Thomas Estley Community College
Year 9 Summer Term
# Knowledge Organiser

What are Knowledge Organisers?

A knowledge organiser is an easy way that each subject can summarise the most important information. Each subject section will include key terms, short explanations, glossary words, diagrams etc making it clear to the student as to what is essential to learn. Each grid has an overall theme and these vary according to the subject being taught.

It will be the students responsibility to keep the knowledge organisers safe and refer to them over the whole academic year.

How will these be used at Thomas Estley?

At Key stage 3, you will be given a knowledge organiser each term. You need to keep these safe in your learning packs that you were provided with at the start of the academic year.

Your subject teachers will use these in a variety of ways, for both class work, remote learning opportunities and homework. They will be used to help with revision for class quizzes and retrieval practice activities. They will also be used for flip learning activities, where subject teachers will ask you to learn some information and then go in to it in more detail in class.

"THE BEAUTIFUL THING ABOUT LEARNING IS NOBODY CAN TAKE IT AWAY FROM YOU."
— B.B. KING
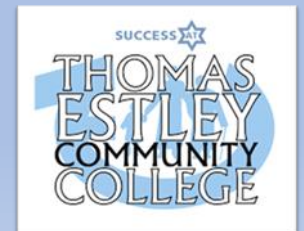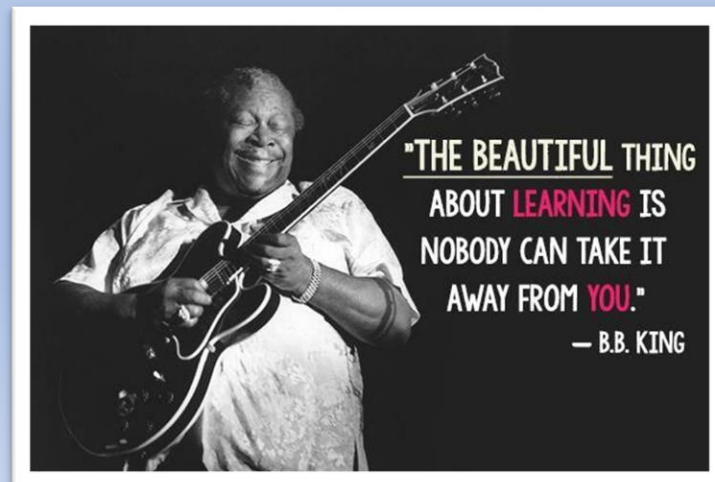
Revision Tips and Tricks!

Record It

Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want!

Teach it!

Teach someone your key facts and the get them to test you, or even test them!

Flash Cards

Write the key word or date on one side and the explanation on the other. Test your memory by asking someone to quiz you on either side.

Back to front

Write down the answers and then write out what the questions the teacher may ask to get those answers.

Hide and Seek

Read through your knowledge organiser, put it down and try and write out as much as you can remember. Then keep adding to it until its full!

Sketch it

Draw pictures to represent each of the facts or dates. It could be a simple drawing or something that reminds you of the answer.

Post its

Using a pack of post-it notes, write out as many of the keywords or dates as you can remember in only 1 minute!

PRACTICE MAKES PERFECT

Read Aloud

Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts – it really helps you remember!
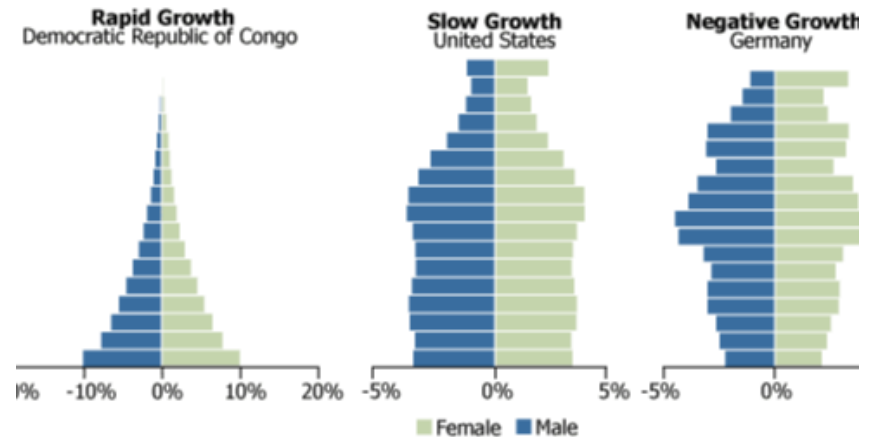
Practice!

Some find they remember by simply writing the facts over and over again.

Geography Knowledge Organiser
Year 9: **Development**

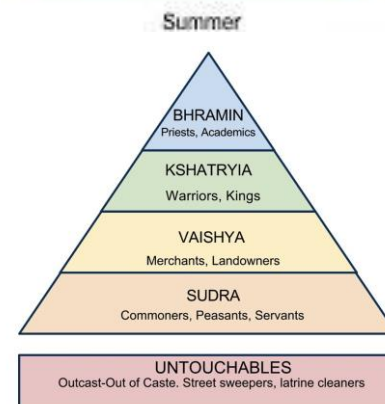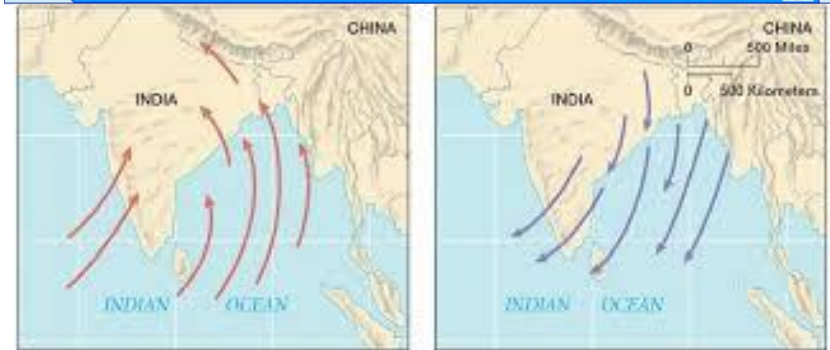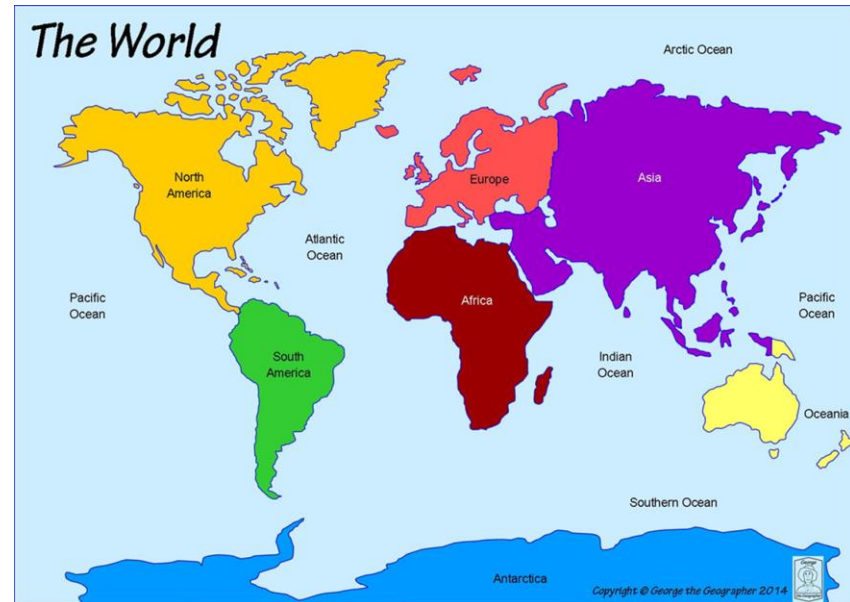| Key Word	Definition
Brandt Line	The dividing line on the world between the 'rich north' and 'poor south', first proposed in 1980.
Development Indicator	A way of comparing development between places.
Inequality	Differences between poverty and wealth, as well as in peoples' wellbeing and access to things like jobs, housing and education.
Trade	The buying and selling of good and services between countries.
Debt	money owed to a person or organization for funds borrowed.
Aid	Assistance provided to other countries in the form of money or food etc.
Population Pyramid	A graphical technique used to display population data about a country.
Economic Structure	Suggests what sectors (primary, secondary and tertiary) people work in.
HDI	Stands for Human Development Index. A number from 0 to 1 and is calculated by combining Life Expectancy, Education and Income.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Useful websites...
https://www.bbc.co.uk/bitesize/topics/zg7nvcw

The Rich North

The Poor South

Tropic of Cancer

Equator

Tropic of Capricorn

0   2000   4000km

Rapid Growth
Democratic Republic of Congo

Slow Growth
United States

Negative Growth
Germany

Female   Male

1 Eradicate extreme poverty and hunger
2 Achieve universal primary education
3 Promote gender equality and empower women
4 Reduce child mortality
5 Improve maternal health
6 Combat HIV/Aids, malaria and other diseases
7 Ensure environmental sustainability
8 Develop a global partnership for development

Geography Knowledge Organiser
Year 9: **Asia**

Key Word	Definition
Asia	One of the seven continents of the world, made up of forty-eight countries.
Himalayas	The name of the tallest mountain range in the world, located to the north of India.
Population Density	The average number of people that live in an are, given as a number per km².
Choropleth Map	A map that uses colour to show changes over space.
Monsoon	The name of the wet season in Asia occurring between June and October, when winds blow from the south west.
Caste	The name of a Hindu system where society is divided into categories.
Globalisation	The process by which the world is becoming increasingly interconnected as a result of massively increased trade and cultural exchange across the globe.
Migration	The movement of people from one place to another.
Urbanisation	The process where more people live in urban areas (cities).
Shanty towns	An area of very poor housing, often self-built by residents out of basic materials.

Useful websites…
https://www.bbc.co.uk/bitesize/topics/z3jhfg8
https://www.bbc.co.uk/bitesize/topics/zg7nvcw

The World

Summer   Winter

BHRAMIN — Priests, Academics
KSHATRYIA — Warriors, Kings
VAISHYA — Merchants, Landowners
SUDRA — Commoners, Peasants, Servants
UNTOUCHABLES — Outcast-Out of Caste. Street sweepers, latrine cleaners

India Natural vegetation

Geography Knowledge Organiser
Year 9: **Tourism**

Key Word	Definition
Mass Tourism	Tourism on a large scale with many people visiting.
Sustainable Tourism	A type of holiday that doesn't cause harm to people or the environment.
Adventure Tourism	Tourism which aims to give an unusual experience.
Urban Tourism	When people take holidays in towns and cities.
Disposable Income	The income people have available to spend after bills, taxes etc.
Dynamic	Something that changes over time.
Galápagos	A group of islands off the west coast of south America made famous by Charles Darwin. This is now a popular eco-tourist destination.
Tertiary Sector	The type of jobs/shops that providing services e.g. retail, tourism, education, health and banking.
UNESCO	United Nations Educational Scientific and Cultural Organisation. Give funding and special protection for important sites globally.

