



Year 9

Knowledge Organiser

Cycle 4 – 2023/24





ENGLISH

Theme Park Project

This cycle will help you develop your craft as a writer. You will be writing persuasively and descriptively, creating a concept for a theme park and all of the promotional materials around it. You will build on your persuasive writing skills from Year 8 (Protest) and prepare to write successfully for GCSE English Language. You will also develop your oracy skills, working collaboratively and discussing ideas with others, as well as presenting your ideas in a formal, professional manner.

P – Power of three / Personal Pronouns

E – Emotive language

R – Repetition / Rhetorical Question

S – Statistics

U – Undermine the Opposition

A – Anecdote / Alliteration

D – Direct Address

E – Exaggeration

Key Terms

PERSUADE

ACOMPASS

SLOGAN

ENDORSEMENT

LOGO

GAP

IMPERATIVES

PUN

Definitions

Persuasive language methods used to convince a consumer.

Descriptive language methods used to persuade a consumer.

A short, striking, memorable phrase used in advertising.

A form of public support or approval of a product.

A symbol created by an organization to identify its product.

Genre, Audience, Purpose – of a text.

A form of verb that is usually used for giving orders.

A humorous play on words.



Alliteration

Colour

Onomatopoeia

Metaphor

Personification

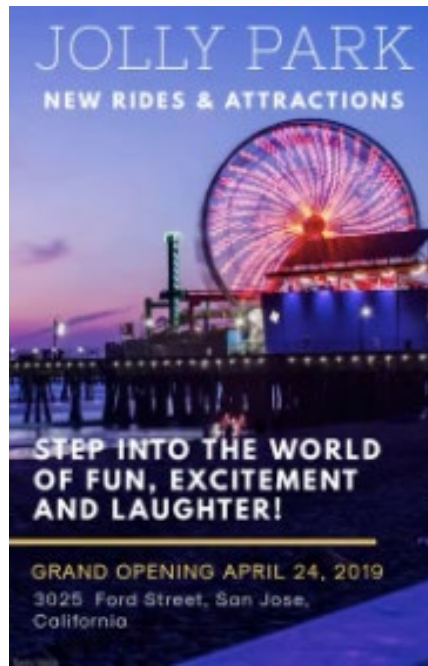


Adjectives & Adverbs

Senses

Similes

Writing Forms this cycle:
(Genre)
Formal Letter
Advertising Material
Slogans



Who you will be writing for:
(Audience)
Potential visitors to your theme park
Age
Interests

What you are writing for:
(Purpose)
Persuade people to visit your park
Persuade people to invest in your park
Persuade people that your park is better than the rest

Recipients Address

Name _____
Street _____
Town _____
Postcode _____

Name or Title

Dear _____

Introduction

Three Main Points of the Letter

1. _____

2. _____

3. _____

Conclusion

Salutation

Writer's Address

Street _____
Town _____
Postcode _____

Date





MATHS

Cycle 4 in **Maths** will focus on developing your knowledge of solving equations with unknowns on one side and on both sides. During this time you will look at inequalities within algebra, learning more ways to speak the 'universal language' of mathematics. You will also look at inequalities and straight lines graphs, investigating what changes the gradient and makes graphs parallel.

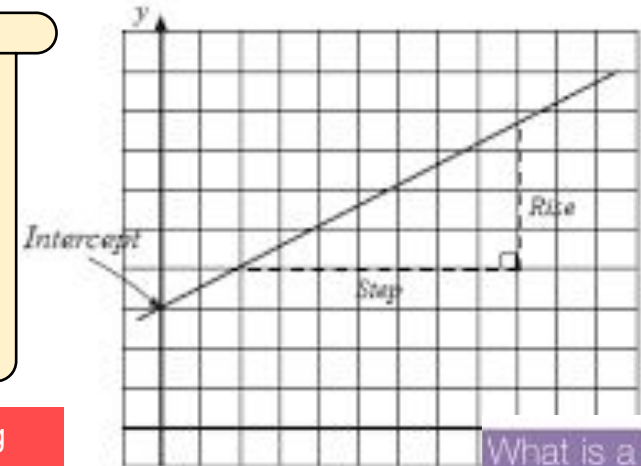
EQUATIONS KEY WORDS AND DEFINITIONS

Solve	To find the value of the letter in an equation
Equation	A mathematical statement saying two things are equal to each other
Horizontal	Parallel to the horizon (flat)
Vertical	At right angle to the horizontal (upright)
Inequalities	Like an equation but less than, less than equal to, greater and greater than equal to symbols used.
Integer	A whole number
Parallel Lines	Two lines that never meet
Perpendicular lines	Two lines that join at 90°

Topic 2

Equation of line and parallel lines

Sparx U377



$$\text{Gradient} = \frac{\text{Rise}}{\text{Step}}$$

When plotting linear graphs you need to complete the table of at least 2 coordinates, substitute the x value into the equation given to find the y value.

