change from liquid to a gas of all the liquid when the temperature reaches boiling point.
Condense: Change of state from gas to liquid when the temperature drops to the boiling point.
Melt: Change from solid to liquid when the temperature rises to the melting point.
Freeze: Change from liquid to a solid when the temperature drops to the melting point.
Sublime: Change from a solid directly into a gas.

Most substances can exist in all three states. The state depends on the temperature and the particles will act differently in each.

The Particle Model



Solids

The particles touch their neighbours in a **regular** arrangement. They vibrate on the spot. Solids cannot be compressed and they do not flow. Solids have the highest density.



Liquids

The particles are in contact with each other as they slide over each other **randomly**. They are not as closely packed as in solids. Liquids are able to flow and change shape.



Gases

The particles are widely spaced and move **randomly** through the whole container. Gases have the lowest density; they can easily be compressed. They also flow.

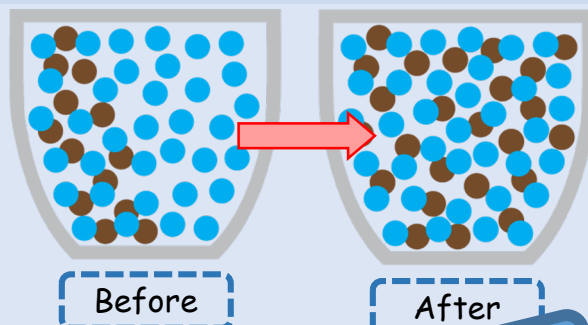
Diffusion is the net movement of particles from an area of high concentration to an area of low concentration. Three things affect the rate of diffusion:

The **size** of the particles

Temperature

The **state** of the particles

Higher temperature = faster diffusion
 Smaller, lighter particles = faster diffusion
 Gas state = fastest diffusion
 Solid state = no diffusion



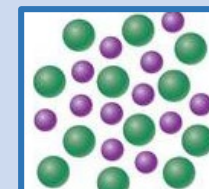
Diffusion

Everything is made up of matter containing tiny particles. The three states of matter are solid liquids and gases. An example of a solid would be wood. An example of a liquid would be water and an example of a gas would be air.

The properties of a substance depend on **what its particles are like, how they move and how they are arranged.**

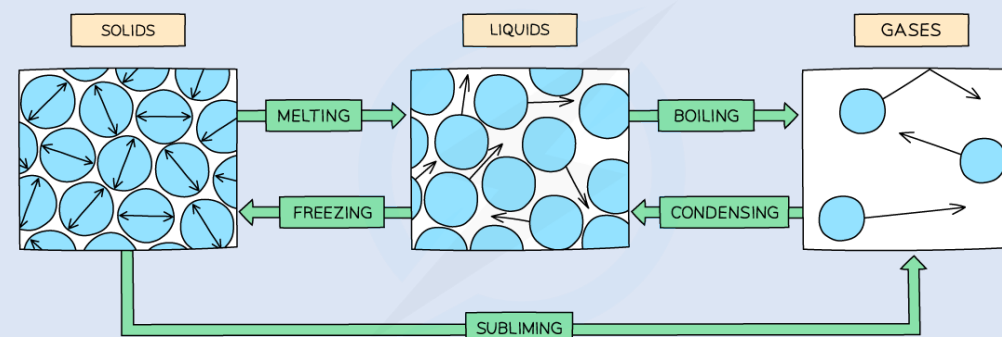


A pure substance is made of only type of material and so all of the particles are the same.



A mixture is made of more than one type of material. This means there is more than one type of particle.

Changes of State



Gaining energy

Boiling

Melting

As temperature increases the particles gain more energy and begin to move around more. Melting happens at the melting point and boiling at the boiling point.

Evaporation

Losing energy

Freezing

Condensing

As the temperature decreases the particles transfer energy to the surroundings and begin to slow down. Condensing happens at the boiling point. The particles will move closer together and freeze at the melting point.

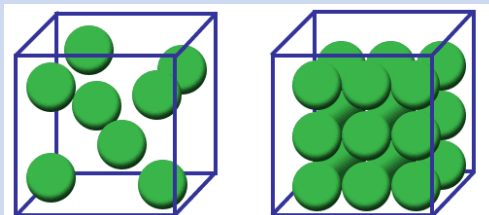
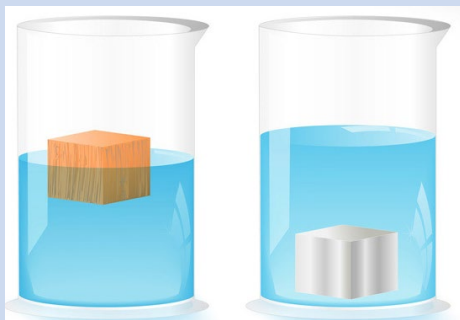
Density

Density is a measure of how much matter there is in a given volume of a substance, or how heavy it is for its size.

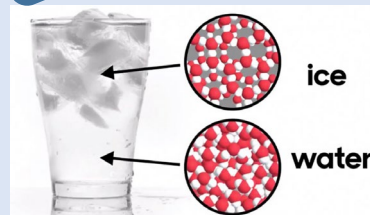
The more dense a substance is, the heavier it feels.

If a substance is **less** dense than water it will float.

If a substance is **more** dense than water it will sink.



Further Reading



Matter	https://www.bbc.com/bitesize/topics/z9r4jxs
Particle Model	https://www.youtube.com/watch?v=npv74D2MO6Q
States of Matter	https://www.youtube.com/watch?v=C33WdI64FiY
Diffusion	https://www.youtube.com/watch?v=c_IYK8sy0QA

Knowledge Organiser - Year 7 - Science - Reproduction

Key Words!

Gamete: The male gamete (sex cell) in animals is a sperm, the female an egg.

Fertilisation: Joining of a nucleus from a male and female sex cell.

Ovary: Organ which contains eggs.

Testicle: Organ where sperm are produced.

Oviduct, or fallopian tube: Carries an egg from the ovary to the uterus and is where fertilisation occurs.

Uterus, or womb: Where a baby develops in a pregnant woman.

Ovulation: Release of an egg cell during the menstrual cycle, which may be met by a sperm.

Menstruation: Loss of the lining of the uterus during the menstrual cycle.

Reproductive system: All the male and female organs involved in reproduction.

Penis: Organ which carries sperm out of the male's body.

Vagina: Where the penis enters the female's body and sperm is received.

Foetus: The developing baby during pregnancy.

Gestation: Process where the baby develops during pregnancy.

Placenta: Organ that provides the foetus with oxygen and nutrients and removes waste substances.

Amniotic fluid: Liquid that surrounds and protects the foetus.

Umbilical cord: Connects the foetus to the placenta.

The reproductive system of a child is not mature. It needs to change as a boy or girl develops into an adult, so that the system is fully working. The time when the changes happen is called puberty. Females: between ages 8 and 14, with an average of 11. Males: between ages 9 and 14, with an average of 12.

Puberty

Changes that happen only to girls:

- breasts develop
- ovaries start to release egg cells (the menstrual cycle starts)
- hips get wider

Changes that happen only to boys:

- voice breaks (gets deeper)
- testes and penis get bigger
- testes start to produce sperm cells
- shoulders get wider
- hair grows on face and chest

Gametes

Gametes have adaptations to increase the chances of fertilisation and successful development of an embryo. For example, sperm cells are produced in large numbers to increase the chance of fertilisation.

Sperm cells have these adaptations:

- A tail to move them towards an egg cell
- Many mitochondria to provide energy
- An acrosome (part of the tip of the head) that releases enzymes to digest the egg membrane.

Development of the fetus

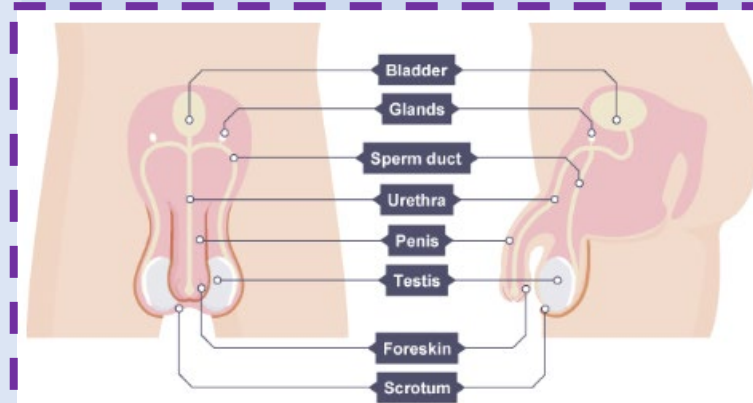
The fetus is protected by the uterus and the **amniotic fluid**, a liquid contained in a bag called the amnion.

The **placenta** provides oxygen and nutrients and removing waste substances. It grows into the wall of the uterus and is joined to the fetus by the umbilical cord.

The mother's blood does not mix with the blood of the fetus, but the placenta lets substances pass between the two blood supplies:

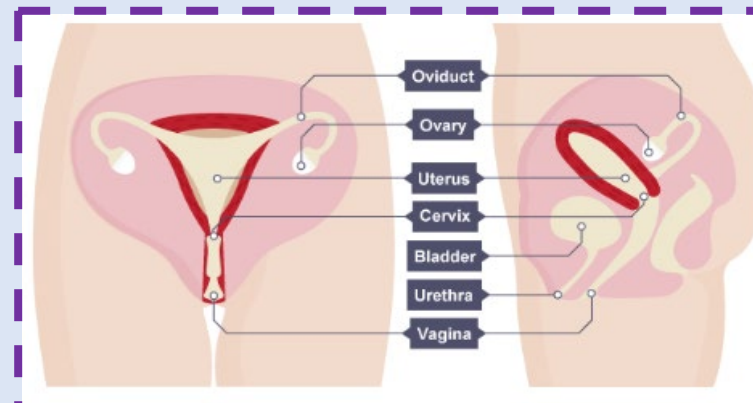
- oxygen and nutrients **diffuse** across the placenta from the mother to the fetus
- carbon dioxide and other waste substances diffuse across the placenta from the fetus to the mother

Male Reproductive System



The testes which are found in a bag of skin called the scrotum. They produce millions of sperm cells. The sperm pass through the sperm ducts and mix with fluids from the glands. This mixture is called semen. The penis releases semen and urine from the body (though not at the same time!)