Increase in world tourism 1975 - 2005 (millions

UNESCO
UNITED NATIONS
Educational, Scientific, Cultural Organization

Computing:

Data Representation

Key Words	
1 bit (b)	The smallest unit of data—a 0 or 1.
1 nibble (N)	4 bits
1 Byte (B)	8 bits (note the difference between b and B)
1 Kilobyte (KB)	1000 bytes. Note KB is different from Kb
1 megabyte (MB)	1000 KB
1 gigabyte (GB)	1000 MB
1 terabyte (TB)	1000 GB
1 petabyte (PB)	1000 TB
Base 2 number system	A number system where there are only 2 digits to select from, that is 0 or 1; also known as the binary number system.
Data types	In computing there can be different data types, including integers, characters and boolean (yes/no)
Base 10 number system	The number system that humans use. It contains 10 unique digits, that is 0 to 9. Also known as the decimal or denary number systems.
Multiplier (also known as place value)	The value of the place, or position, of a digit in a number

Representing information with sequences of symbols is necessary for storing, exchanging and processing information. Information in computers must be represented in a form convenient for processing.

Humans have invented lots of different ways to code information using different sounds, symbols or even lights!

Computers represent all data, including numbers, letters, symbols, images, videos and sounds using binary numbers. All binary numbers are made up of the digits 0 and 1.

0s and 1s are called **b**inary dig**its**, or **bits**. All characters are represented using sequences of bits.

Computers only use the two symbols 0 and 1 because all computers are built out of electrical switched which can only be on (1) or off (0).

Binary digits are like letters; they are the symbols that computers 'write' with.

Multipliers or weights are the amount each digit in a sequence is worth e.g the number 314 contains three 100s, one 10s and four 1s . 100, 10 and 1 are the multipliers or weights. Binary numbers use different multipliers or weights.

Multipliers	128	64	32	16	8	4	2	1
Example binary number	0	0	0	1	0	1	1	1

To convert from binary to decimal (also known as denary) multiply each binary digit with its multiplier, then add up the products to work out the decimal number.

For example in the binary number above: 1 x 16 =16 1 x4 = 4 1x2 = 2 and 1x1 = 1 and 16 + 4 + 2 + 1 = 23

To convert from decimal to binary go through the multipliers from left to right . If a multiplier needs to be included in the sum, set the corresponding binary digits to 1 and proceed with the number that remains

Decimal number → Binary number

	16	8	4	2	1
13		1	1	0	1

Computing: Developing for the Web

Hyper Text Markup Language (HTML) is a basic programming language for building web pages. It uses a set of predefined **tags** that the web browser then interprets and displays.

The World Wide Web is responsible for standardising HTML and releasing updated specifications that revise existing tags and introduce new tags. Web pages contain different types of information including images, text and multimedia.

Key Vocabulary

Web Browser: An application used to view webpages eg Google Chrome, Firefox, Microsoft Edge, Safari, Internet Explorer.

HTML: (Hyper Text Markup Language) Used to write and create web.

Hyperlink: A link in a document or webpage that connects to another location.

Internet: A global network connecting millions of computers together.

Website: A webpage or group of webpages hosted on a web server and viewed in a web browser,

Using HTML to create websites

HTML can be written in a simple text editor like Notepad. As long as it is saved with file extension.html eg: myfirstwebpage.html it can be opened and viewed as a webpage from a browser.

```
<html>
      <body>
          <h1> My First Web page </h1>
           <p> This is my very first web page
            that I have created using Notepad </p>
      </body>
</html>
```

Key Facts

- Web pages contain different types of information including images, text and multimedia.
- There is no central storage for websites.
- The World Wide Web (WWW) is a huge collection of websites that we can access using the internet.
- Each website contains web pages which are navigated via hyperlinks.

HTML Tags:

Tag	Description
<html>	States that the document is a HTMl document .
<body>	Information appears in the body of the page.
<h1>	The main heading for the web page.
<p>	The beginning of a new paragraph.
<img>	Image for web page and file type of image example: Jpg, Png, gif
**
**	Add a blank line
<a href>	A link to other web sites

Ranking algorithm

Used to rank the importance of web pages and considers:

- when the page was last updated
- webpages that link to a found page
- other webpages that a found page links to

Gathering information

- Search engines use programs known as **crawlers** or **spiders** to find content on the World Wide Web.

- These crawlers visit links from one web page to another, recording common keywords that they find.

- By travelling along these links, the crawlers can eventually find newly created content.

Indexing

When crawlers finish their journey, they are stored in a data structure called an index.

The index records the following about each web page:

- Frequently used keywords
- Type of content found, (images, text, etc.)
- Date of last update

CSS Cascading style sheets:

- HTML defines the structure and content of your web page.
- CSS defines the style and layout of web pages.
- CSS can be used to change the style of a whole website, one web page or a single occurrence of an element, e.g.

  <h1 style="text-align:center">

  OR

  body {
  color: green;
  }

Threats to networks

Trojan Horse: Programs designed to lock you out of your computer and not let you access the data unless you pay a ransom

Virus: A malicious program that hides inside other files that users might believe are harmless

Spyware: Installed without you knowing and used to track all your activity when you browse the World Wide Web

Ransomware: Executable code that when run damages the files and stops the computer from operating normally

Worm: Exploits the vulnerabilities of a system by finding holes in its security

Phishing: Steal people's personal information using fake emails from real organisations

What happens when I view a web page?

Your Computer → Your ISP → Internet → Website Host / Server

Controlling searches

Edinburgh OR castle
Q All Maps New
About 1,160,000,000 results
OR operator
Finds pages with either Edinburgh or castle on them.

Edinburgh -castle
Q All Maps N
About 179,000,000 results
NOT operator
Finds pages with Edinburgh, but removes those with word castle.

"Edinburgh castle"
Q All Maps
About 4,230,000 results
Phrase search
Pages found that only have "Edinburgh castle" on them, in that order.

Gas exchange and breathing

- **Gas exchange** is the process of taking in oxygen and giving out carbon dioxide
- This occurs in the **respiratory system**
- The proportions of gases in the air we **inhale** and **exhale** changes due to using oxygen in **respiration** and producing carbon dioxide
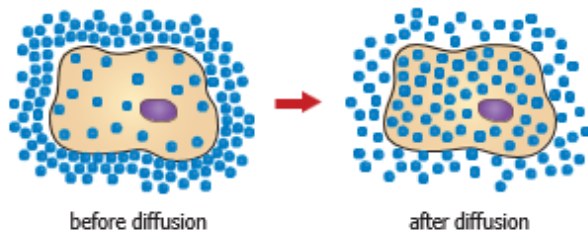
nose
mouth
intercostal muscles
rib
lung
heart
bronchioles
alveoli (air sacs)
thorax
trachea (windpipe)
bronchi
abdomen
diaphragm

Drugs

- **Drugs** are chemicals that affect the way that our body works
- **Medicinal drugs** are used in medicine, they benefit health
- If medicinal drugs are not taken in the correct way they can harm health
- Examples include antibiotics and pain killers

- **Recreational drugs** are taken by people for enjoyment
- Recreational drugs normally have no health benefits and can be harmful for health
- Examples include alcohol and tobacco

- Drug **addiction** is when your body gets so used to a drug, it feels it cannot cope without it
- If someone who has an addiction stops taking the drug, they will experience **withdrawal symptoms**

What happens when you breathe in and out

when you breathe in (inhale)	• muscles between the rubs contract • ribs are pulled up and out • diaphragm contracts and flattens • volume of the chest increases • pressure inside the chest decreases • air rushes into the lungs
when you breathe out (exhale)	• muscles between ribs relax • ribs are pulled in and down • diaphragm relaxes and moves up • volume in the chest decrease • pressure inside the chest increases • air is forced out of the lungs

Movement into and out of cells

- The process in which substances move into and out of cells is known as **diffusion**
- This occurs across the **cell membrane**
- During diffusion particles move from an area of high **concentration**, to an area of low concentration

before diffusion   after diffusion

- Oxygen and nutrients enter the cell by diffusion, carbon dioxide and waste products leave

🔑 **Key terms**   Make sure you can write definitions for these key terms.

Aerobic respiration   Anaerobic respiration Antagonistic muscle pairs   Bone
Bone marrow   Cartilage   Diffusion   Drug   Exhale   Fermentation Gas exchange
Haemoglobin   Inhale   Joints   Lactic acid   Ligaments Medicinal drug   Muscle
Oxygen debt   Plasma   Recreational drug   Red blood cells   Respiration
Respiratory system   Skeleton   Tendons   Tissue   Withdrawal symptoms

Respiration

- Respiration is the process in which energy is released from the molecules of food which you eat
- Respiration happens in the mitochondria of the cell
- **Aerobic respiration** involves oxygen, it is more efficient as all of the food is broken down to release energy

$$glucose + oxygen \rightarrow carbon\ dioxide + water$$

- The glucose is transported to the cells in the blood **plasma**
- The oxygen is transported to the cells in **red blood cells**, by binding with **haemoglobin**
- Carbon dioxide is a waste product and is transported from the cells to the lungs to be exhaled

- **Anaerobic respiration** is a type of respiration which does not use oxygen, it is used when the body cannot supply the cells with enough oxygen for aerobic respiration
- Anaerobic respiration releases less energy than aerobic respiration

$$glucose \rightarrow lactic\ acid + carbon\ dioxide$$

- The **lactic acid** produced through anaerobic respiration can cause muscle cramps
- Lactic acid will build up if there is not enough oxygen present in the blood supply to break it down. This is known as an **oxygen debt**

The skeleton

- The **skeleton** is made up of 206 **bones** which are a type of **tissue**
- Bones have a blood supply and are a living tissue
- The skeleton is part of the **muscular-skeletal system**
- The four main functions of the skeleton are:
    - To support the body – to keep you upright and hold **organs** in place
    - Protect organs – such as the skull protecting the brain
    - Movement – by working with muscles to allow you to move
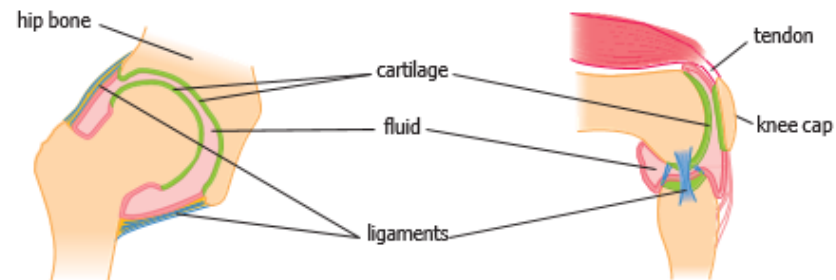   - Making blood cells – the **bone marrow** produces red and white blood cells

Labels: skull, jaw bone, collar bone, sternum, humerus, vertebral column (backbone), pelvis, ulna, radius, femur, kneecap, fbula, tibia, ankle