What is a Gradient?

A Gradient is a number that is given to a line or slope to show its steepness.

$$\text{Gradient} = \frac{\text{Change in Y}}{\text{Change in X}}$$



$y = mx + c$

$y = 2x + 1$

$y = 5x - 2$

Positive Gradients

Negative Gradients

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Positive Gradient



Negative Gradient



Steep Gradient



Shallow Gradient

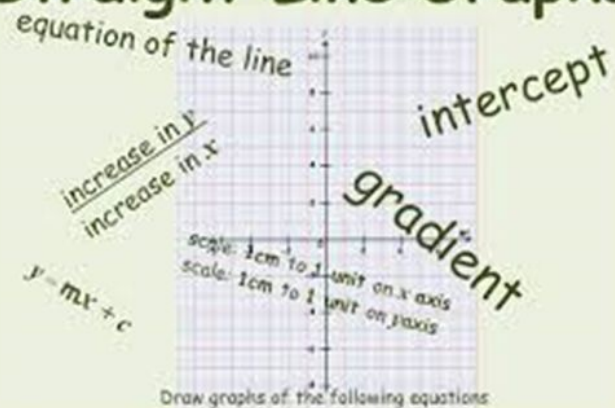


Gradient Zero

Undefined Gradient



Straight Line Graphs



$y = x + 3$	<table border="1"> <tr><td>x</td><td>-3</td><td>-2</td><td>-1</td><td>0</td><td>1</td><td>2</td></tr> <tr><td>y</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </table>	x	-3	-2	-1	0	1	2	y	0	1	2	3	4	5	
x	-3	-2	-1	0	1	2										
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x	-3	-2	-1	0	1	2										
y	-5	-3	-1	1	3	5										

Topic 1

Straight Line graphs

Sparx M932, M544, M888

A Linear graph is also known as a straight line graph. You need only 2 points to draw a straight line, however a few more is useful.

Topic 3

To be able to solve equations with unknowns on one side and both sides

Sparx M707 M509, M544

One Step Addition Example

The Opposite of Addition is Subtraction

$$y + 14 = 20$$

$$\begin{array}{r} -14 \\ -14 \end{array}$$

$$y = 6 \checkmark$$

The value which makes the equation true is 6.



GOLDEN RULES WHEN SOLVING EQUATIONS:

- 1) Always do the **same thing to both sides of the equation.**
- 2) To get rid of something, do the **opposite/inverse.**
- 3) Keep going until you have a letter **on its own.**



ONE STEP SUBTRACTION EXAMPLE

The Opposite of Subtraction is Addition

$$x - 120 = 80$$

$$\begin{array}{r} +120 \\ +120 \end{array}$$

$$x = 200 \checkmark$$

The value which makes the equation true is 200.

Example:

$$5(x + 2) = 3x - 8$$

$$5x + 10 = 3x - 8$$

$$5x - 3x + 10 = 3x - 3x - 8 - 8$$

$$2x + 10 = -8$$

$$2x + 10 - 10 = -8 - 10$$

$$2x = -18$$

$$2x/2 = -18/2$$

$$x = -9$$

Check:

$$5(-9 + 2) = 3(-9) - 8$$

$$-35 = -35$$

Topic 4

Inequalities

Sparx M314, M118

To understand what are inequalities, how we represent them on a number line and how we extend our solving equation knowledge to solve them



Solve $9 - 2x > 15$

$$\begin{array}{l} (-9) \quad 9 - 2x - 9 > 15 - 9 \\ \qquad \qquad -2x > 6 \\ (\div -2) \quad -2x \div -2 < 6 \div -2 \\ \qquad \qquad \qquad x < -3 \end{array}$$

If your equation involves inequality symbols solve it exactly the same way as you would an equation with an = sign