Female Reproductive System



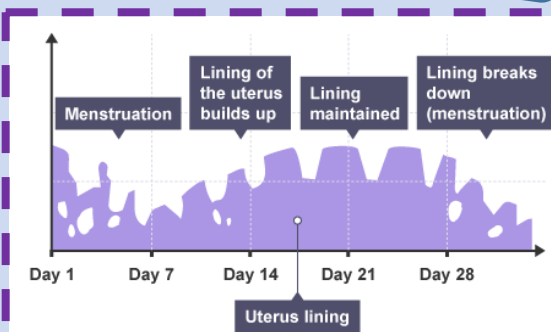
The ovaries store the egg cells. Each month one is released along the oviduct and carried towards the uterus. The uterus is where the baby develops. A baby is held in the uterus by the ring of muscle known as the cervix. The vagina is the entrance to this system. It is where the penis enters during sexual intercourse.

The menstrual cycle

It lasts about 28 days, but it can be slightly less or more than this.

These are the main features of the menstrual cycle:

- Day 1, is when bleeding from the vagina begins. This is called **menstruation**.
- Day 5, the loss of blood stops. The lining of the uterus begins to re-grow and an egg cell starts to mature.
- Day 14, the mature egg cell is released from the ovary. This is called **ovulation**. The egg cell travels through the oviduct towards the uterus.
- If the egg cell does not meet with a sperm cell in the oviduct, the lining of the uterus begins to break down and the cycle repeats.



Fertilisation

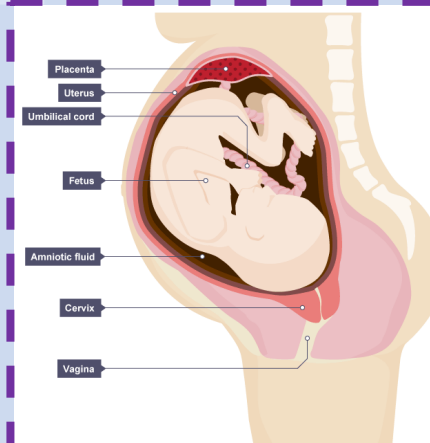
The embryo attaches to the lining of the uterus and it begins to develop into a **fetus**. The fetus relies upon its mother as it develops.

These are some of the things it needs:

nutrients

oxygen for respiration

protection against knock and bumps, and temperature changes



Knowledge Organiser - Year 7 - Working Scientifically

1. Key Words!

Accuracy: Data that is close to the true value

Line of Best Fit: A line which goes through as many points as possible on a graph.

Anomalies (Outlier): Results which do not fit the pattern

Evidence: Data which is used to back up a statement.

Fair Test: You only change one factor at a time to make something a fair test

Categoric : When there are limited number of possible values.

Continuous: When there are infinite number of possible values.

Observational Enquiry: Questions that can be investigated using observations.

Pattern Seeking Enquiry: Questions that can be investigated by collecting data from variables.

2. Hazard Symbols!

You will find hazard symbols on bottles of chemicals in the laboratory. They will tell you about any hazards of the chemical in the bottle you are working with. They are there to keep us safe in the lab.



3. Lab Equipment!



Units of length:

millimetres (mm), centimetres (cm), meters (m), kilometres (km)

Units of time:

seconds (s), minutes (mins), hours (h)

Units of mass:

Grams (g), kilograms (kg)

Units of volume: cm^3

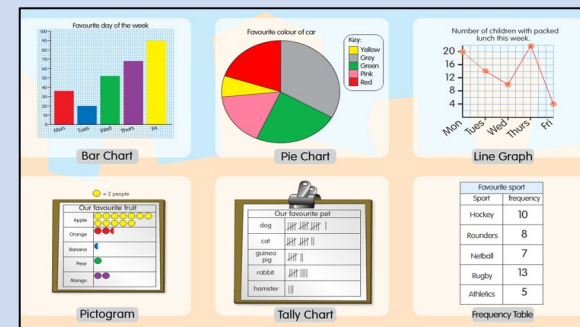
Units of temperature: Celsius ($^{\circ}\text{C}$) Fahrenheit ($^{\circ}\text{F}$)

4. Measurements!

5. Graphs and Tables!

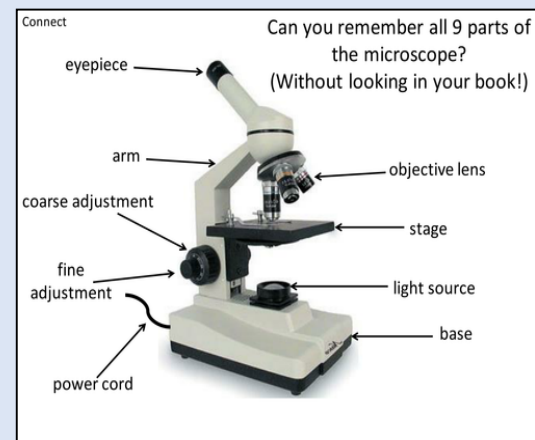
Depending on your data you will have to use different types of graph to represent your data.

- A bar chart is used when the data fits into distinct categories.
- A scatter graph is used to show the link between two different variables.
- A line graph is used to show how one variable changes over a period of time.



6. Microscopes!

- A microscope is used to examine very small specimens.
- Place the slide on the stage.
- Look through the eyepiece too see the specimen.
- A light is shone from the light source through the specimen allowing you to see the image.
- The adjustment wheels are used to bring the sample into focus.



Aim What is the purpose of your investigation?

Prediction What you think you will find during the investigation

Hypothesis A scientific explanation of why you think this will happen

Variables:

Independent / Dependent / Control

Equipment List detailed

Method Written in future tense. Step by step instructions

It must tell you to repeat your readings 3 times

Risk Assessment

Conclusion What you discovered during the investigation

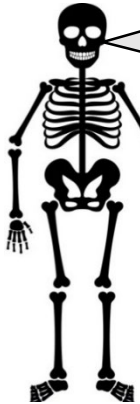
Evaluation How you would improve your investigation if you were to do it again

7. Writing a Method!

8. Further Reading!

Working Scientifically	
Lab Rules Song	https://www.youtube.com/watch?v=BRDapYqvDqQ
Bunsen Burners	https://www.youtube.com/watch?v=QjDUVMWacEQ
Graphs	https://www.youtube.com/watch?v=I2BwzZlqqj8
Tables	https://www.youtube.com/watch?v=FpeOHYELH74
Hazard Symbols	https://www.youtube.com/watch?v=WQyObsamnMw
Variables Song	https://www.youtube.com/watch?v=hwU3YL_SD70
Accuracy, Reliability and Precision	https://www.youtube.com/watch?v=MRX2laaTZHY
Scientific Methodology	https://www.youtube.com/watch?v=qAJ8IF4HI20

Year 7 Fantastic Places



Make sure you know the 'bare bones' of this unit.

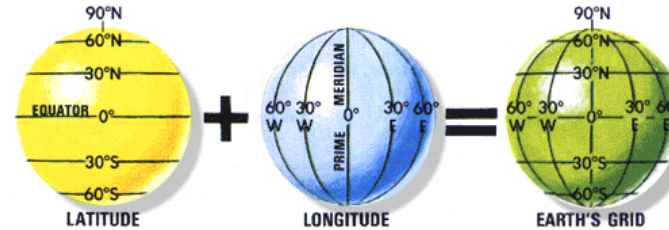
Keywords:

- **Continent** – the main land masses on Earth. It is divided into countries that have borders to separate them
- **Ocean** – large body of water that separate continents
- **Physical Geography** – linked to the natural feature of the world
- **Human Geography** – linked to people and how we live
- **Relief** – height and shape of the land
- **Contour lines** – orange/brown lines on a map showing the relief
- **Longitude** – lines running east and west of the Greenwich Meridian
- **Latitude** – lines running north and south of the equator
- **Conservation** – protecting resources and landscapes from harm
- **Climate** – the average temperature and precipitation of a location
- **Scale** – difference in distance between different points.

Continents and Oceans

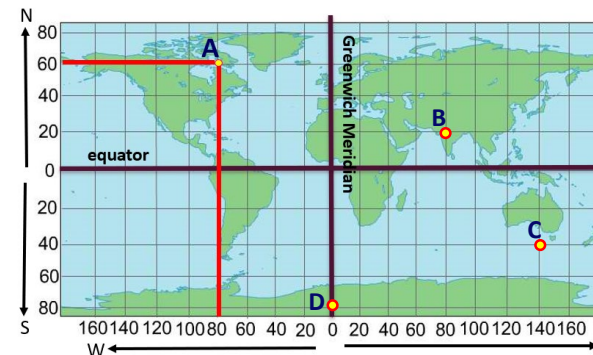


Longitude and Latitude



Instructions to find longitude and latitude:

1. Find the **latitude**. Remember to follow the lines that go left to right.
2. Write down the number
3. Is it North or South of the equator? Add this to your number
4. Now look at the **longitude**. Remember these are the lines that go up and down.
5. Write down the number
6. Is East or West of the Greenwich Meridian? Add this to your number



A = 60°N 80°W

Practice Questions:

B =

C =

D =

Geography of the UK

The UK is made up of England, Northern Ireland, Scotland and Wales. Each has its own capital city (shown on the map)

Physical Geography of the UK

- Ben Nevis (the tallest mountain at 1,345m)
- River Severn (longest river)
- Coastlines

Human Geography of the UK

- Towns and cities
- Famous landmarks like Big Ben, Buckingham Palace, The Angel of the North and Blackpool Tower



Antarctica

- It is located in the Southern Hemisphere; it is the most southern continent
- Antarctica does not have a permanent population, instead there is a scientific research base with up to 4,000 scientific researchers
- Antarctica is one of the coldest places on Earth with ninety-nine percent of it covered by an ice sheet. Average temperatures inland are -57°C and in the summer it can be up to 8°C. It can be classed as a cold desert as it receives less than 250mm of rainfall per year

Treats

- Climate change melting the ice
- Oil leaks from tourist ships
- Tourists scaring wildlife e.g. penguins during mating season

Management

- SSSIs (Sites of Special Scientific Interest) - tourists cannot access the area and cannot disrupt wildlife
- The IAATO (International Association of Antarctic Tour Operators) – Ensure companies look after the environment.