Fermentation

- **Fermentation** is a type of anaerobic respiration which occurs in yeast
- Instead of producing lactic acid, yeast produces ethanol, which is a type of alcohol

$$glucose \rightarrow ethanol + carbon\ dioxide$$

- This process can be used to form alcohol to drink or to allow bread and cakes to rise

Movement

Joints occur between bones and allow movement, there are three main types of joints

Hinge	Ball and socket	Fixed
For back and forward movement, e.g. knees	For movement in all directionse.g. hips	Do not allow movement, e.g. skull

Joints have three main types of tissue:

Ligaments	Cartilage	Tendons
Connect bone to bone	Coats the end of bones as a protection	Connects bone to muscle

Labels: hip bone, cartilage, fluid, ligaments, tendon, knee cap

Muscles

- **Muscles** are a type of tissue which allows movement
- They pull on tendons which in turn pull on bones to allow movement
- Muscles like the triceps and biceps are known as **antagonistic muscle pairs**, they work together – as one contracts, the other will relax

B5 Animals
Knowledge organiser
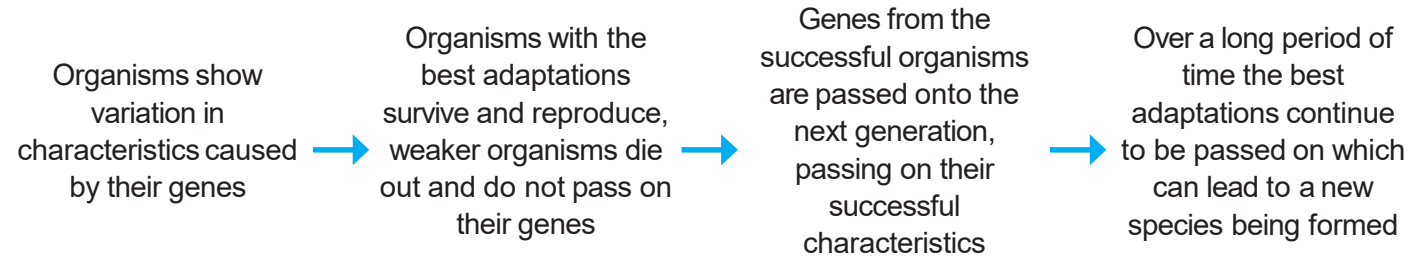Activate
Question •Progress •Succeed

Natural selection

- Scientists believe that the organisms which we see on Earth today have gradually developed over millions of years, this is known as **evolution**
- Charles Darwin came up with the concept of **natural selection**, he said that only the best adapted animals will survive to pass on their **genes**, weaker animals will die out

Organisms show variation in characteristics caused by their genes → Organisms with the best adaptations survive and reproduce, weaker organisms die out and do not pass on their genes → Genes from the successful organisms are passed onto the next generation, passing on their successful characteristics → Over a long period of time the best adaptations continue to be passed on which can lead to a new species being formed

- One example of natural selection can be seen in giraffes, only the giraffes with the longest necks would be able to eat from trees, the ones with shorter necks would not be able to eat and die out
- This would mean that only the gene for long necks would be passed on, leading to all giraffes having long necks

Extinction

- A species will become **extinct** when all of a species die out
- The **fossil record** shows us that animals have existed in the past which have now become extinct
- Extinction can be caused by:
  - Changes to the environment
  - Destruction of habitat
  - New diseases
  - Introduction of new predators
  - Increased **competition**
- When a species becomes extinct, the variety of species within an ecosystem is reduced, this is also known as a reduction in **biodiversity**
- The more diverse a **population** is, the more likely they are to survive environmental changes

Punnet squares

Possible alleles from father

Possible alleles from mother

	B (dominant allele for brown eyes)	b (recessive allele for blue eyes)
b (recessive allele for blue eyes)	Bb Offspring will have brown eyes as B is dominant	bb Offspring will have blue eyes as both alleles are recessive
b (recessive allele for blue eyes)	Bb Offspring will have brown eyes as B is dominant	bb Offspring will have blue eyes as both alleles are recessive

Genetic modification

- **Genetic modification** is the process which scientists can use in order to alter the genes of an organism
- Examples of this include altering cotton to produce higher yields, altering bacteria genes to produce medicines and altering crops to produce their own insecticides

Inheritance

- **Characteristics** are passed along from parents to their offspring
- Half of the genetic information comes from each parent, this is passed on through the sex cells in the process of fertilisation
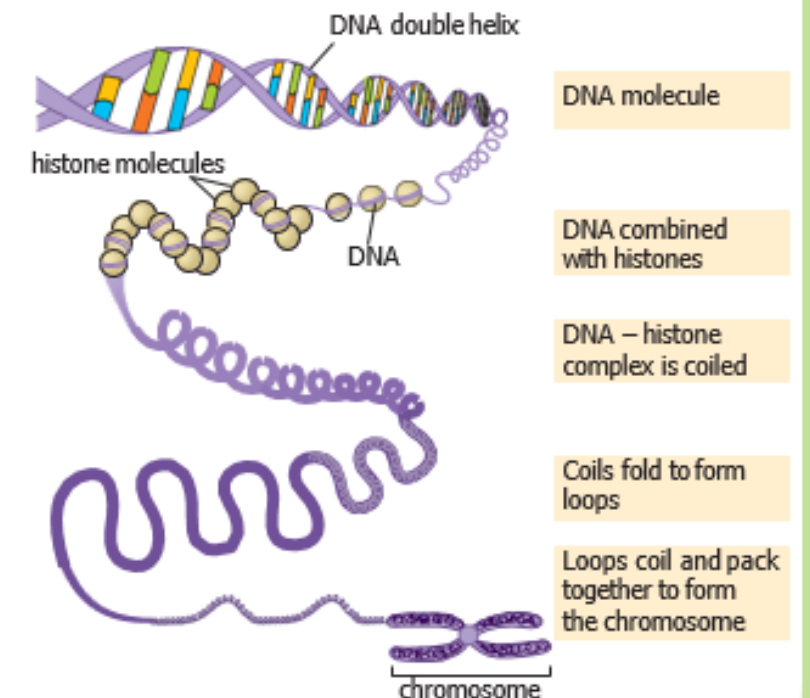

sperm contains 23 chromosomes
egg contains 23 chromosomes
During fertilisation the genetic material joins together.
cell division
Each nucleus in an embryo contains 46 chromosomes.
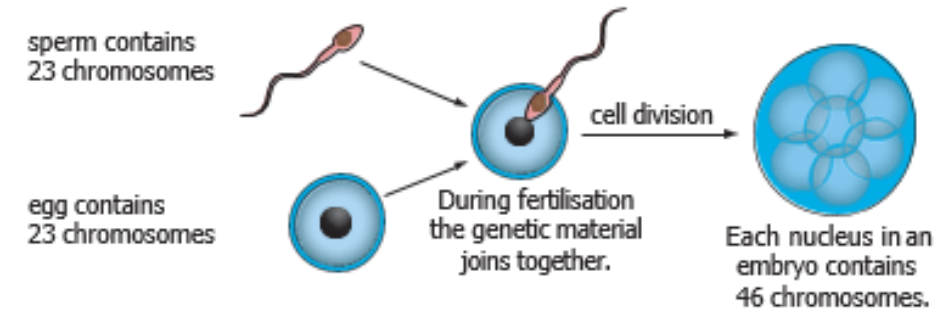
- **DNA** is the material which contains all of this genetic information

DNA – in the shape of a double helix
↓
Genes – a section of DNA which hold the information for a particular characteristic
↓
Chromosomes – long strands of DNA which hold many genes, humans have 46 of these in the nucleus of cells

DNA double helix
DNA molecule
DNA combined with histones
histone molecules
DNA
DNA – histone complex is coiled
Coils fold to form loops
Loops coil and pack together to form the chromosome
chromosome

Genetics

- For every characteristic an organism will have two **alleles**, this is two different genes which can code for the same characteristic, one is inherited from each parent
- **Dominant** alleles will cause the characteristic to be displayed even if they are with another allele, this is represented by a capital letter
- **Recessive** alleles will not be displayed as characteristics unless there are two of the same allele, they are the characteristic least likely to be shown, this is represented by a small letter
- We can predict the inheritance of characteristics using a **Punnet square**

Key terms

Allele   Biodiversity   Characteristics   Chromosome   Competition   DNA   Dominant   Evolution   Extinct   Fossil record   Gene   Genetic modification   Mutation   Natural selection   Population   Punnet square   Recessive

Context

| Ghost stories	**Ghost story**, a tale about ghosts. More generally, the phrase may refer to a tale based on imagination rather than fact. Ghost stories exist in all kinds of literature, from folktales to religious works to modern horror stories, and in most cultures.

Elements

Supernatural	The word **supernatural** (from Latin: *supernātūrālis)* is used for things that some people believe are real, but that are not part of nature or inexplicable by the scientific laws of nature. Because we cannot prove whether these things are real, people often disagree about these things.
Setting	Choosing a location in a ghost story is the first and best way of creating a haunting atmosphere. Isolated, lonely places, buildings with unhappy histories, places where something terrible has happened regularly crop up in ghost stories for a reason. As well as using recognisable settings such as haunted house and fright night clichés, think how you can add an original twist to familiar ghost story tropes to give an original spin to your ghost story

How can an actor create tension? →
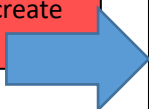
The lack of movement can have just as much impact as movement. A **freeze frame** or **still image** with an emotional stillness can be very powerful. The power comes from the interruption of what is natural. We expect movement, so stillness is an implicit shock. It makes us look at what is happening, taking the time afforded by the stillness to interpret the action. This can also be used for **marking the moment** to explore a key moment in time. It also creates contrast and varies pace, keeping the work interesting.

Creating Your Production

A **soundscape** is a series of sounds created by students (not words, echoes, repetition, or speaking together) that create a setting or suggest a scene. Sounds could range from wind, to creaking boards, to laughter. Gestures are optional.

Ghostly sounds effect and ambiences
When it comes to ghostly sounds low mid and high frequencies are what we're after. Good source sounds are e.g. metal or wood squeaks, metal scrapes and moans . Also effective are whistling winds, squeaky doors and vocalizations of course (especially children's voices).
There are many 'standard tools" for blood soaking, bone cracking sound effects. These tools mostly are vegetables and other kinds of food. Take bone breaks, for example. You want to use something crunchy and snapping. For this I'd highly recommend Chinese cabbage or celery. Single leaves or sticks make great bone-snapping sounds when broken fast.

Techniques an actor can use to prepare for their role

Hot Seatiing	A widely used and very effective Drama strategy. Questions are asked to someone sitting in the 'hot-seat' who answers in character.
Dramatic Monologue	a speech or narrative by an imagined person, in which the speaker inadvertently reveals aspects of their character while describing a particular situation or series of events.