Solve $6x + 7 > x + 22$

$$\begin{array}{l} (-7) \quad 6x + 7 - 7 > x + 22 - 7 \\ \qquad \qquad \qquad 6x > x + 15 \\ (-x) \quad 6x - x > x + 15 - x \\ \qquad \qquad \qquad 5x > 15 \\ (\div 5) \quad 5x \div 5 > 15 \div 5 \\ \qquad \qquad \qquad x > 3 \end{array}$$



One Step Division Example

The Opposite of Division is Multiplication.

$$\frac{k}{2} = 16$$

K is divided by 2, so we need to multiply both sides by 2

$$\frac{k}{2} \times 2 = 16 \times 2$$

2/2 cancels down to become 1/1 = 1

$$k = 32 \checkmark$$

1k is simply "k"

The value which makes the equation true is 32.

Multiplication Example

The Opposite of Multiplication is Division

$$3n = 12$$

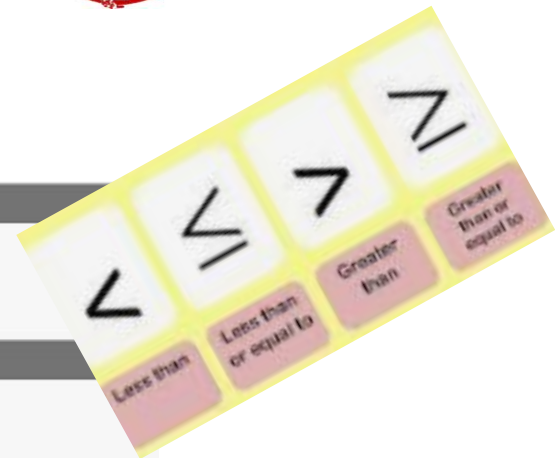
$$\frac{3n}{3} = \frac{12}{3}$$

3/3 cancels down to become 1/1 = 1

$$n = 4 \checkmark$$

1n is simply "n"

The value which makes the equation true is 4.



Cycle 4 in **Maths** will focus on looking at new knowledge on surds and how to rationalise the denominator. You will also develop your knowledge of straight line graphs and non-linear graphs. Finally you will extend your equation solving skills, working with unknowns on one side and on both sides. During this time you will look at inequalities within algebra and add to your 'universal language' vocabulary.

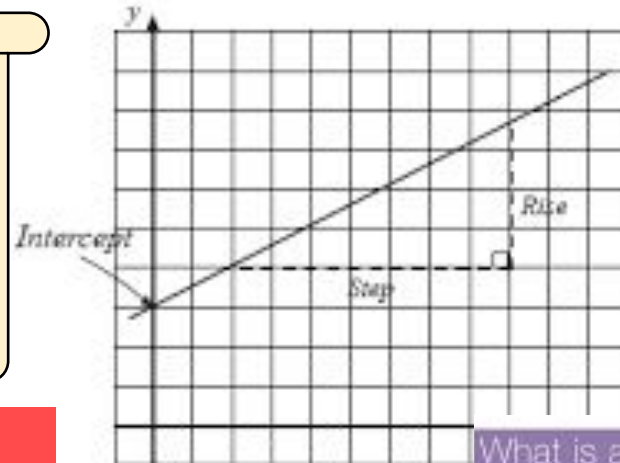
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Integer	A whole number
Parallel Lines	Two lines that never meet
Perpendicular lines	Two lines that join at 90°
Surd	A number that can't be simplified to remove a square root

Topic 2

Equation of line and parallel lines

Sparx M544, U377



$$\text{Gradient} = \frac{\text{Rise}}{\text{Step}}$$

When plotting linear graphs you need to complete the table of at least 2 coordinates, substitute the x value into the equation given to find the y value.

y = mx + c

What is a Gradient?

A Gradient is a number that is given to a line or slope to show its steepness.

Gradient = $\frac{\text{Change in Y}}{\text{Change in X}}$

Positive Gradient
A line with a positive gradient has a positive slope. The line has a gradient of 1.

Negative Gradient
A line with a negative gradient has a negative slope. The line has a gradient of -1.

Steep Gradient
A line with a steep gradient has a high positive gradient. The line has a gradient of 2.

Shallow Gradient
A line with a shallow gradient has a low positive gradient. The line has a gradient of 0.5.

Gradient Zero
A line with a gradient of 0 is a horizontal line.

Undefined Gradient
A line with an undefined gradient is a vertical line.