Africa

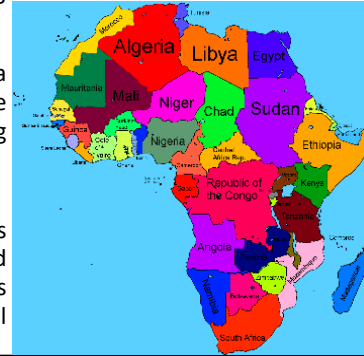
- Africa is the second biggest continent – remember it is not a country!
- It is the oldest inhabited continent with people living here for 5 million years.
- It has a total of 54 countries; the biggest being Algeria

Physical Geography

Due to the large scale of the continent the climate and ecosystems vary. In the North you have the Sahara Desert and south of this is the semi arid region of the Sahel. In central Africa you have grasslands and along the Congo River Basin you have tropical rainforest.

Human Geography

Many cities in Africa are facing rapid population, Lagos in Nigeria has 21m people living there! There rapid Population growth is resulting in some countries having rapid development and attracting global businesses.



The Great Barrier Reef

The Great Barrier Reef is located off the north eastern coast of Queensland Australia. The reef stretches for 1429 miles.

The Himalayas

This is a mountain range in Asia. It is found in India, China and Nepal. The worst tallest mountain, Mount Everest, is found here.



<u>Importance</u>	<u>Threats</u>
• provide food and livelihoods for hundreds of millions of people around the world • Tourism creates jobs – it attracts 1.6 million tourists every year • protect shorelines from erosion • Makes up 10% of the worlds coral reef and is home to a range of species	• Overfishing • Climate change – warmer oceans are killing off the coral causing it to bleach • Mining coral for building materials • Endangered species 

<u>Opportunities</u>	<u>Challenges</u>
• The slopes have forest coverage so there are trees which provide timber • snow melts providing water to the rivers which settlements use to generate electricity • attracts lots of mountain climbers and tourists bringing money to the area	• Earthquakes and avalanches threaten lives • cold climate makes staying warm difficult, there are limited energy resources for heating • mountains make it virtually impossible to build roads making large areas inaccessible.

The Galapagos
They are made up of 19 islands in the Pacific Ocean
They belong to the continent of South America and form part of the country of Ecuador.

Super Volcanoes – Yellow Stone
Yellow Stone is a National Park located in the USA. Yellowstone has an amazing landscape with deep canyons, rivers, lush forests, hot springs and geysers (blasts of hot spring water due to the heat from within the Earth).

<u>Importance</u>	<u>Threats</u>
• Around 260,000 people visit the Galapagos Islands each year creating jobs and supporting the economy	• Tourists can bring foreign animals, plants, seeds and bacteria onto them without knowing. • Over fishing • Oil leaks from boats

Yellowstone has a super volcano beneath it; this is a huge volcano which would have global impacts if it was to erupt. Luckily, they don’t erupt often, and it occurs around every 100,000 years.

Conservation
In order to protect the species found on the islands, in 1959 97% of the Islands were declared a national park.
Tourists must follow strict rules when they are there to protect the wildlife and islands for the future. This includes staying 2m from the animals, not using a flash when taking photos, no water sports.

Social Impacts – 87,000 could be killed in the area, Two thirds of the USA would be uninhabitable

Economic Impacts - Air travel would be hugely disrupted, causing economic damage, The global economy will be placed under huge pressure and likely collapse due to the damage in the USA

Environmental Impacts - The ash in the atmosphere could lower global temperatures by 10oC for up to 10 years!

Year 7 Population and Migration



Make sure you know the 'bare bones' of this unit.



UK population Distribution

- More people live in the Southeast of London – for example London. This is because there are more jobs available, better transport links and services.
- There are still other areas of high population density (lots of people) in other cities such as Liverpool, Birmingham, Manchester and Newcastle.
- Scotland and Wales have more sparsely populated (fewer people) mainly due to the high relief making it harder to live there

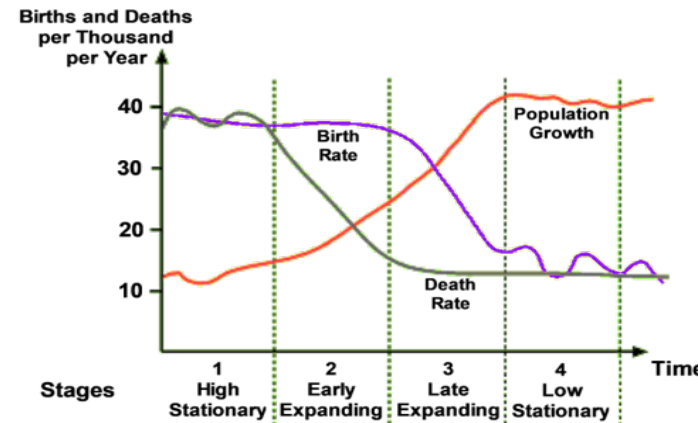


LICs	Poorest countries in the world. GNI per capita is low and most citizens have a low standard of living.
NEEs	These countries are getting richer as their economy is progressing from the primary industry to the secondary industry. Greater exports leads to better wages.
HICs	These countries are wealthy with a high GNI per capita and standards of living. These countries can spend money on services.

Population control

Governments in different countries around the world are developing strategies to control their populations. These strategies differ depending on which stage of the demographic transition model a country is at

Demographic Transition Model



Trying to decrease a population: One Child Policy

This is where the Chinese government brought in a law where people were only allowed to have one child; this was because they feared there would be another famine (lack of food).

- ☺ 400 million births were prevented
- ☹ Gender imbalance as families preferred boys - men outnumber women by more than 60 million
- ☹ Because they preferred boys there was female infanticide – this is where baby girls were aborted or orphaned
- ☹ There are now not enough working age people



Mexico to USA Migration

There is a 2000 km border between the USA and Mexico as illegal migration is a huge problem. U.S. Border Patrol guards the border and try to prevent illegal immigrants from entering the country.

Impacts on the USA

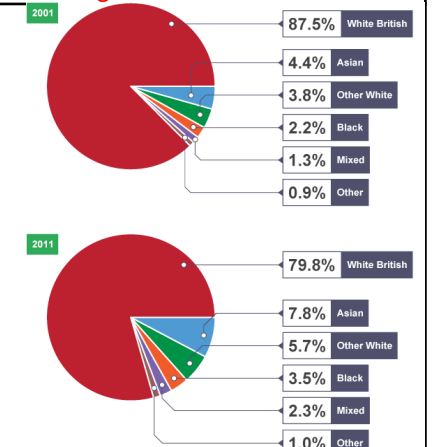
- Some Americans think Mexican immigrants are a drain on the economy. They believe that migrant workers keep wages low which affects Americans.
- Mexicans will do the jobs some Americans will not for a low wage
- Mexican culture has also enriched the USA border states with food, language and music.

Impacts on Mexico

- It often is younger people and men that migrate; this leaves an aging population and many women left behind
- Legal and illegal immigrants together send back \$6 billion a year back to Mexico.
- 10,000 people try to smuggle themselves over the border every week. One in three get caught

Multiculturalism

The increase in the number of people of mixed race is due to the development of a multicultural society where the people of the UK are now made up of different cultures and races, this is due to migration from being apart of the EU and inviting people from previous British Empire countries to come and live in the UK to help provide key skills and services.



Keywords:

1. **Population** – the total number of people living in an area
2. **Population distribution** – where people live and how this is spread out
3. **Sparsely populated** – fewer people living in an area
4. **Densely populated** – lots of people living in an area
5. **Demographic Transition Model** – model that shows us how a population changes over time as a country develops and improves
6. **Birth rate** – number of births per 1000
7. **Death rate** – number of deaths per 1000
8. **Natural increase** – where there are more births than deaths
9. **Migration** - people moving from one place to another
10. **Immigrant** – People who move into another country
11. **Illegal Immigrant** - When someone does not have permission to move into a country
12. **Refugee** - a person who has been forced to leave their country for their own safety
13. **Push factor** – something that is bad that makes people want to leave an area e.g. war, lack of water, no jobs
14. **Pull factor** – something that is good about a place that makes people want to move there e.g. safe, clean water, jobs, healthcare

Line Dance

Key Vocabulary

Posture	The way you are standing.
Step	Any movement made with your feet.
Timing	The speed of the music.
Unison	At the same time as one another.

Historical Context

Line dancing is exactly what its name implies: people dancing in lines to music.

Line dances are choreographed dances with a repeating series of steps that are performed in unison by a group of people in lines or rows. All of the dancers performing a line dance face the same direction and perform the steps at the same time. Although there are usually several lines of dancers, small groups may only form one line. Line dancers rarely interact with each other during a dance.

Line dancing is believed to have originated from [folk dancing](#), which has many similarities. The movements of a line dance are marked as "counts." Generally, one count equals one musical beat, with a particular movement or step taking place at each beat. A line dance will have a certain number of counts. Eg, a 64-count dance would contain 64 beats. The number of beats does not necessarily equal the number of steps, however, as steps can be performed between two beats or over more than one beat.