Energy

- **Energy** is needed to make things happen
- It is measured in **joules** or **kilojoules**

- The **law of conservation of energy** says that energy cannot be created or destroyed, only transferred
- This means that the total energy before a change if always equal to the total energy after a change

Energy can be in different energy **stores**, including:
- **Chemical** – to do with food, fuels and batteries
- **Thermal** – to do with hot objects
- **Kinetic** – to do with moving objects
- **Gravitational potential** – to do with the position in a gravitational field
- **Elastic potential** – to do with changing shape, squashing and stretching

Speed

- **Speed** is a measure of how quickly or slowly that something is moving
- We measure speed in meters per second (m/s), this means that distance must be in meters and time must be in seconds
- We calculate speed with the following formula:

$$\text{speed (m/s)} = \frac{\text{distance travelled (m)}}{\text{time taken (s)}}$$

- **Relative motion** compares how quickly one object is moving compared to another
- If both objects are moving at the same speed, they are not changing position in comparison to one another, meaning that their relative speed is zero

Distance-time graphs

- **Distance-time graphs** tell the story of a journey, they show how much distance has been covered in a certain period of time
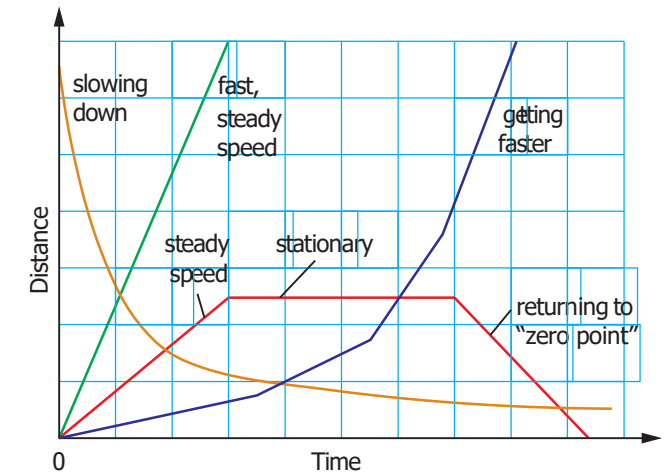
- To find the average speed, the total distance must be divided by the total time

Turning forces

- A **moment** is the turning effect of a force, it is measured in Newton meters
- We can calculate a moment with the equation:

moment (Nm) = force (N) × distance from the pivot (m)

- The size of the moment will increase as the distance from the **pivot** or the size of the force increases
- When an object, such as a seesaw is balanced, the clockwise and the anticlockwise moments will be equal and opposite, which is known as **equilibrium**
- When forces are equal and opposite to each other, there is no **resultant force**

50 0 N   1 m   pivot   100 0 N
0.5 m
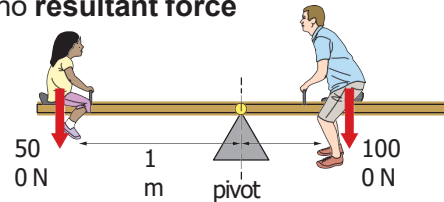
clockwise moment = force × distance on the right
= 1000 N × 0.5m
= 500 Nm
anticlockwise moment = force × distance on the left
= 500 N × 1m
= 500 Nm

Power and energy

- **Power** is a measure of how much energy is transferred per second
- Power is measured in **watts** (W)
- Each appliance has it's own power rating to tell us how quickly it uses energy
- We can calculate power with the equation:

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

Energy Dissipation

- We say that energy is **dissipated** when it is transferred to a nonuseful store, it cannot be used for what it was intended for
- Energy can be wasted through friction, heating up components or heating the surroundings
- **Efficiency** is a measure of how much of the energy has been used in a useful way, we can calculate this with the equation:

$$\text{Efficiency (\%)} = \frac{\text{useful energy output}}{\text{energy input}} \times 100$$

Gas pressure

- **Gas pressure** is caused by the particles of a gas colliding with the wall of the container which they are in
- The more often that the particles collide with the wall of the container, the higher the pressure of the gas will be
- Gas pressure can be increased by:
  - Heating the gas so the particles move more quickly and collide with the container with a higher energy
  - Compressing the gas so there are the same amount of particles within a smaller volume meaning that there are more collisions
  - Increasing the amount of particles within the same volume so there are more collisions

- **Atmospheric pressure** is the pressure which the air exerts on you all of the time, nearer the ground there are more particles weighing down on you so the pressure is greater
- The higher you go, the smaller the atmospheric pressure, this is because there will be less particles weighing down on you

Pressure in solids

- The pressure which is exerted on a solid is known as **stress**
- The greater the area over which the force is exerted over, the lower the pressure, this is why snowshoes have a large area to prevent you sinking into the snow
- **Pressure** can be calculated using the following equation:

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Pressure in liquids

- Liquids are **incompressible**
- The particles in a liquid are already touching, meaning that there is little space between them to compress
- Liquids will transfer the pressure applied to them, this is seen in hydraulic machines
- As the ocean gets deeper, the pressure will increase, this is because the pressure depends on the weight of the water above
- The greater the number of water molecules above, the higher the pressure will be

**Key terms** Make sure you can write definitions for these key terms.

Acceleration, air resistance, atmospheric pressure, balanced, contact force, deceleration, distance-time graph, drag, equilibrium, field force, friction, gas pressure, gravity, gravitational force, interaction pair, kilograms, mass, moment, Newton, non-contact, pivot, pull, push, pressure, relative motion, resultant force, speed, unbalanced, weight

Sarah Turner

Sarah Turner is an eco artist and designer. She uses discarded items like plastic bottles, cans and circuit boards to make beautiful jewellery, sculptures, lighting and artwork.
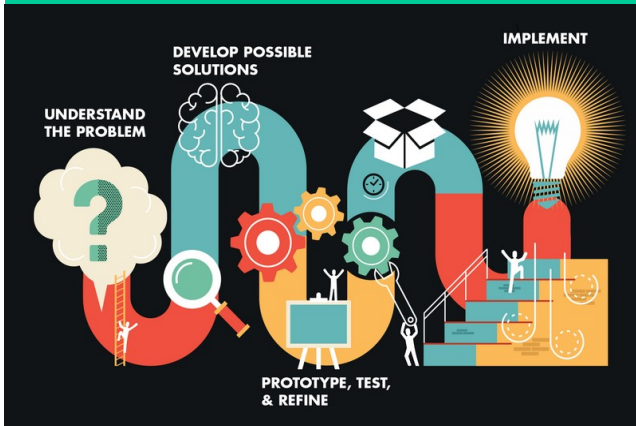
Textiles Year 9

Design and Technology

Sustainability in Design.

Sustainable design is the idea of designing products, the built environment, and services so there is no negative impact on the planet or people. Examples of this include using recycled materials, using renewable materials and using fair trade principles.

Adidas

Adidas have teamed up with environmental company Parley to turn ocean plastic waste like fishing nets and plastic bottles into trainers. They are also rethinking how trainers are designed by producing innovative styles that use minimal materials.

The Design Process

The 6Rs

Rethink	Do we make too many products? Design in a way that considers people and the environment.	
Refuse	Don't use a materials or buy a product if you don't need it or if it's bad for people or the environment	
Reduce	Cut down the amount of material and energy you use as much as you can.	
Reuse	Use a product to make something else with all or parts of it.	
Recycle	Reprocess a material or product and make something else.	
Repair	When a product breaks down or	

The Impact Of Fast Fashion

Textile production produces harmful emissions and other pollution from chemicals and dyes.

Poor-quality clothing leads to more textile waste. Plastic based fibers release harmful gases in landfills.

Textile production uses scarce resources. The industry uses 100 billion cubic meters of water annually — about 4% of global freshwater withdrawal.
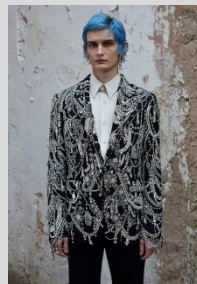
Microplastics enter the water system when synthetic materials are washed. Ocean species consume these plastics, and so do people eating seafood.
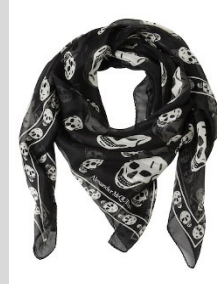
Alexander McQueen

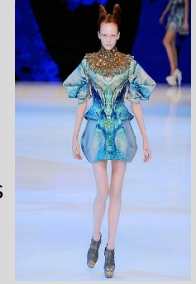McQueen has been credited with bringing drama, extravagance, fantasy and rebellion to fashion

McQueen became known for using skulls in his designs and his iconic skull scarf was copied into mainstream fashion
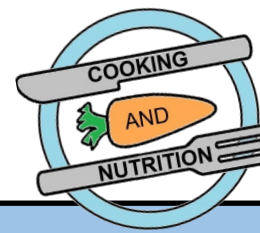
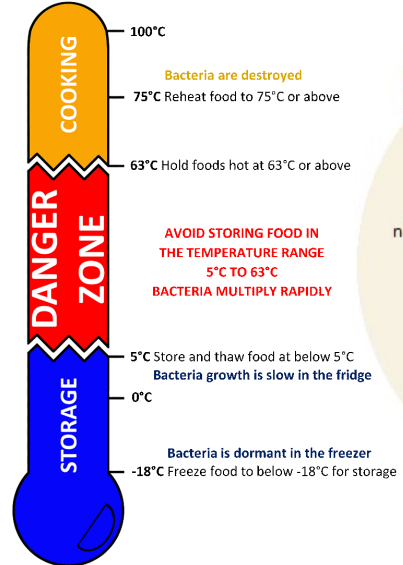McQueen designed for both Givenchy and Gucci

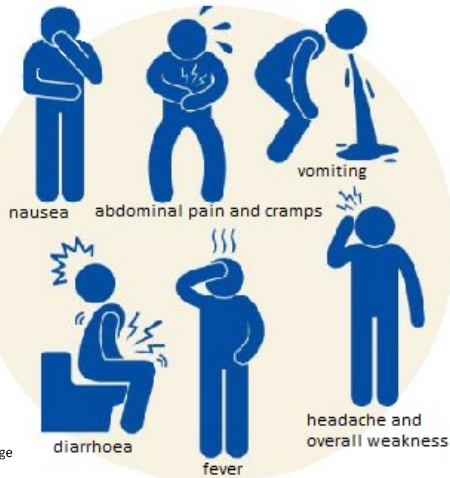He was an avid scuba diver and used this passion as inspiration for his Plato's Atlantis Collection

Year 9 - Lifestyle & Choice

COOKING AND NUTRITION

Food safety

- 100°C
- **Bacteria are destroyed**
- 75°C Reheat food to 75°C or above
- 63°C Hold foods hot at 63°C or above

DANGER ZONE — **COOKING**

AVOID STORING FOOD IN THE TEMPERATURE RANGE 5°C TO 63°C BACTERIA MULTIPLY RAPIDLY

- 5°C Store and thaw food at below 5°C
- Bacteria growth is slow in the fridge
- 0°C
- Bacteria is dormant in the freezer
- -18°C Freeze food to below -18°C for storage

STORAGE

Food poisoning symptoms

nausea — abdominal pain and cramps — vomiting — diarrhoea — fever — headache and overall weakness

https://www.youtube.com/watch?v=flxmB8NKMzE
https://www.nhs.uk/live-well/eat-well/10-ways-to-prevent-food-poisoning/
https://www.food.gov.uk/safety-hygiene/avoiding-cross-contamination

Food labelling: lots of information is required by law. Storage instructions are particularly important for food safety.