One of the most popular line dances performed today is the [Cha-Cha Slide](#)

Single beat steps:

Technical Skills

Step	<i>place foot on floor and take weight onto it</i>	
Vine	<i>step right foot to side, step left foot behind right, step right foot to side.</i>	
Touch / Tap	<i>touch toe or heel to ground but don't put any weight on it</i>	
Brush	<i>brush foot forward and upwards past the foot you are standing on</i>	
Hop	<i>spring into the air taking off and landing with same foot</i>	
Jump	<i>jump forward or backward taking off and landing with both feet at the same time</i>	
Hitch	<i>to lift the knee</i>	
Rock	<i>to transfer weight from one foot to the other</i>	
Slide	<i>to draw one foot next to the supporting foot</i>	
Strut	<i>place heel forward on floor then toe onto floor taking weight onto foot</i>	
Pivot	<i>step forward on right foot, keeping weight on ball of left foot make a ½ turn over your left shoulder so that you end up with your weight on your left foot and facing the wall that was behind you</i>	
Jazz Box	<i>step right foot across in front of left, step left foot back, step right foot to right side, step left foot next to right. Also done leading with left foot i.e. start by crossing left in front of right</i>	

Lesson Overview

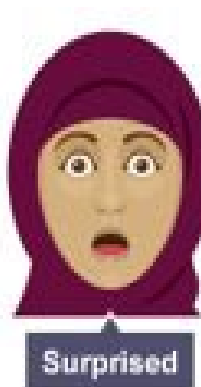
1. Key features of Line Dance and basic history
2. Copy and repeat Line Dance 1
3. Copy and repeat Line Dance 2
4. Copy and repeat Line Dance 3
5. Performance of the 3 dances for assessment
6. Evaluation of Performances

Year 7, Term 1

Introduction to Stage Craft

Keywords

Vocal Expression	How an actor communicates meaning using their voice.
Posture	How an actor stands or sits to show their characters personality.
Mime	A wordless form of entertainment in which movement and gesture are used to communicate meaning.
Gesture	A movement of the head, hand or other body part to express meaning/intention.
Ensemble movement	A choreographed movement sequence performed by a group that is abstract in style rather than naturalistic.
Still Image	This is a frozen picture which communicates meaning. It's sometimes called a freeze frame or tableau. It can provide insight into character relationships with a clear focus upon use of space/proxemics, levels, body language and facial expression.
Proxemics	This refers to the use of space between actors and how that use of space communicates their relationship to the audience.
Pantomime	A form of entertainment which is popular in the UK and is usually performed around the Christmas period.
Facial Expression	Using your face to communicate how the character is feeling.



Vocal Skills

Pitch – How high or low the voice sounds
Pace – How quickly you deliver your lines.
Pause – A pause (or beat) is a short break in speech for dramatic effect.
Tone - this suggest your mood or emotion. A sad tone or an angry tone.
Emphasis – This is where a performer will place stress on a particular word or phrase within a sentence to indicate importance.
Volume – How loud or quiet you speak depending on intention/emotion.

Stock Characters in Pantomime

Hero – The character who saves the day. (Aladdin or Peter Pan)
Villain – An evil character in the story. (Captain Hook or The Evil Queen)
Dame – A female character played by a man in drag. (Widow Twanky)
Damsel – A lady in need of rescuing. (Rapunzel or Princess Jasmine)
Sidekick – A best friend to the damsel OR the villain. (Wishee Washee or Mr Smee)

Physical Skills

Movement	Posture
Pace	Stance
Gesture	Facial Expression
Proximity	Touch
Levels	Style

Year 7 French Sentence Builder Introductions				
Je m'appelle (I am called) Je suis (I am)	Antoine	et (and)	j'habite à (I live in) je vis à (I live in)	Peterlee.
	Raoul			Shotton.
	Hugo			Wingate.
	Lucie			Paris.
	Marie			Nice.

Year 7 French Sentence Builder Age and Birthday				premier (first)	janvier (January) février (February) mars (March) avril (April) mai (May) juin (June) juillet (July) août (August) septembre (September) octobre (October) novembre (November) décembre (December)
J'ai (I have*)	onze (11)	et (and) ans (years) en plus (in addition)	mon anniversaire c'est le (my birthday is the)	deux (2)	
	douze (12)			trois (3)	
				quatre (4)	
				cinq (5)	
				six (6)	
				sept (7)	
				huit (8)	
				neuf (9)	
				dix (10)	
				onze (11)	
				douze (12)	
				treize (13)	
				quatorze (14)	
				quinze (15)	
				seize (16)	
				dix-sept (17)	
				dix-huit (18)	
				dix-neuf (19)	
				vingt (20)	
				vingt-et-un (21)	
				vingt-deux (22)	
				vingt-trois (23)	
				vingt-quatre (24)	
				vingt-cinq (25)	
				vingt-six (26)	
				vingt-sept (27)	
				vingt-huit (28)	
				vingt-neuf (29)	
				trente (30)	
				trente-et-un (31)	

J'ai [I have] Nous avons [We have]	un chat [a cat]	Year 7 Sentence Builder Pets		de chat [a cat]
	un chien [a dog]			de chien [a dog]
	un lapin [a rabbit]			de lapin [a rabbit]
	un poisson [a fish]	et [and]		de poisson [a fish]
	un cheval [a horse]	aussi [also]		de cheval [a horse]
	un serpent [a snake]	en plus [in addition]	je n'ai pas (I don't have)	de serpent [a snake]
	un oiseau [a bird]	mais [but]	nous n'avons pas (we don't have)	d'oiseau [a bird]
	un hamster [a hamster]	cependant [however]		d'hamster [a hamster]
	une souris [a mouse]	par contre [on the other hand]		de souris [a mouse]
	une tortue [tortoise]			de tortue [tortoise]
une araignée [a spider]			d'araignée [a spider]	

HRF – Health, Fitness and Exercise, Consequences of a SL, Lifestyle choices & CoF

Health, Fitness and Exercise

Health can be defined as 'complete physical, mental and social wellbeing and not only the absence of illness or infirmity'. Fitness can be defined as 'the ability to meet the demands of the environment'. Exercise can be defined as 'a form of physical exercise done to improve health or fitness or both'. *Adults* - five sessions of thirty minutes activity per week. The activity should be physical enough to cause the adult to breathe more deeply and to begin to sweat. *Children and young people* - seven sessions of sixty minutes per week. At least two of these sessions should be of high intensity exercise such as running, jumping or cardiovascular based sports.

Consequences of a sedentary lifestyle

If a person does not take part in regular physical activity, exercise or sport then they are at risk of a number of illnesses and negative effects such as weight gain or obesity; heart disease; hypertension (high blood pressure); diabetes; depression; increased risk of osteoporosis and loss of muscle tone.

Lifestyle choices

Other lifestyle choices can affect a person's health in either a positive or negative way. For example, eating a balanced diet means a person is less likely to become ill or put on excess body fat; getting enough sleep is important for the body to rest and brain to function optimally; not smoking as this causes illnesses such as bronchitis and lung cancer and not taking recreational drugs such as alcohol as in the short term it can lead to disorientation and poor decision-making and in the long term can lead to disease.

Component of Fitness

	Definition	Example
Body composition	The percentage of body weight which is fat, muscle and bone	The gymnast has a lean body composition to allow them to propel themselves through the air when performing on the asymmetrical bars
Cardiovascular fitness	The ability of the heart, lungs and blood to transport oxygen	Completing a half marathon with consistent split times across all parts of the run
Flexibility	The range of motion (ROM) at a joint	A gymnast training to increase hip mobility to improve the quality of their split leap on the beam
Muscular endurance	The ability to use voluntary muscles repeatedly without tiring	A rower repeatedly pulling their oar against the water to propel the boat towards the line
Strength	The amount of force a muscle can exert against a resistance	Pushing with all one's force in a rugby scrum against the resistance of the opposition pack
Agility	The ability to change the position of the body quickly and control the movement	A badminton player moving around the court from back to front and side to side at high speed and efficiency
Balance	The ability to maintain the body's centre of mass above the base of support	A sprinter holds a perfectly still sprint start position and is ready to go into action as soon as the gun sounds
Coordination	The ability to use two or more body parts together	A trampolinist timing their arm and leg movements to perform the perfect tuck somersault
Power	The ability to perform strength performances quickly	A javelin thrower applies great force to the spear while moving their arm rapidly forward
Reaction time	The time taken to respond to a stimulus	A boxer perceives a punch from their left and rapidly moves their head to avoid being struck
Speed	The ability to put body parts into motion quickly	A tennis player moving forward from the baseline quickly to reach a drop shot close to the net

HRF – Training Methods, Advantages/Disadvantages of TM & Training Zones

Training Methods

Training can be aerobic or anaerobic. In aerobic exercise, which is steady and not too fast, the heart is able to supply enough oxygen to the muscles. Aerobic training improves cardiovascular fitness. Anaerobic exercise is performed in short, fast bursts where the heart cannot supply enough oxygen to the muscles. Anaerobic training improves the ability of the muscles to work without enough oxygen when lactic acid is produced.

Specific training methods can be used to improve each fitness factor. Circuit training involves performing a series of exercises in a special order called a circuit. Each activity takes place at a 'station'. It can be designed to improve speed, agility, coordination, balance and muscular endurance. Continuous training involves working for a sustained period of time without rest. It improves cardiovascular fitness. Cross training involves using another sport or activity to improve your fitness. It happens when an athlete trains in a different environment. For example a volleyball player uses the power training for that sport to help with fitness for long jump. Fartlek training or 'speed play' training involves varying your speed and the type of terrain over which you run, walk, cycle or ski. It improves aerobic and anaerobic fitness. Interval training involves alternating between periods of hard exercise and rest. It improves speed and muscular endurance. Weight training uses weights to provide resistance to the muscles. It improves muscular strength (high weight, low reps), muscular endurance (low weight, high reps, many sets) and power (medium weight and reps performed quickly).

Advantages and Disadvantages of Training Methods

Continuous Training

Good for aerobic fitness, lose weight accessible, health benefits, good for beginners of all ages, little equipment Boring, not always sport specific, risk of injury does not improve anaerobic fitness

Fartlek Training

Good for team sports, less boredom, easy to use, can mimic the sport, good for team sports Too easy to cheat, can be difficult

Circuit Training

Less boring, easily adapted for fitness/skill, easily adapted to sports, stations can target specific muscle groups Take time to set up, requires equipment

Interval Training

Can be both aerobic and anaerobic, less technical, can mimic a sport, good for sports that require a change of pace Can be boring, easy to cheat hard aspects,

Free weights

Full range of sporting movement, large muscle groups can be worked Risk of injury, need a spotter, more suitable for advance performers, requires good knowledge

Resistance machines

Safer, good for beginners, good for injury rehabilitation Expensive, no functional everyday movements, only focuses on one muscle group

Training Zones

Anaerobic Threshold
80-100%
Peak Performance
80-90%
Aerobic Fitness
70-80%
Aerobic
60-80%
Fat Burning
60-70%
Active Recovery
60%
Warm-up Cool-down
50%

Subject Knowledge Organiser

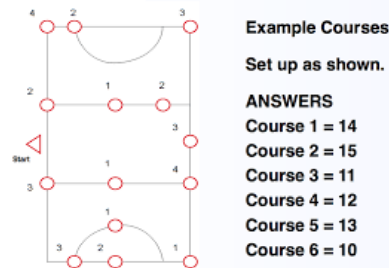
Orienteering- Orientate, observe, navigate, team work, communication

Key Skills:

1. The first thing you must do when map reading is to orientate your map (move it around) so it is the correct way around to where you are facing.
2. You then need to observe the surroundings before looking for the markings on the map. Once you have identified where you are standing you then find your starting point
3. You need to double check you are at the correct marker before starting because the only way you will successfully complete the course is by getting all answers correct.
4. Team work is key when completing an orienteering course as you will be working in pairs. You must communicate and discuss every decision before moving and navigating to the next cone. Mistakes can easily be made through poor communication.
5. As orienteering involves running, cardiovascular fitness is key as you will be running for a long period of time. To train for this, continuous training is useful as well as fartlek training (over different terrains at different speeds)



	M16	4,1 km	120 m
1	40	↘	✕
2	53	↘	Y
3	46	↓	V
4	57	)	(
5	32	)	3
6	58	▲	
7	47	↘	—
8	48	↘	—
9	49	■	—
10	100	↘	✕



Rules and tactics:

Orienteering requires physical fitness, skill in map reading, mental alertness and decisiveness. Orienteering teaches you to assess, understand and "read" the school site you are working in

The main aim of orienteering is to complete the course(s) correctly in the shortest amount of time, although it is based on map reading it is also a test of your physical fitness. You must find all the points that are placed on the map and record them on your sheet. Consider the ground you are moving over ensuring your safety at all times.

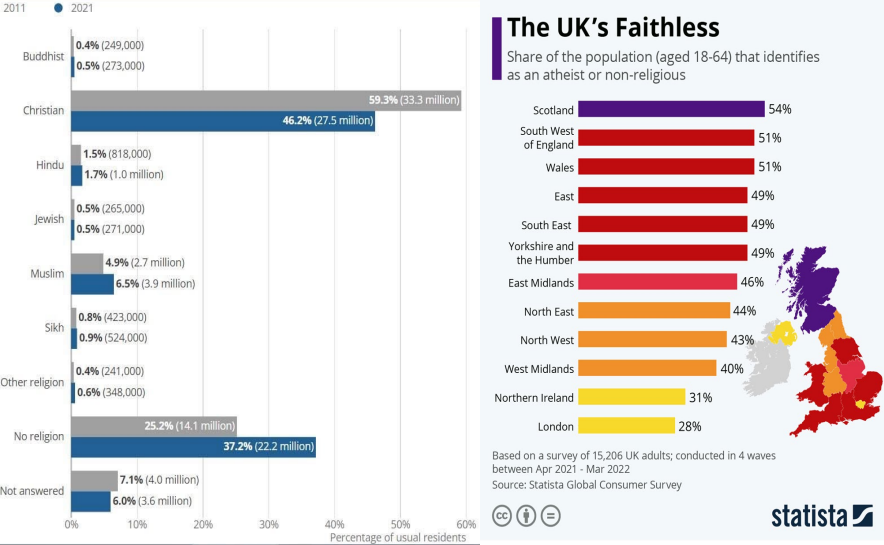
A major tactic is to use is your pace. As you are competing with the other people in your group. You must make sure you don't sprint off too quickly so that you are too tired to keep the pace up. If you take it steady the whole way- a jog and not walk- this tactic will help you to be successful

Always remember: The main aim of orienteering is to complete the course in the shortest amount of time, however good team work and planning of you route is vital to success.

Progress Vocabulary: *Identify, Define, describe, explain, compare and contrast, sporting links, analyse, evaluate*

Key Words: Navigation; decision making; communication; cardiovascular fitness; speed; co-operation, orientation; map reading; observation; pace judgement; team work; safety and mental alertness

Religious life has changed enormously in the UK. It is now a much more religiously diverse and multicultural society, made up of people of many different faiths and those who have no faith or religion. Every ten years, the government conducts a census. This is a questionnaire that all households must complete so that the government can get a good idea of the types of people who make up the population.



Expression of religious beliefs
Art, music, literature, clothes and symbols

Shared values and beliefs
Whether Christian, Muslim, Hindu, Buddhist, Sikh, Jewish or of no religious faith at all, recognising the common spiritual goals of all faith positions can teach pupils interpersonal skills and contribute to their own spiritual development.

- Golden Rule - Treating others as we wish to be treated ourselves is often referred to as 'The Golden Rule' and is apparent in the teachings of a variety of faiths.
- Morals - Many religions have value frameworks regarding personal behaviour that guide adherents in determining between right and wrong. The Ten Commandments from the Bible, the Ten Precept's of the Buddha and codes from the Bhagavad Gita and other sacred texts all clearly state the essentiality of morals in the life of humans
- Harmony and peace - Peace unites communities and nations into an everlasting friendship, and that is a shared goal for all humanity, no matter what the religion.

Religion in the 21st century – Y7 P4L

Multi-faith society

Living in a multi-faith society brings many benefits. Different religious cultures and traditions bring with them a variety of food, clothes, music and literature into our lives. We develop new ways of living and enjoying life. By living and working alongside different religious backgrounds we can gain greater tolerance, respect and understanding towards those who have different viewpoints to you.

Advantages	Disadvantages
• Tolerance towards other religions Religious festivals - everyone can join in and participate • Learning about other religions can give you a deeper understanding of your own • Widens your knowledge of the world	• Interfaith marriages can cause family issues • Bringing up children (parents may disagree) • Conversion - may want to change due to influences and this could upset your own family • Prejudice and discrimination

KEY WORDS

Religion - Religion is the belief in a particular way of worshipping a divine being (which could be a superhuman force or a personal being, like a god or goddess) and living your life to follow that being's teachings

Fact - A fact is something that is true. Facts are something that you can prove to be true.

Belief - is having confidence and trust in the truth or existence of something.

Multi-faith society - Is where lots of different faiths live side-by-side, like the UK

Inter-faith dialogue - Co-operative, constructive and positive engagement between people of different faiths and people of no faith such as Humanists and Atheists

Atheist - someone who does not believe in God

Agnostic - someone who does not know if there is a God or not

Theist - someone who believes in God

Humanism - a group of people who think about how to live a good life, but do not believe in God

Secularism - a society where the law and institutions are not controlled or guided by a religion. Religious identity is a private matter. The state does not promote one religion and permits religious freedom. The UK is a secular society

Non-religious worldviews - these can be any ethical or philosophical view, such as about how we should live, what is just, what is right, and so on. However, these will not come from a religious tradition or start with belief in a God or Gods.

Rights and Responsibilities in Modern Britain – Y7 – P4L

What does it mean to be British?

Modern Britain is **multicultural**, where people of different skin colour, nationality, languages and beliefs are living as one society.

British Values

1. Democracy – Being able to vote and having a fair vote
2. Rule of law – no individual or group is above the law
3. Individual liberty – fair treatment for all
4. Mutual respect and tolerance – respecting individual's differences and others of a differing faith or belief

Immigration and Diversity

Immigration - People who move into a country

- Britain needed workers since many men had died in WWII.
- In 1948, the British Nationality Act gave 800 million people in the Commonwealth the right to claim British Citizenship.

How has immigration improved Britain?

- Better skilled workers, TV/film, music, sport, fashion, technology, food etc

Rules and Laws:

Rules: provide a stable environment. They ensure people are happy and safe.

Laws protect our general safety, and ensure our rights as citizens against any abuses.

Rights and Responsibilities:

- We have rights, which we get from laws, and we also have responsibilities.
- Responsibilities can be legal (for example, to pay taxes and obey other laws)]
- Or they can be moral. Something that is moral is the correct thing to do, though we are not always forced to do it by law.

How religion has shaped the UK

Some people argue that religion does not play a part in society because:

- Religious beliefs, practices and organisations are becoming less important in society (secularisation)
- Humanism is on the rise - way of seeing and reacting to the world using science

However, it can be argued that religion does play a role in society:

- Christianity - 10 commandments e.g. Thou shall not kill which is part of current law
- Christian teachings still used today e.g. treat others as you would like to be treated.
- Islam – charity work, give 2.5% of savings (zakah)
- Sikhism – fought for British army in WW1/2

Human Declaration of Human Rights

- Human rights are a set of universal rights that all humans are entitled to regardless of their age, race, religion or gender.
- They ensure people have basic needs met, the vulnerable groups are protected, equality and everyone is protected.
- Human rights cannot be prioritised as they are all important and they link together – one depends on the other.
- There are 30 human rights e.g. the right to education, the right to work, the right not to be treated like a slave etc.

Protecting Human Rights

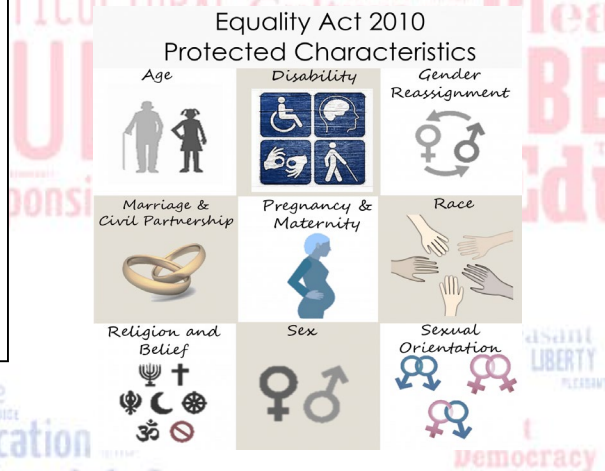
- Human rights violation examples – child labour and child soldiers.
- Amnesty International is a worldwide movement of people who campaign for internationally recognized human rights for all.
- They conduct research and generate action to prevent and end grave abuses of human rights and to demand justice for those whose rights have been violated.

Social injustice

- Unfairness or undeserved actions such as discrimination.
- Social justice is about seeking to protect people's civil liberties, rights and opportunities, and taking care of the least advantaged members of society.
- People who have stood up for the weak or oppressed: Mahatma Gandhi, Mother Teresa, Martin Luther King

Equality Act

- Became law in 2010.
- It brings together all previous equality laws and makes it law that everyone must not discriminate against people because of particular characteristics.