USE BY vs **BEST BEFORE**

USE BY: 24 JUL
BEST BEFORE: 10 OCT

YOU'VE GOT UNTIL THE END OF THIS DATE TO USE OR FREEZE THE FOOD BEFORE IT BECOMES TOO RISKY TO EAT

YOU CAN EAT FOOD PAST THIS DATE BUT IT MIGHT NOT BE AT ITS BEST QUALITY

Keep refrigerated   Store in a cool, dry place

https://www.youtube.com/watch?v=OZOIEYQ0axo&list=PLcvEcrsF_9zIxoGGU59CjuZHciPl9uvGm&index=9&t=2s

Key vocabulary

safety / hygiene / cross-contamination
pathogenic / food poisoning / symptoms
nutrition / hydration / shelf life
perishable / ambient / dormant
ethical / moral / cultural / preferences
allergies / intolerances / life stages

Nutritional needs and health: some people have special dietary needs based on their age, lifestyle or allergies.

GLUTEN FREE / LACTOSE FREE / 100% VEGETARIAN / VEGAN / LOW FAT / SOURCE OF FIBRE / LOW SODIUM SEA SALT CO. / SUGAR FREE

https://www.youtube.com/watch?v=k5YSJq4iQtI

Senses: influence our enjoyment of food.

VISION   HEARING   SMELL   TASTE   TOUCH

https://www.youtube.com/watch?v=zNchJIa7G0E

The Eatwell Guide shows the types and proportions of foods people need for a healthy and well-balanced diet.

Eatwell Guide

https://www.youtube.com/watch?v=7MlE4G8ntss
https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/
https://www.youtube.com/watch?v=8aWqZd9RScQ

Food choices: a variety of factors influence what we choose to eat.

100% ORGANIC / Likes and Dislikes / HALAL / i'm lovin' it / FAIRTRADE / CERTIFIED KOSHER / CAUTION PEER PRESSURE / TESCO / Sainsbury's / M&S / ASDA

https://www.youtube.com/watch?v=D6eor1wkNFY
https://www.youtube.com/watch?v=bowUbkANVVY

Dehydration: the main symptoms.

DIZZINESS   DRY MOUTH
DARK URINE   HEADACHE
THIRST   FATIGUE

https://www.youtube.com/watch?v=b7s2Aqj72Q8
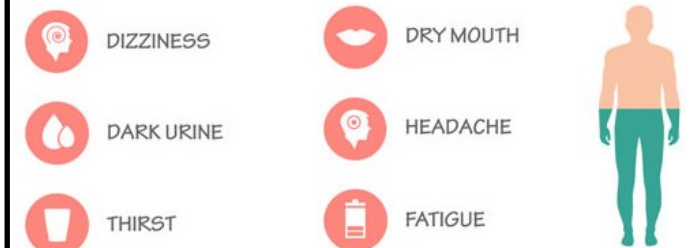
Y9 Set 1-2 : Les vacances

Vocabulaire

Les vacances	Holidays
Je vais en vacances …	*I go on holiday …*
au bord de la mer	*to the seaside*
à la campagne	*to the countryside*
à la montagne	*to the mountains*
J'y vais …	*I go there …*
avec ma famille	*with my family*
J'y reste …	*I stay there …*
une semaine/quinze jours/un mois	*one week/a fortnight/a month*
Je pars en colo.	*I go to a holiday camp.*
Je pars en classe de neige.	*I go on a winter sports holiday.*
On fait du camping.	*We go camping.*

Les activités de vacances — Holiday activities

Les activités de vacances	Holiday activities
Je fais …	*I do/go …*
du canoë-kayak	*canoeing*
du VTT	*mountain-biking*
du ski nautique	*water-skiing*
du snowboard	*snowboarding*
de la plongée sous-marine	*scuba diving*
de la voile	*sailing*
de la planche à voile	*wind-surfing*
de l'équitation	*horse-riding*
de l'escalade	*climbing*
des randonnées dans la forêt	*hiking in the forest*
Je vais à la pêche.	*I go fishing.*
Je prends des cours de ski.	*I have skiing lessons.*
J'ai fait un stage de (voile).	*I did a (sailing) course.*
Il n'y a pas grand-chose à faire.	*There's not much to do.*

Scan the QR code to access this vocab on Quizlet.

Mes rêves — My dreams

Mes rêves	My dreams
Je voudrais …/J'aimerais…	I would like to…
descendre l'Amazone en canoë	go down the Amazon in a canoe
essayer des sports extrêmes	try some extreme sports
faire un safari en Afrique	go on safari in Africa
passer des vacances sur une île déserte	spend the holidays on a desert island
traverser le Sahara à dos	cross the Sahara by camel

de chameau

visiter tous les parcs d'attractions du monde

visit all the theme parks in the world

voir des gorilles en liberté

see gorillas in the wild

Les réactions

Reactions

Oua-a-a-is! Cool!	*Yeah! Cool!*
Bonne idée!	*Good idea!*
Ce serait génial/super.	*That would be great.*
Quelle horreur!	*How horrible!*
Tu rigoles!	*You must be joking!*
Ce serait trop …	*That would be too …*
dangereux/tranquille pour moi.	*dangerous/quiet for me.*
Ce n'est pas mon truc.	*It's not my kind of thing.*

Les verbes pronominaux

Reflexive verbs

Je me baigne.	*I swim.*
Je me coiffe.	*I do my hair.*
Je me couche.	*I go to bed.*
Je me douche.	*I have a shower.*
Je me fais bronzer.	*I sunbathe.*
Je me fais piquer.	*I get stung.*
Je m'amuse.	*I have fun.*
Je m'ennuie.	*I get bored.*

Les affaires de vacances

Holiday items

un adaptateur	*an adaptor*
un chargeur (pour mon mp3)	*a charger (for my mp3)*
un chapeau de paille	*a straw hat*
un tuba	*a snorkel*
un sac à dos	*a rucksack*
une bombe anti-insectes	*an insect repellent spray*
une lampe de poche	*a torch*
de la crème solaire	*sun cream*
du gel coiffant	*hair gel*
des lunettes de plongée (fpl)	*swimming goggles*
des palmes (fpl)	*flippers*
des tongs (fpl)	*flip-flops*
plein de bouquins (mpl)	*loads of books*

T'as passé de bonnes vacances?	***Did you have a nice holiday?***
Pas vraiment.	*Not really.*
C'était un désastre.	*It was a disaster.*
Je suis resté(e) trop longtemps au soleil.	*I stayed in the sun too long.*
J'ai pris un coup de soleil.	*I got sunburnt.*
Il a plu tout le temps.	*It rained all the time.*
L'eau est entrée dans la tente.	*Water came into the tent.*
Je suis tombé(e) à l'eau.	*I fell in the water.*
J'ai été malade.	*I was ill.*
On a tous été malades.	*We were all ill.*
C'est dommage.	*What a shame.*
C'est pas drôle, ça.	*That's not funny.*

À la base de loisirs	***At the leisure park***
J'ai …/On a….	*I …/We …*
fait du tir à l'arc	*did archery*
fait de la planche à voile	*went windsurfing*
fait du trampoline	*did trampolining*
fait de la baignade	*went swimming*
fait une balade en barque	*went on a boat ride*
joué aux boules	*played boules*
joué sur des structures gonflables	*played on a bouncy castle*
loué un pédalo	*hired a pedalo*

Les mots essentiels	***High-frequency words***
avec qui?	*with whom?*
combien de?	*how much/how many?*
que?/ qu'est-ce que?	*what?*
pourquoi?	*why?*
y	*there*
quel(le)(s)	*which?/what*
toujours	*always*
prochain(e)(s)	*next*

Y9 French Set 3-4 : Les vacances

Vocabulaire

Les vacances	*Holidays*
Je passe mes vacances …	*I spend my holidays …*
au bord de la mer	*at the seaside*
à la campagne	*in the countryside*
à la montagne	*in the mountains*
en colo	*at a holiday camp*
Je vais en vacances …	*I go on holiday …*
avec ma famille	*with my family*
avec mes parents	*with my parents*
avec mes copains	*with my friends*
Je reste …	*I stay …*
une semaine	*one week*
quinze jours	*a fortnight*
dix jours	*ten days*

Les activités de vacances	**Holiday activities**
Je fais …	*I do/go …*
du canoë-kayak	*canoeing*
du ski	*skiing*
du snowboard	*snowboarding*
du VTT	*mountain biking*
de la voile	*sailing*
de la planche à voile	*windsurfing*
de l'équitation	*horse riding*

Mes rêves	*My dreams*
Un jour, je voudrais …	*One day, I would like to …*
aller au pôle Nord	*go to the North Pole*
descendre l'Amazone en canoë	*go down the Amazon in a canoe*
faire de la plongée sous-marine	*go scuba diving*
faire des sports extrêmes	*do some extreme sports*
faire un safari en Afrique	*go on safari in Africa*
habiter sur une île déserte	*live on a desert island*

Les réactions

Ouais! Cool!
Bonne idée!
Pourquoi pas?
Quelle horreur!
Tu rigoles!
Ce n'est pas mon truc.

Reactions

Yeah! Cool!
Good idea!
Why not?
How horrible!
You must be joking!
It's not my kind of thing.

Les affaires de vacances

un chargeur (pour mon
  mp3/ma PlayStation portable)
un portable
un tuba
une bombe anti-insectes
du gel coiffant
de la crème solaire
des lunettes de plongée
des palmes
des tongs

Holiday items

a charger (for my mp3/my portable
  PlayStation)
a mobile phone
a snorkel
an insect-repellent spray
hair gel
sun cream
swimming goggles
flippers
flip-flops

Les verbes pronominaux

Je me baigne.
Je me coiffe.
Je me douche.
Je me fais bronzer.
Je me fais piquer.
Je m'ennuie.

Reflexive verbs

I swim.
I do my hair.
I have a shower.
I sunbathe.
I get stung.
I get bored.

Des vacances désastreuses

J'ai oublié mon passeport.
J'ai perdu mon portemonnaie.
J'ai cassé mon appareil photo.
J'ai pris un coup de soleil.
J'ai mangé quelque chose
  de mauvais.
On a raté l'avion.
Aïe!

Disastrous holidays

I forgot my passport.
I lost my purse.
I broke my camera.
I got sunburnt.
I ate something bad.

We missed the plane.
Oh, no!/Ouch!

Mince!	Damn!
Oh là là!	Oh, dear!
C'est pas possible!	No way!
Quel désastre!	What a disaster!

À la base de loisirs

At the leisure park

J'ai …	I …
Il/Elle a …	He/She …
fait du tir à l'arc	did archery
fait du trampoline	did trampolining
fait de l'escalade	went climbing
Je suis …	I …
Il/Elle est …	He/She …
allé(e) à la pêche	went fishing

Les mots essentiels

High-frequency words

où?	where?
avec qui?	who with?
combien de?	how much?/how many?
que?/qu'est-ce que?	what?
normalement	usually, normally
quel/quelle	which/what (a)
alors/donc	so/therefore
quand	when
mon/ma/mes	my
ton/ta/tes	your
son/sa/ses	his/her
d'abord	first of all
ensuite	then/next
puis	then
après	afterwards
finalement	finally

Year 9 Summer Term World Conflict 1939-Present Pt.2

Lesson Content

America enters the War

Turning the tide

D-Day 1944

The Final Stages of WW2

The atomic bomb

The Cold War 1945-1991

The Cold War 1945-1991

The end of the Cold War

The roots of International Terrorism

International Terrorism

International Terrorism

Key dates

7 December 1941	Attack on Pearl Harbor in Hawaii
4 June 1942	Battle of Midway
October-November 1942	battle of the Second World War that took place near the Egyptian railway halt of El Alamein.
5 July 1943	Germans launch battle of Kursk
6th June 1944	D-Day, Allies invade Normandy
8th May 1945	Germany surrenders to the Allies
August 1945	Japan surrenders to the Allies
June 1945	United Nations set up
1950 – 1953	The Korean War
August 1961	Berlin Wall built
1986	Chernobyl disaster
1989	Berlin Wall is dismantled

Key people

Joseph Stalin	Soviet politician who ruled the Soviet Union from the mid-1920s until his death in 1953
Franklin D. Roosevelt	American politician who served as the 32nd president of the United States from 1933 until his death in 1945
Bernard Montgomery	commanded the British Eighth Army from August 1942, through the Second Battle of El Alamein and on to the final Allied victory in Tunisia in May 1943.
Alan Turing	played a crucial role in cracking intercepted coded messages that enabled the Allies to defeat the Nazis in many crucial engagements, and in so doing helped win the war
John F.Kennedy	Often referred to by his initials **JFK**, was an American politician who served as the 35th president of the United States from 1961 until his assassination in 1963
Nikita Kruschev	Soviet politician who led the Soviet Union as the first secretary of the ruling Communist Party from 1953 to 1964
Ronald Reagan	American politician who served as the 40th **president** of the United States from 1981 to 1989
Mikhail Gorbachev	Russian and former Soviet politician. The eighth and last leader of the Soviet Union, he was the General Secretary of the Communist Party of the Soviet Union from 1985 until 1991.

Key Words - Glossary

"The Western Allies"	the countries that together opposed Germany and her allies during the Second World War (1939–1945).	Global	relating to the whole world; worldwide.
Atomic bomb	an explosive device that derives its destructive force from nuclear reactions, either fission (fission bomb) or from a combination of fission and fusion reactions (thermonuclear bomb)	Domino Theory	A theory prominent in the United States from the 1950s to the 1980s that posited that if one country in a region came under the influence of communism, then the surrounding countries would follow in a domino effect.
M.A.D	**Mutually assured destruction** (**MAD**) is a doctrine of military strategy and national security policy in which a full-scale use of nuclear weapons by two or more opposing sides would cause the complete annihilation of both the attacker and the defender	Glasnost	Glasnost was taken to mean increased openness and transparency in government institutions and activities in the Soviet Union (USSR).
Blockade	An act or means of sealing off a place to prevent goods or people from entering or leaving.	Perestroika	a political movement for reformation within the Communist Party of the Soviet Union during the 1980s and is widely associated with Soviet leader Mikhail Gorbachev and his glasnost (meaning "openness") policy reform.
Boycott	To withdraw from commercial or social relations with (a country, organization, or person) as a punishment or protest.	Terrorism	the unlawful use of violence and intimidation, especially against civilians, in the pursuit of political aims.
Stalemate	A situation in which further action or progress by opposing or competing parties seems impossible.	Al-Qaeda	**Al-Qaeda** ideologues envision the removal of all foreign influences in Muslim countries.

Key resources:
www.tecchistoryks3.blogspot.com

Key Assessment: 50 minute assessment based on skills from Paper 3 GCSE History, Questions 6 – 8 or 9

¿Qué casa prefieres? / Which house do you prefer?

Spanish	English
Esta casa es...	This house is...
Este piso es...	This flat is...
amplio, amplia	spacious
antiguo, antigua	old
bonito, bonita	nice
cómodo, cómoda	comfortable
enorme	enormous
feo, fea	ugly
grande	big
maravilloso, maravillosa	marvellous
moderno, moderna	modern
pequeño, pequeña	small
La casa/El piso está	The house/The flat is...
cerca de la playa	near the beach
en el centro	in the centre
en la montaña	in the mountains
más... que...	more... than...
menos... que...	less... than...
Prefiero...	I prefer...
porque	because

Beautiful

¿Qué se puede hacer en...? / What can you do in...?

Spanish	English
Se puede(n)...	You can...
hacer senderismo	go hiking
hacer actividades náuticas	do water sports
hacer artes marciales	do martial arts
ir a la bolera	go bowling
ir al cine	go to the cinema
ir de compras	go shopping
ir de paseo en bicicleta	go on a bike ride
ir a la playa	go to the beach
ir al restaurante	go to the restaurant
jugar al golf	play golf
jugar al voleibol	play volleyball
jugar al tenis	play tennis
ver la catedral	see the cathedral
visitar un castillo	visit a castle

¿Dónde está...? / Where is...?

Spanish	English
la catedral	the cathedral
la estación de tren	the railway station
el minigolf	the minigolf
el parque acuático	the water park
el parque de atracciones	the theme park
la pista de karting	the go-kart track
el zoo	the zoo
Sigue todo recto.	Keep straight on.
Dobla a la derecha.	Turn right.
Dobla a la izquierda.	Turn left.
Toma la primera a la derecha.	Take the first on the right.
Toma la segunda a la izquierda.	Take the second on the left.
Cruza la plaza	Cross the square.
Está a la derecha.	It's on the right.
Está a la izquierda.	It's on the left.

WILD!

Palabras muy frecuentes / High-frequency words

Spanish	English
bastante	quite
donde	where
esta, este	this
está	it is
muy	very
también	also, too

Expresiones de tiempo / Time expressions

Spanish	English
ayer	yesterday
el fin de semana pasado	last weekend
el verano pasado	last summer
el año pasado	last year
hace dos años	two years ago
hoy	today
mañana	tomorrow
este fin de semana	this weekend
el verano que viene	next summer
el año que viene	next year

La casa / The house

Spanish	English
Tiene...	It has...
una cocina	a kitchen
un comedor	a dining room
un cuarto de baño	a bathroom
un dormitorio	a bedroom
un salón	a living room
una chimenea	a fireplace
un jacuzzi	a hot tub
un jardín	a garden
una piscina	a swimming pool
una terraza	a balcony, a terrace
vistas al mar	views of the sea

Opiniones / Opinions

Spanish	English
Me gusta...	I like...
Me encanta...	I love...
Me gustaría mucho...	I would really like...
Me encantaría...	I would love...

I LOVE IT!

To revise this topic

SCAN ME

En la tienda de recuerdos — In the souvenir shop

¿Qué vas a comprar?	What are you going to buy?	Es...	It's...
¿Qué quiere usted?	What would you like? (polite form)	barato/a	cheap
		bonito/a	pretty
Quiero (comprar) algo para mi (madre).	I want (to buy) something for my (mother).	caro/a	expensive
		feo/a	ugly
Creo que voy a comprar...	I think that I am going to buy...	precioso/a	lovely
		útil	useful
un abanico / un collar	a fan / a necklace	¿Cuánto es?	How much is it?
un imán / un llavero	a magnet / a key ring	Son... euros.	It is... euros.
una camiseta / una figurita / una taza	a T-shirt / a figurine / a mug	Es demasiado caro/a.	It's too expensive.
(el) turrón	nougat	No, gracias.	No, thank you.
Me gusta la taza, pero prefiero el imán.	I like the mug, but I prefer the magnet.	Perfecto, gracias.	Perfect, thank you.

Mi último día en Madrid — My last day in Madrid

Si...	If...	sacar fotos (del Palacio Real)	take photos (of the Palacio Real)
hace buen tiempo	it's good weather		
hace frío / sol / viento	it's cold / sunny / windy	tomar el sol (en el Retiro)	sunbathe (in the Retiro)
llueve	it's raining / it rains	ver un partido (en el estadio Santiago Bernabéu)	watch a match (at the Santiago Bernabéu Stadium)
voy a...	I'm going to...		
ir de compras (al Rastro)	go shopping (in the Rastro)		
probar (un cocido madrileño)	try (cocido madrileño stew)	visitar (el Museo del Prado)	visit (the Prado Museum)

La caza del tesoro — The treasure hunt

¿Adónde hay que ir?	Where do you/we have to go?	sacar fotos de...	take photos of...
		ver...	see...
Hay que...	You/We have to...	el campo de fútbol más famoso de Madrid	the most famous football pitch in Madrid
ir al estadio Santiago Bernabéu	go to the Santiago Bernabéu Stadium		
ir al parque del Retiro	go to Retiro Park	el cuadro más famoso de España	the most famous painting in Spain
visitar el Museo Reina Sofía	visit the Reina Sofía Museum	los churros más ricos del mundo	the tastiest churros in the world
coger el teleférico	take the cable car	el león más feroz del parque	the most ferocious lion in the park
comer...	eat...		
comprar una postal de...	buy a postcard of...	los monumentos más interesantes de Madrid	the most interesting monuments in Madrid
dibujar...	draw...		

Mi día favorito — My favourite day

Mi día favorito fue el (martes).	My favourite day was (Tuesday).	hice / hicimos muchas cosas	I / we did lots of things
Por la mañana...	In the morning...	monté / montamos en la montaña rusa	I / we went on the roller coaster
Por la tarde...	In the afternoon / evening...	saqué / sacamos fotos	I / we took photos
bebí / bebimos horchata	I / we drank horchata	vi / vimos los delfines	I / we saw the dolphins
comí / comimos un bocadillo de calamares	I / we ate a fried squid sandwich	visité / visitamos el zoo / el parque de atracciones	I / we visited the zoo / theme park
compré / compramos una gorra	I / we bought a cap	Fue increíble / divertido / flipante.	It was incredible / fun / awesome.
fui / fuimos a la cafetería	I / we went to the café	¡Qué miedo / rico / guay!	How scary / tasty / cool!
fui / fuimos en metro	I / we went by metro / underground		

Palabras muy frecuentes — High-frequency words

primero	first	donde	where
luego	then	este/esta	this
después	afterwards	algo	something
más tarde	later	para	for
finalmente	finally	usted	you (polite form)
(o) tal vez	(or) perhaps	sobre todo	above all / especially

To revise this topic

SCAN ME
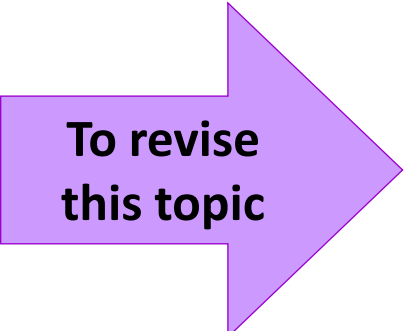
Year 9 CRE – Ethical Questions

Key Words

Equality

Rights

Suffering

Evil

Belief

Punishment

Good

Treatment

Islamophobia

Atheist

God's biggest problem?