Religious attitudes to prejudice and discrimination

- Christianity** - God created everyone equally (Old Testament). Jesus told us to love our neighbour.
- Buddhism** - The belief not to harm others or use harmful language (Precepts). Everyone should try to develop metta (loving kindness).
- Islam** - Allah loves the fair-minded. The Five Pillars (beliefs and actions) apply to all – equality.

Prejudice and Discrimination

Prejudice is forming an unfavourable opinion or feeling about a person or a group of people, without a full examination of the situation

Discrimination is the treatment of a person or group (actions) such as verbal or physical abuse.

Stereotyping - means making an unfair assumption or generalisation about a person or group of people based on an aspect of their identity, for example their race, culture, religion, or gender.

Homophobia - dislike of or prejudice against gay people

Transphobia - the persecution of someone who identifies as a different gender to their sex.

Racism – prejudice and discrimination directed against someone of a different race based on the belief that one's own race is superior.

Islamophobia - dislike of or prejudice against Islam or Muslims

Disablism – discrimination or prejudice against disabled people

Y7 ART: Formal Elements of Art and Design

Key Figures



Michael Craig Martin CBE RA

(born August 28, 1941)

Is an Irish-born contemporary conceptual artist and painter. He is noted for fostering the Young British Artists, many of whom he taught, and for his conceptual artwork, An Oak Tree. He is Emeritus Professor of Fine Art at Goldsmiths.

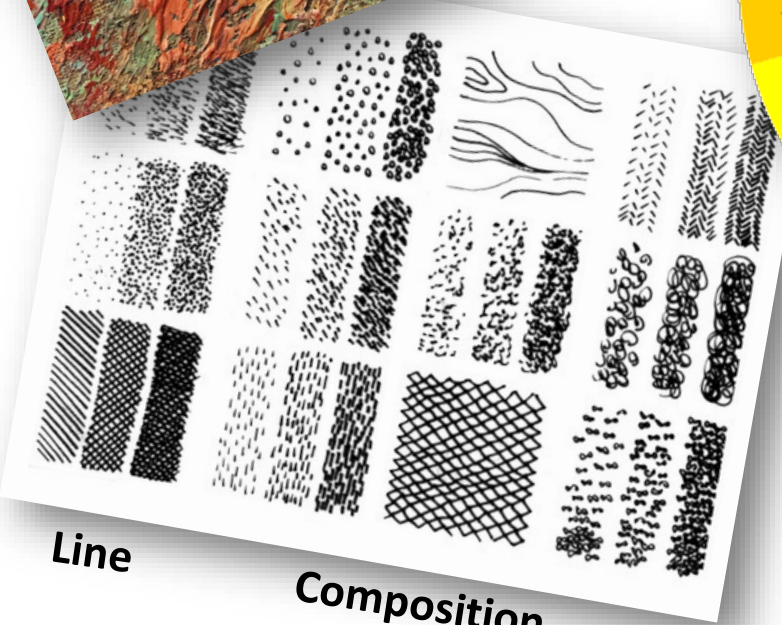


Key Terms	
Colour	Colour is what we see when light enters our eyes! Primary, colours can be mixed together to create secondary and tertiary colours.
Composition	Composition is the placement or arrangement of visual elements in a work of art.
Contrast	Contrast is the scale of difference between dark and light areas in images.
Form	A form is a three-dimensional geometrical shape
Line	Lines can be horizontal, vertical, or diagonal, straight or curved, thick or thin.
Shape	An area enclosed by a line. It can be empty and just be an outline or shaded in
Texture	Texture is the perceived surface quality of a work of art.
Tone	This could be a shade or how dark or light a colour appears
Pattern	Texture is the perceived surface quality of a work of art.

Examples



Texture

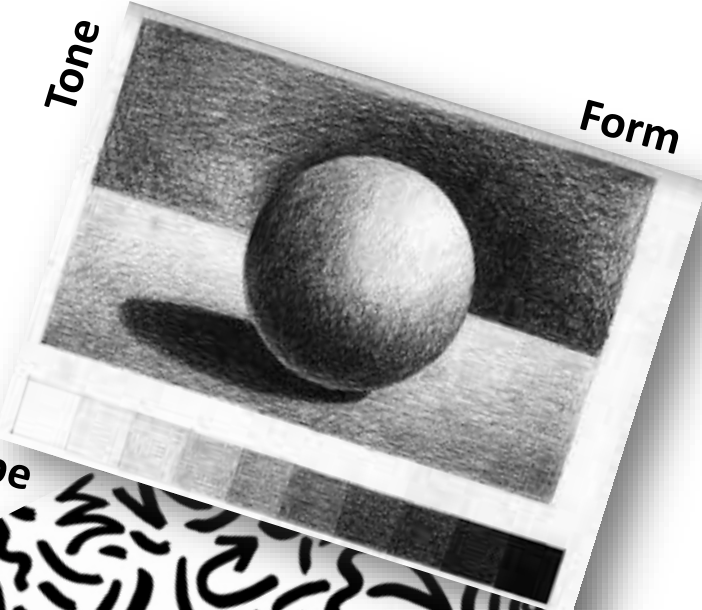


Line

Composition

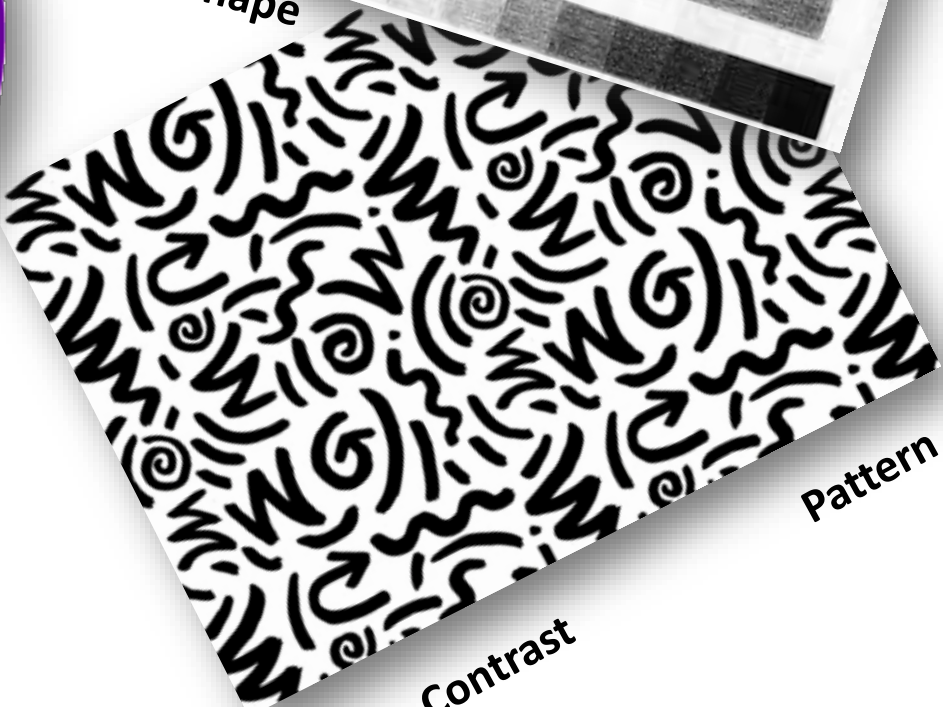


Colour



Tone

Form



Shape

Pattern

Contrast

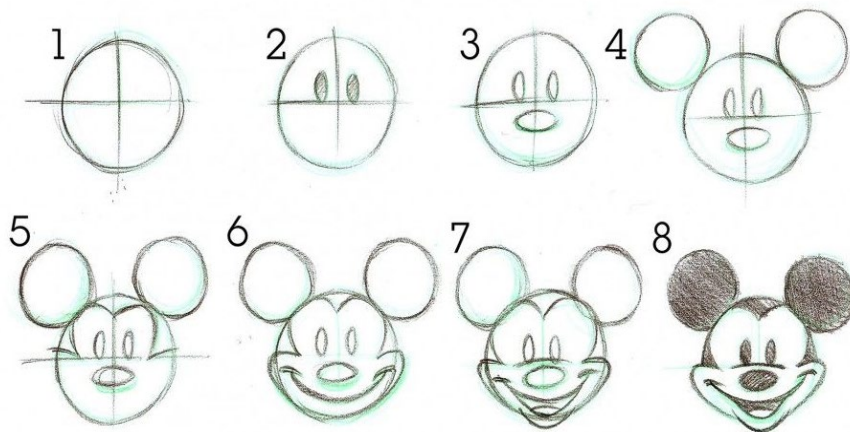
Student knowledge Organiser

2D Drawing Techniques

Construction Lines

Use construction lines to plan out your drawing. Construction lines help divide your drawings into smaller chunks. They help you plan the size of each part to keep drawings in the correct scale/ratio. Ensure construction lines are light as they will not form part of your final drawings.

Below is an example of a drawing being built up using construction lines.



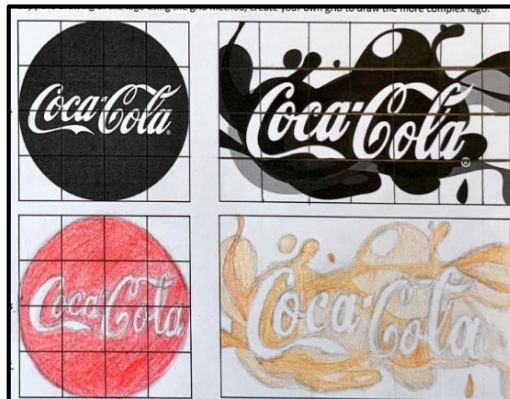
Grid Method

The grid method can be used by drawing a grid around an existing image you wish to duplicate.

Usually, the existing image would be divided into equal sections forming a grid. The grid would be duplicated exactly on a blank piece of paper.

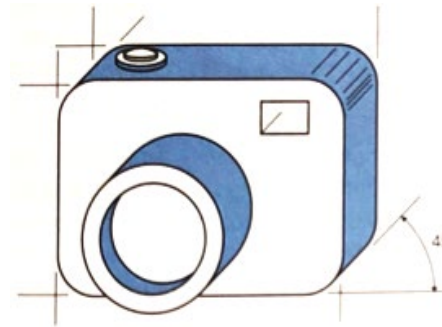
Using the existing image with the grid, copy each smaller section into the new grid.