Ask most atheists why they do not believe in the God of the Bible, and their answer will ultimately come back to the character of God.

AIDS, genocide, child slavery, starvation, earthquakes, tsunamis, hurricanes, and terrorism—where did these evils come from, and how could a loving God allow people to endure so many horrible tragedies?

This is known as the problem of evil and suffering.

How does religion impact the UK?

- Bishops sit in the House of Lords in Parliament.
- Many laws have been based on religious teachings.
- Church plays a ceremonial role in society – weddings, funerals etc.

Key Questions

Should we respect everyone?

Why are people different?

What is in place to make sure people are treated equally?

Why are people treated differently?

What does it mean to be a good person?

Do we all have a part to play in making sure everyone has equal rights?

Year 9 RM Knowledge Organiser – Architecture Project

Single-point perspective - This shows an object from the front in a realistic way as it gets smaller going into the distance. The front view goes back towards a **vanishing point**, which is a point on the horizon line that all lines meet at.
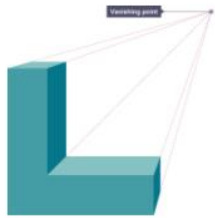
Two-point perspective - This shows an object from the side with two vanishing points.
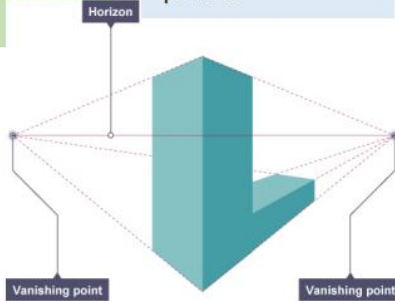
Gerrit Rietveld 1888-1964
Connected with De Stijl

Rietveld was a Dutch furniture designer and architect. One of the principal members of the Dutch artistic movement called **De Stijl**, **Rietveld** is famous for his Red and Blue Chair and for the **Rietveld Schröder House**, which is now a **UNESCO** World Heritage Site.

Scaled models can be made from a variety of different materials using hard materials such as **wood**, **metal** and **plastic** or compliant materials such as **paper**, **board** and **foam**.

Block modelling
After sketch modelling, designers may progress onto block modelling as '**proof of concept**' or to explore form or function in more detail. **Blockboard**, **Foamboard** and **Styrofoam** are all useful materials for making quick block models.

This logo belongs to the FSC, The Forest Stewardship Council. The FSC promotes the responsible management of forests through sustainable forestry.

The **six R's** are a range of approaches to minimizing the use of natural resources and reducing waste.

Rendering
Creating the illusion of light, tone and texture using graphic materials. Creating the illusion that an object is made from a particular material.

3 Tone shading

6 Rs:
Reuse
Reduce
Recycle
Refuse
Repair
Rethink

Renewable energy sources are alternatives to fossil fuels and nuclear energy. They are considered infinite as sources of energy are produced naturally by the earth such as wind, seas, rivers and energy from the sun.

Card modelling
Unlike styrofoam and other solid modelling materials, card and paper can be used to make 'hollow' shell or box models.

Another type of laminated board, **Foam Board** is a multi layer board made up of two outer layers of card with a foam centre. It is used for display boards and more commonly used for architectural models.

Year 9 Summer Maths Knowledge Organiser

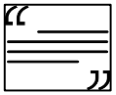| Topic	Key fact	Hegarty maths clip number
Percentage of Amount	Turn the percentage into a decimal and multiply it by the amount. e.g. 45% of 60 is 0.45 x 60 = 27 The 0.45 is called the decimal multiplier.	83 to 87
Percentage Increase & Decrease	If it is a percentage increase, the decimal multiplier will be 1.something because you are getting more than 100%. If it is a percentage decrease, the decimal multiplier will be 0.something because you are getting less than 100% e.g increase £200 by 40% would be 200 x 1.4 decrease £200 by 40% would be 200 x 0.6	88 to 92
Reverse percentages		96
Expanding a single bracket		160 – 161
Expanding double brackets		162 - 165
Linear sequences (nth term) & Special Sequences	Square: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, … Cube: 1, 8, 27, 64, 125,… Triangular: 1, 3, 6, 10, 15, 21, 28, 36, 45, … nth term: General rule for a sequence. Find the difference between each term, then how do you get from that times table to the sequence: (e.g. $3n + 2$) 	196 – 198

Pythagoras' Theorem	c = hypotenuse $a^2 + b^2 = c^2$ $c^2 - b^2 = a^2$ $c^2 - a^2 = b^2$ Remember to square root your answer to find the missing side.	497 – 504
Indices	$a^m \times a^n = a^{m+n}$ $a^m / a^n = a^{m-n}$ $(a^m)^n = a^{m \times n}$ $a^0 = 1$ $a^1 = a$	102 to 106
Calculations with numbers in standard form	Multiplying & dividing: do the 'normal' numbers like usual; then use index laws for the $\times 10^n$ Adding & subtracting: make them ordinary numbers first; do column addition or subtraction; change back to standard form	125 to 128
Negative and Fractional Indices	$$m^{a/b} = \sqrt[b]{m^a}$$ $$a^{-c} = \frac{1}{a^c} \qquad \left(\frac{1}{a}\right)^{-c} = a^c \qquad \left(\frac{x}{y}\right)^{-c} = \frac{y^c}{x^c}$$	104 to 108
Direct Proportion	One quantity **increases** at the same rate as the other quantity **increases**. DIRECT PROPORTION	339
Inverse Proportion	One quantity **increases** at the same rate as the other quantity **decreases**.	342

Key Vocabulary

- Integer – A whole number.
- Power/Indices - The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
- Square number - the answer you get when you multiple a number by itself.
- Cube number - the answer you get when you multiply a number by itself 3 times. o Root – The inverse operation of a power.
- Expand – to multiply the term before bracket by the terms in the bracket using the o Factorise – To put into brackets by taking out the highest common factor. o Hypotenuse – the longest side in a right0angled triangle. o Direct proportion - one quantity increases at the same rate as the other quantity increases. o Inverse proportion - one quantity increases at the same rate as the other quantity decreases. o $n^{th} term$ – the position to term rule for a sequence. Can be used to find any number in a sequence.

Success criteria

- ❓ Answer the question
- 💡 Writer's intentions
- 🗒 Quotation to support your idea
- ⚙ Subject terminology / method
- 🔗 Make links from method to your idea
- 👤 Explain the effect on reader / audience
- 🔍 Develop analysis - zoom in
- ⤋ Alternative analysis
- 🗎 Comparison
- 🌍 Context links

Check:
- ☐ Capital letters (new sentence / proper nouns)
- ☐ Quotation marks
- ☐ Academic voice (no slang or weak vocabulary)
- ☐ Punctuation (full stops / no '?' or '!')
- ☐ Paragraphs

❓ Answer the question / 💡 Writer's intentions	🗒 Quotation to support your idea	⚙ Subject terminology / method	🔗 Make links from method to idea
The writer… • creates • evokes • suggests • presents • conveys • reveals • explores • introduces • highlights • persuades • states	• choose carefully – it must support your idea • keep quotations short • embed where possible e.g. At the beginning of the play, Shakespeare describes Macbeth as 'brave' and as 'disdaining fortune' to convey… • avoid 'in the quote' - use 'the phrase' or 'the word' if you can't embed	• noun • adjective • verb • dialogue • character • simile • metaphor • personification • alliteration • symbolism • imagery • semantic field	• reflects • alludes to • echoes • symbolises • contrasts • connotes • develops • establishes • illustrates • highlights • questions • subverts
👤 Effect on reader / audience	👤 Explaining effect on reader / audience	🔍 Develop analysis - zoom in / ⤋ Alternative interpretation / 🗎 Comparison	🌍 Context links
The reader / audience can… • infer • understand • interpret *The reader / audience is…* • shocked • disturbed • provoked • reassured • manipulated • surprised • convinced	• because • but • so that • as • also	• additionally • similarly • in contrast • however • moreover • furthermore • although • whereas • despite this • equally • consequently	• at the time • contextually • during this period • reflects contemporary ideas • typical of the time • unusual for the time • typical of the genre • subverts the genre • reflects the real world experience

NARRATIVE WRITING - YEAR 9

CREATIVE WRITING DEVICES

Subversion	Going against the natural order of things. In the context of literature, this means to create something which goes against the readers' expectation e.g. plot twist.
Didactic	Intended to teach an audience and deliver entertainment. In the context of literature, a didactic story would usually provide the character with a moral dilemma.
Symbolism	The use of symbols (names, people, locations, animals, weather) to represent something beyond the literal meaning. The symbol should not be taken literally but be used as a representative of something with a deeper meaning e.g. flying birds = freedom.
Foreshadowing	Occurs when an author drops different hints to the reader about what is to come e.g. "Marley was dead: to begin with".
Show, not tell	When language and structure are used to give clues to the reader about what is happening. This skill is a way of demonstrating creative techniques while avoiding making obvious statements.

HIGH LEVEL PUNCTUATION

Ellipsis ...	Allows a reader to contemplate what you have written and create a sense of anticipation. For example: *You could probably imagine what I felt after that... complete embarrassment!*
Semi-Colon ;	Used to link two clauses instead of a comma. The sentence after the semi-colon usually does not make sense without the previous sentence. For example: *Joan likes eggs; Jennifer does not.*
Colon :	Consists of two equally sized dots placed one above the other on the same vertical line. A colon often comes before: an explanation, a list, a quotation, or a block quotation.
Parenthesis ( )	Allows a writer to include additional information to a sentence. Whatever is inside the parenthesis must not be integral to the original sentence. For example: *He finally answered (after five minutes of thinking) that he did not understand the question.*

NARRATIVE WRITING HOOKS

Direct Speech	Opening a story with somebody talking, perhaps saying something that helps the reader to imagine what might happen in the story.
Action	Describing an action or something that has just happened, perhaps to the main character.
Scene Setting	Describing the setting of the story; perhaps where they are or when. It also might use imagery to describe the weather.
Direct Address	Opening a story where the narrator talks directly to the reader, often asking a question.