This method helps break the image down, ensuring the duplication is identical with each part of the image in the exact place.

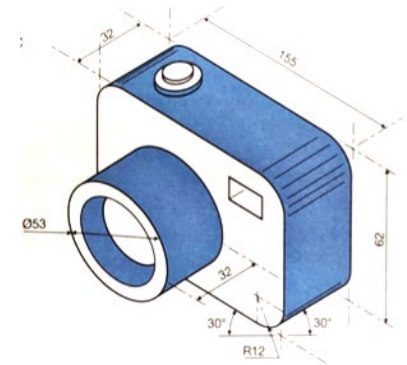


3D Drawing Techniques

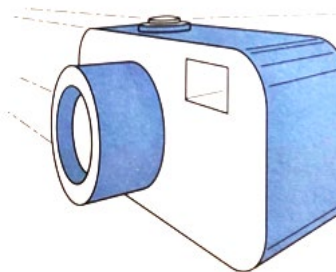
Cabinet Oblique



Isometric Projection



Two Point Perspective



Cabinet Oblique: Design is drawn from the front in 2D. 45° lines are drawn to show the depth of the product. This is the quickest and easiest 3D drawing technique.

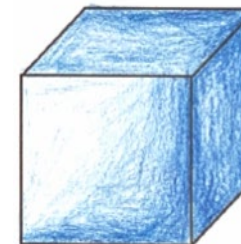
Isometric Projection: Uses 30° lines (parallel) to show the width and depth of a product. The height is drawn with vertical lines. Much more detailed than Cabinet Oblique and can be a quick drawing technique if practiced.

2 Point Perspective: Uses Vanishing Points. The Width and Depth are drawn towards the vanishing points. 2 point perspective is the most time consuming technique but also the most accurate as it emulates how the human eye would view a product.

Tone

Tone is the various shades of a colour which can be achieved by how heavy we press on a pencil.

We use tone to show how light projects onto an object. This helps demonstrate the 3D qualities of our drawings.



Texture

Adding colour in certain ways can help demonstrate the texture and materials on our designs/drawings.

This, paired with tone, is known as 'rendering'. Rendering is used to bring drawings to life and make them look as realistic as possible.



Year 7 Topic 1 Number and Calculations Student Knowledge Organiser

Key words and definitions

Odd numbers– a number ending in 1, 3, 5, 7 or 9, can not be divided by 2.

Even numbers – a number ending in 2, 4, 6, 8 or 0, can be divided by 2.

Prime numbers – a number that can only be divided by 1 and itself.

Square numbers– multiply by itself, e.g. $2 \times 2 = 4$ written as 2^2

Cube numbers – multiply by itself 3 times e.g. $2 \times 2 \times 2 = 8$ written as 2^3

Factors – numbers which divide into another number with no remainder.

Multiples – answers to times tables.

Multiplication and division

$$\begin{array}{r} 12 \\ 124 \\ \times 26 \\ \hline 2480 \\ 744 \\ \hline 3224 \\ 11 \end{array}$$

Answer: 3224



$$\begin{array}{r} 288 \\ 15 \overline{) 4320} \\ \underline{432} \\ 0 \\ \hline 0 \end{array}$$

Answer: 28.8

Types of numbers

Here are a list of numbers
23, 24, 27, 28, 31, 33, 34, 35

a) List the prime numbers **23, 31**
Can only be divided by 1 and itself, 24, 28, 34 can be divided by 2, 27 and 33 are in the 3 times table (and others), 35 is in the 5 times table

b) Find the cube number **27**
 $1 \times 1 \times 1 = 1$, $2 \times 2 \times 2 = 8$, $3 \times 3 \times 3 = 27$

BIDMAS – Order of operation

B	Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$
I	Indices	$5 + 2^2 = 5 + 4 = 9$
D	Division	$10 + 6 \div 2 = 10 + 3 = 13$
M	Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$
A	Addition	$10 \times 4 + 7 = 40 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$

Using a given number fact

Given that $37 \times 432 = 15984$

$3.7 \times 4.32 = 19.984$
3.7 is 10 times smaller than 37, 4.32 is 100 times smaller than 432. So the answer is 1000 times smaller than 15984

$159.84 \div 43.2 = 3.7$ **Rearrange original $15984 \div 432 = 37$**
159.84 is 100 smaller than 15984, 43.2 is 10 times smaller than 432. So the answer is 10 times smaller than 37

Addition and subtraction

$$\begin{array}{r} 38 \\ 93 \\ \hline 131 \\ 1 \end{array}$$

$$\begin{array}{r} 6712 \\ 56 \\ \hline 16 \end{array}$$

Negative numbers - directed

$++=+$
 $3++4=+7$
 $-2++8=+6$

$--=+$
 $3--4=+7$
 $-2--8=+6$

$+-=-$
 $3+-4=-1$
 $-2+-8=-10$

$-+=-$
 $3-+4=-1$
 $-2-+8=-10$

SAME SIGNS - POSITIVE		
$++$	$\times$	$++$
$--$	$\times$	$--$
Even number of negative numbers		
DIFFERENT SIGNS - NEGATIVE		
$+-$	$\times$	$-$
$-+$	$\times$	$-$
Odd number of negative numbers		

Hegarty Maths Skills Links

Addition and Subtraction	9, 18, 19, 20, 40, 41, 47
Multiplication and division	6, 10, 11, 21, 22, 23, 48, 49, 50, 144, 145
Order of operations	24, 44, 120, 150
Negative numbers	37, 38, 39, 40, 41, 42, 43, 44

Year 7 Topic 2 Factors and Multiples Student Knowledge Organiser

Key words and definitions

Factors – numbers which divide into another number with no remainder.

Multiples – answers to times tables.

Prime factor decomposition – write a number as a product of its prime factors.

Rounding – make a number simpler but still close to the original number.

Significant figures – the importance of each single digit in a number.

Approximate – estimate calculations by rounding each number to 1 significant figure first.

Factors and Highest common factor

To find the factors of a number, find all of the numbers that can divide exactly into that number with no remainders

To find the HCF of two or more numbers, find the factors of each number and then find the highest number that appears in both lists

16 → 1, 2, 4, **8**, 16

24 → 1, 2, 3, 4, 6, **8**, 12, 24

So the highest common factor of 16 and 24 is 8

Multiples and LCM

To find multiples of a number, list the answers in that times table.

To find the LCM of two or more numbers, find multiples of each number then look for the lowest number in each list

Multiples of 3:

0, 3, 6, 9, **12**, 15, 18, 21, **24**...

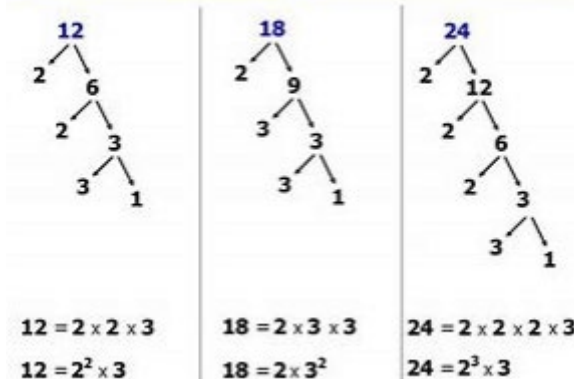
Multiples of 4:

0, 4, 8, **12**, 16, 20, **24**, 28...

The LCM of 3 and 4 is 12.

Prime factor decomposition

Write these numbers as a **product of prime factors**



Significant figures

Rounding to 1.s.f

304.2 ≈ 300 18.97 ≈ 20 2.47 ≈ 2 0.3901 ≈ 0.4

Approximate calculations

Round each number to 1 significant figure then calculate

$$19 \times 1.73 \approx 40$$

$$20 \times 2$$

$$98.1 \times 41.8 \approx 4000$$

$$100 \times 40$$

$$73.8 \div 4.85 \approx 14$$

$$70 \div 5 = 14$$

$$\frac{62.1 + 17.3}{11.4} \approx 10$$

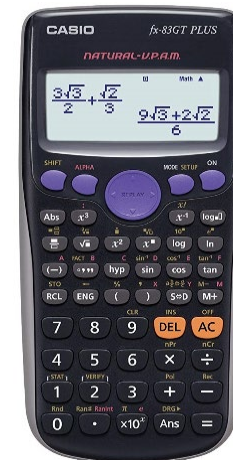
$$\frac{80 + 20}{10} = \frac{100}{10}$$

$$\frac{4.1 \times 6.4}{3.25 + 4.91} \approx 3$$

$$\frac{4 \times 6}{3 + 5} = \frac{24}{8}$$

$$\frac{22.03 \times 38.4}{0.179} =$$

Using a calculator



Be familiar with, and be able to use the following keys – this is not an exhaustive list.



Brackets keys



Change between fraction and decimal form



Fraction key



Find the square root of a number



Press to square a number

Hegarty Maths Skills Links

Factors and multiples	27, 31, 32, 33, 34, 35
Significant figures	130
Approximate calculations	131
Using a calculator	129
Product of prime factors	29,30

Year 7 Topic 3 Charts and Averages Student Knowledge Organiser

Key words and definitions

Primary data – data collected first hand, in a survey or experiment.

Secondary data – data collected by someone else.

Discrete – can only take certain values, usually something you can count.

Continuous – data that can be measured, can take any value.

Average – a typical value for some data, see mean, mode and median.

Distribution – how data is spread out, takes account of average & range.

Averages

Mode

Most common

Mean

Sum of values
Number of values

Median

Middle value
in ascending order

Average

Mean

Median

Mode

Advantages

Every value makes a difference

Not affected by extreme values

Easy to find.
Not affected by extreme values. Can be non-numerical

Disadvantages

Affected by extreme values

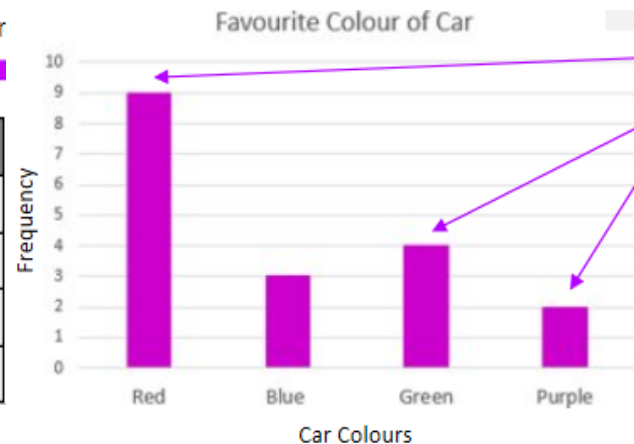
May not change if a data value changes

There may not be one.
There may be more than one.