STORY MOUNTAIN

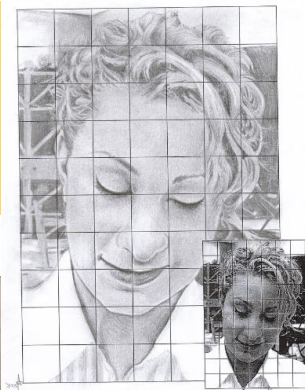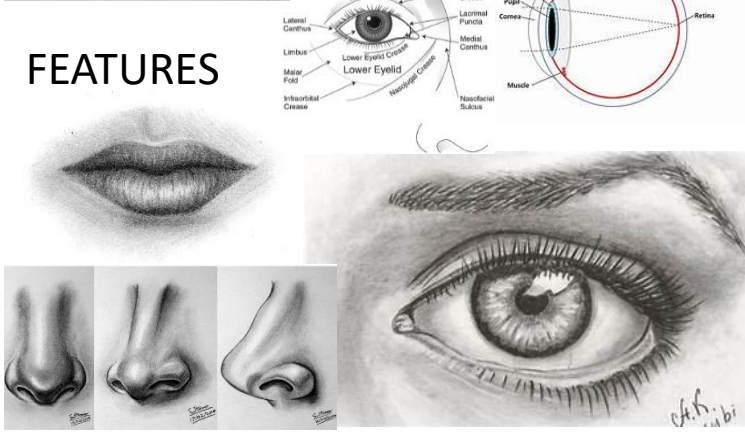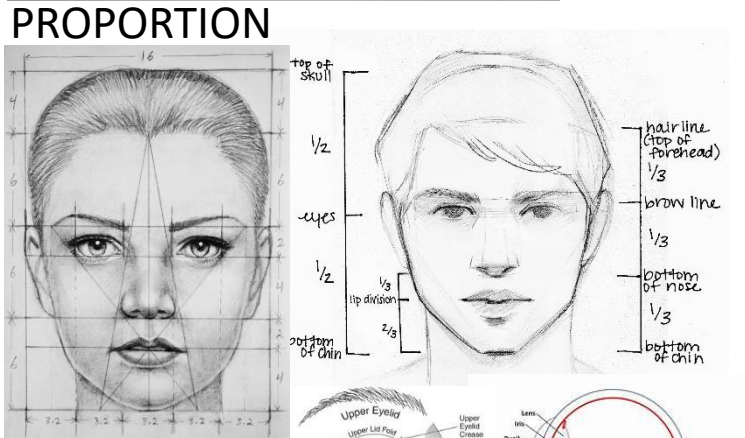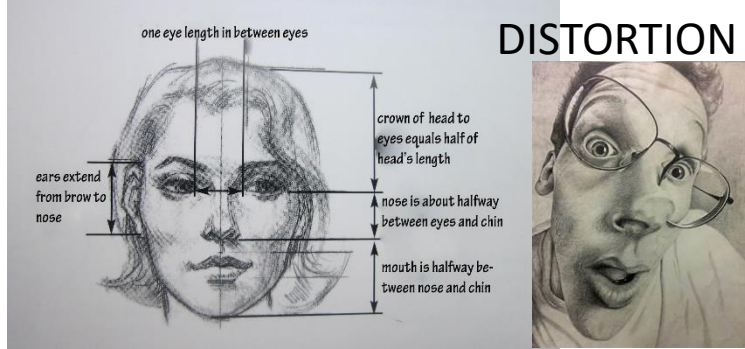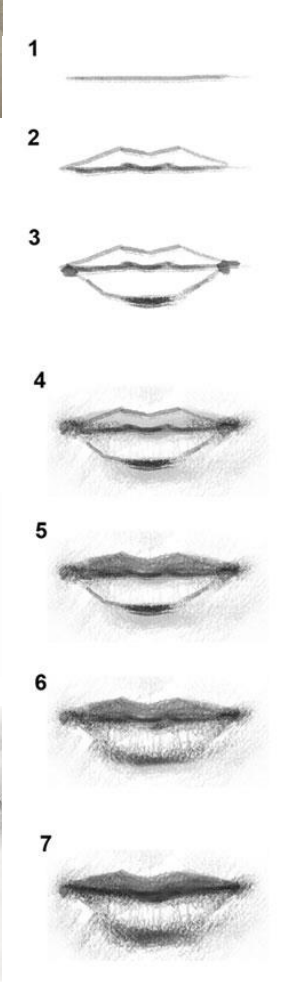|	
Exposition	The start of the plot which introduces the characters, setting and outlines any relevant events that have taken place before the time of the story.
Rising Action	A series of relevant events/moments in the story that lead to the climax of the story. It will usually create interest, suspense and tension for the reader.
Climax	The most intense, important or exciting moment of a story.
Falling Tension	Events which happen immediately happen after the climax of the story. Usually address the consequences/after-effects of the climax.
Resolution	Where the story is finalised, and the main problem is usually resolved. Loose ends are often tied up and it is typically when the story ends.

AO1 Developing ideas- mindmap, montage, artist research
AO2 Using Resources- testing out ideas/media
AO3 Recording ideas-photos and drawings
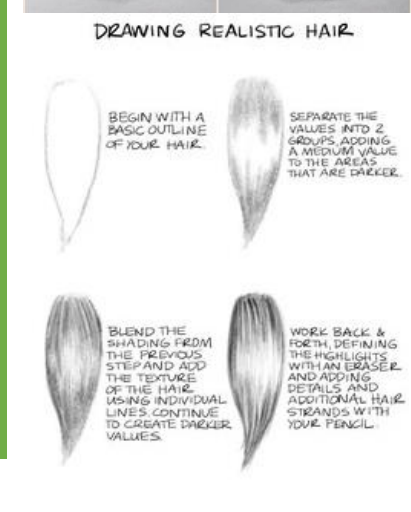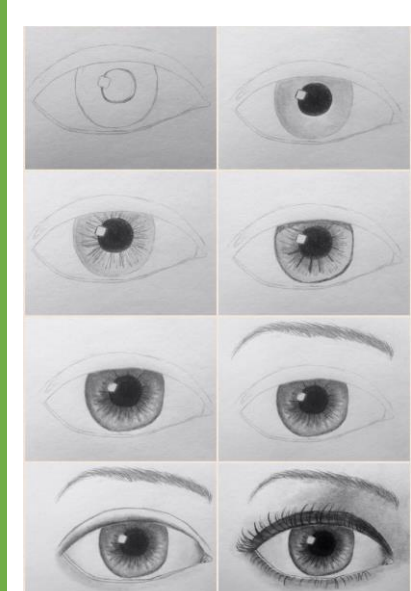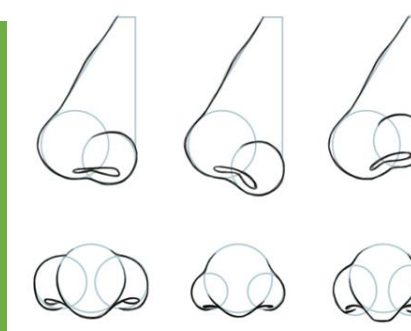AO4 Making a personal response- final ideas

DISTORTION

PROPORTION

one eye length in between eyes
crown of head to eyes equals half of head's length
ears extend from brow to nose
nose is about halfway between eyes and chin
mouth is halfway between nose and chin

top of skull
hair line (top of forehead)
brow line
bottom of nose
bottom of chin
1/2
eyes
1/2
1/3
lip division
2/3
1/3
1/3
1/3

FEATURES

Upper Eyelid
Upper Lid Fold
Lateral Canthus
Limbus
Major Fold
Lower Eyelid Crease
Lower Eyelid
Infraorbital Crease
Upper Eyelid Crease
Medial Canthus
Medial Canthus
Nasofacial Sulcus
Muscle
Lens
Iris
Pupil
Cornea
Retina

GRID METHOD

1
2
3
4
5
6
7

KEYWORDS:
Portrait
Contrast
Shape
Proportion
Texture
Tone
Form
Composition
Observation
Balance
Tone
Detail
Collage
Blending
Shade
Oil pastel
Symmetry
Profile
Background
Middle ground
Foreground
Composition

DRAWING REALISTIC HAIR

BEGIN WITH A BASIC OUTLINE OF YOUR HAIR.
SEPARATE THE VALUES INTO 2 GROUPS, ADDING A MEDIUM VALUE TO THE AREAS THAT ARE DARKER.
BLEND THE SHADING FROM THE PREVIOUS STEP AND ADD THE TEXTURE OF THE HAIR USING INDIVIDUAL LINES. CONTINUE TO CREATE DARKER VALUES.
WORK BACK & FORTH, DEFINING THE HIGHLIGHTS WITH AN ERASER AND ADDING DETAILS AND ADDITIONAL HAIR STRANDS WITH YOUR PENCIL.

MARK POWELL

FRANCOISE NIELLY

SANDRA CHEVRIER

PORTRAIT ARTISTS

LOBO

DOMINIC BEYELER

I AM NOBODY WHO ARE YOU?

JEFF HUNTINGTON

WW1 POETRY- YEAR 9

FORMS OF WAR LITERATURE

Letters	**The** main form of communication between soldiers and loved ones, they helped to: ease the pain of separation, boosted morale to keep Soldiers' connected to the lives they left behind. Although good for morale, many were censored by Army officials, meaning they may not give us a wholly honest account of Soldiers' experiences.
Poetry	Not only a way to overcome boredom in the trenches, but it was a way to express extreme emotion and truth on the edge of experience.
Novels	The primary action usually takes place on a battlefield, or in a civilian setting where they are preoccupied with the preparations, suffering because of or dealing with the War. Often written based on real experiences in order to document the horror experienced.
Newspapers	Due to no television/internet communications, Newspapers were the best and most efficient way of spreading news to civilians about the War.
Posters	During WW1, propaganda posters were used to encourage enlistment, boost morale and to encourage the war effort at home. They suggested war was glorious and heroic to encourage men to join.

KEY POETS

Wilfred Owen	Owen enlisted in the War at the age of 22 and died a few days before the end of the War at aged 25. He was exposed to the sheer horror of the War and wanted to expose this horror to civilians.
Jessie Pope	An English poet and journalist, she was best known for her patriotic stance on the War. As a woman, Pope was prohibited from fighting but encapsulated the civilian view at the beginning of the War.
Siegfried Sassoon	An English poet but a self confessed conscientious objector. He wrote about the horrors of trench warfare and, using satire, mocked the 'incompetent' leaders of the War.
Philip Larkin	Although not alive during WW1, he experienced WW2 as a young boy. His poetry often comments on the ordinary nature of society and how civilians interact.

SMILE

Structure	The arrangement of a poem (including rhyme, form and rhythm).
Meaning	What is meant by the poem/what is the poet trying to get across (including viewpoint and storyline).
Imagery	A vibrant form of description which appeals to the readers imagination (including metaphors, similes, personification etc)
Language	The choice of words chosen by the poet and their method of communication (including semantic fields, onomatopoeia etc)
Effect	What emotions are brought about in the reader (including the mood, emotion and tone of the poem).

KEY POEMS

Dulce et Decorum Est	Owen's anti-war poem exposes the horror's of War and criticises those who view the War as honourable.
The Call	Pope's patriotic poem which shames those who have not yet enlisted an depicts the War as a glorious game.
The General	Depicts and mocks a General in the War who, in Sassoon's opinion, is useless and careless in his plan of attack.
The Hero	A controversial war poem where an Officer delivers a letter to a mother, concerning the death of her son. She is proud of his sacrifice although upon leaving, the Officer recollects the soldier's cowardice in battle.
MCMXIV (1914)	A poem depicting pre-War Britain on the brink of war. It demonstrates how different life was before the war and comments on the changes it brought to society.