Tally Charts and bar charts

Complete a tally chart for the most popular colour of car
Red, blue, red, green, red, purple, red, green, red
purple, green, blue, red, green, blue, red, red, red

Colour	Tally	Frequency
Red		9
Blue		3
Green		4
Purple		2



The number of red, blue, green and purple cars is the frequency (height of the bars).

IMPORTANT

The bars are the SAME width

The gaps between the bars are the SAME width

Both axes are labelled

The graph has a title

Frequency starts at 0



Range

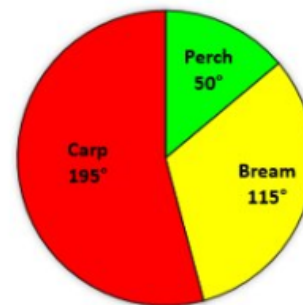
Range

Largest value – smallest value

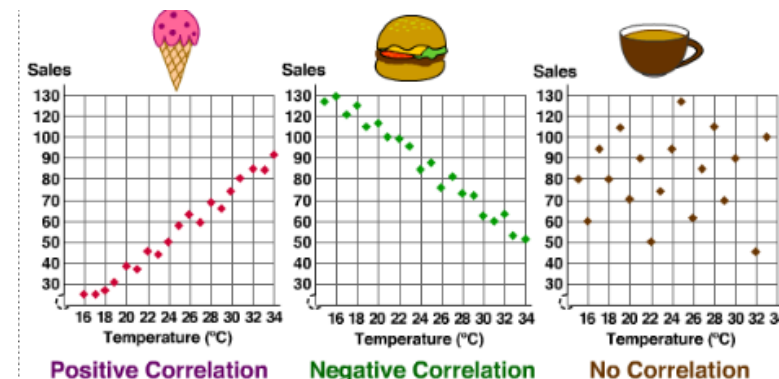
Pie chart

1	Sum (add up) the frequency	
2	$360^\circ \div \text{frequency}$ $360^\circ \div 72 = 5$	
3	Multiply each category x5 to find sector size	
Fish	Frequency	
Perch	10	$x 5 = 50^\circ$
Bream	23	$x 5 = 115^\circ$
Carp	39	$x 5 = 195^\circ$
TOTAL	72	360°
$360^\circ \div 72 = 5$		

Draw an accurate pie chart to show this information.
This table give information about then number of fish in a lake.



Scatter graphs



Hegarty Maths Skills Links

Averages	404, 405, 406, 407, 408, 409, 410, 413
Tally and bar charts	401, 425
Scatter graphs	453, 454
Pie charts	427, 428, 429

Year 7 Topic 4 Area and Volume Student Knowledge Organiser

Key words and definitions

Area – the area of a 2D shapes is the amount of space inside it.

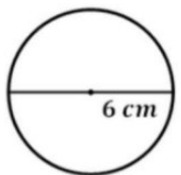
Perimeter – the perimeter is the total distance around the outside of a shape.

Circumference – the distance around the outside of a circle.

Surface area – sum of the areas of all the faces in a 3D shape.

Volume – the amount of 3D space occupied by an object.

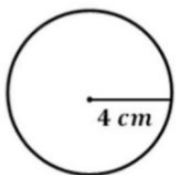
Area and Circumference



$$C = \pi d$$

$$= 3.142 \times 6 \text{ cm}$$

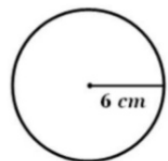
$$= 18.85 \text{ cm}$$



$$C = 2\pi r$$

$$= 2 \times 3.142 \times 4 \text{ cm}$$

$$= 25.14 \text{ cm}$$



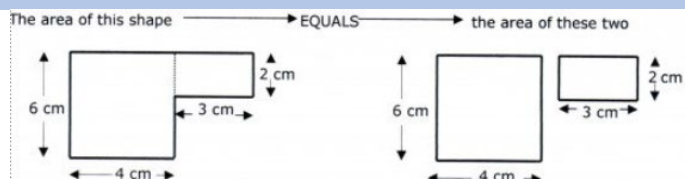
$$A = \pi r^2$$

$$= 3.142 \times 6^2$$

$$= 3.142 \times 36$$

$$= 113.11 \text{ cm}^2$$

Compound area



$$\text{The area of this shape} = (6 \times 4) + (2 \times 3)$$

$$= 24 + 6$$

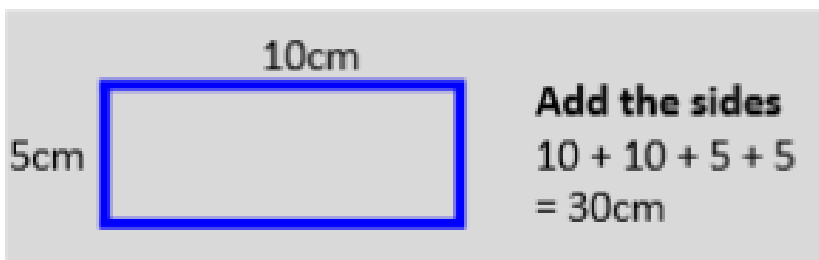
$$= 30 \text{ cm}^2$$



Area

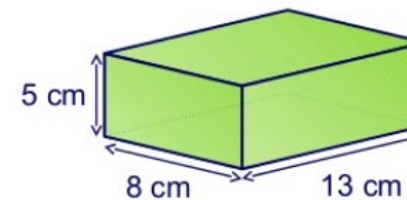
SQUARE $A = \text{Length}^2$	
RECTANGLE $A = \text{Length} \times \text{width}$	
TRIANGLE $A = \frac{1}{2} \text{Base} \times \text{height}^*$	
TRAPEIZUM $A = \frac{1}{2} (a + b) \times \text{height}^*$	
PARALLELOGRAM $A = \text{Base} \times \text{height}^*$	

Perimeter



Volume of a cuboid

What is the volume of this cuboid?



Volume of cuboid

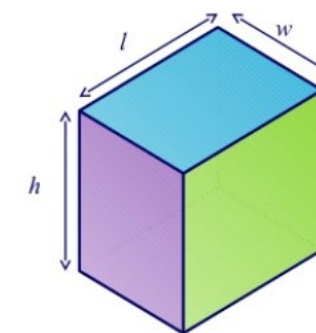
$$= \text{length} \times \text{width} \times \text{height}$$

$$= 5 \times 8 \times 13$$

$$= 520 \text{ cm}^3$$

Surface area of a cuboid

We can find the formula for the surface area of a cuboid as follows.



Surface area of a cuboid =

$$2 \times lw \quad \text{Top and bottom}$$

$$+ 2 \times hw \quad \text{Front and back}$$

$$+ 2 \times lh \quad \text{Left and right side}$$

$$= 2lw + 2hw + 2lh$$

Sparxmaths Links

Area – M900, M390, M269, M291, M610, M705,

Perimeter – M635, M920, M690

Circles- M231, M169, M280, M430

Volume – M765, M722, M697

Surface area – M534, M661

Year 7: The Norman Conquest



Key Vocab	Definitions
Saxons	The English army at Hastings
Normans	William's men (from Normandy in France)
Fyrd	Working men who were called up to fight for King Harold
Housecarls	Well trained, full time Saxon soldiers. Harold's bodyguard
Mounted knights	Soldiers on horseback
Archers	Soldiers with bows & arrows
Shield Wall	Saxon defensive tactic
Oath	A promise
Domesday Book	Survey of English lands & property made about 1086.
Feudal system	System of government introduced by William I
Senlac Hill	Where the Battle of Hastings was fought
Bayeux tapestry	Norman embroidery depicting the battle
Rebellion	An act of armed resistance
Heir	Next in line to the throne
Pevensey	Where William's army landed
Conquest	Invasion & control of a country using military force

Claimants to the Throne

King Edward the Confessor died childless in January 1066. 4 men believed they should be king:

1. Edgar the Atheling
2. William Duke of Normandy
3. Harald Hardrada
4. Harold Godwinson

The Witan (royal council) chose Harold Godwinson to be king. Harald Hardrada & William then each launched invasions.

Castles



The earliest castles were **motte & bailey** castles. They were made of wood so were easy to burn down. From around 1100, castles were made from stone. The first stone castles had a rectangular keep. Later, castles with round towers were built. In the 12th & 13th centuries concentric castles were built (outer & inner walls).

Castle defences: moats, ramparts, machicolations, battlements, drawbridge, portcullis, murder holes, arrow slits.

Attacking a castle: Fire arrows, battering ram, catapults e.g. trebuchet & mangonel, mining, siege tower, ladders, siege warfare.

Why did William win the Battle of Hastings?

1. Harold's bad luck e.g. had to rush south into battle after victory at Stamford Bridge.
2. William's men were better prepared & more experienced
3. The Norman army was stronger.
4. The Normans tricked the Saxons by using a fake retreat. They had better tactics.
5. The Normans had the Pope's support.

Armies at Hastings

Normans

3000 foot soldiers (infantry)
3000 mounted knights (cavalry)
2000 archers

Saxons

2000 Housecarls
5000 Fyrd



The Harrying of the North

Some English people rebelled against William's rule, including Hereward the Wake. The biggest rebellion was in the north of England in 1069. It was led by Edgar the Atheling, who had a blood-claim to the throne. He was joined by Danish and Scottish armies. William defeated the rebellion. In the north-east of England, he ordered villages to be destroyed and people to be killed. Herds of animals and crops were burnt. Most people who survived later starved to death.

1064	Jan 1066	20 Sep 1066	25 Sep 1066	14 Oct 1066	25 Dec 1066
Harold's oath	King Edward dies Harold is crowned	Hardrada wins Battle of Fulford Gate	King Harold wins the Battle of Stamford Bridge	Battle of Hastings	William is crowned king 'William the Conqueror'