Topic 1

Surds

Sparx, U338, U633, U707

Surds

$\sqrt{3}$ $\sqrt{10}$

$\sqrt{8}$

$\sqrt[3]{16}$

Not surds

8	-12.05	0.62
24	$\frac{3}{7}$	$7\frac{1}{2}$
$\sqrt{25}$	$\sqrt[3]{8}$	$\sqrt{0.25}$

Write $\frac{2+\sqrt{2}}{6+\sqrt{2}}$ in the form $\frac{a+b\sqrt{2}}{c}$ where a, b and c are all integers.

$$\frac{(2+\sqrt{2})(6-\sqrt{2})}{(6+\sqrt{2})(6-\sqrt{2})} = \frac{12+4\sqrt{2}-2}{6^2-2} = \frac{10+4\sqrt{2}}{34}$$

v = x + 3

x	-3	-2	-1	0	1	2
y	0	1	2	3	4	5

v = 2x + 1

x	-3	-2	-1	0	1	2
y	-5	-3	-1	1	3	5

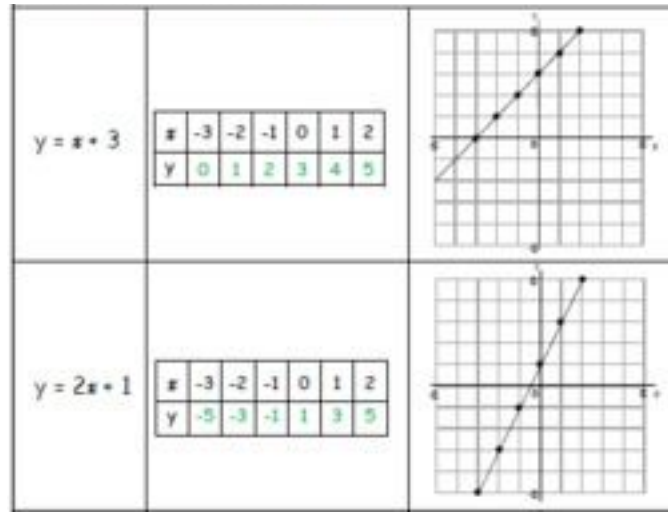
A Linear graph is also known as a straight line graph. You need only 2 points to draw a straight line, however a few more is useful.

Maths - Higher

Topic 3

Non-linear graphs

Sparx U989,
U980, U593,
U229

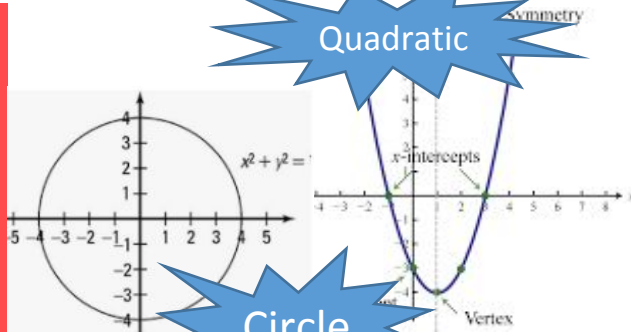


When plotting linear graphs you need to complete the table of at least 2 coordinates, substitute the x value into the equation given to find the y value.

Non-linear graphs are all graphs that are curved lines.

A Linear graph is also known as a straight line graph. You need only 2 points to draw a straight line, however a few more is useful.

Quadratic

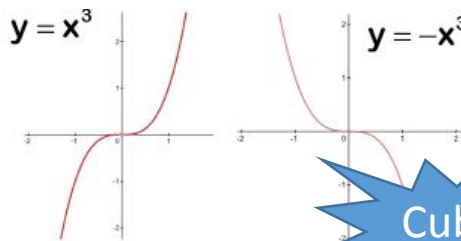


Circle

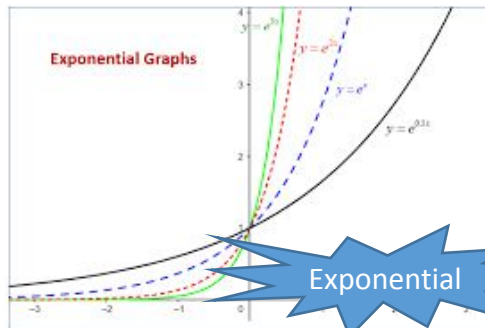
Reciprocal



Cubic



Exponential



Topic 4

Inequalities

Sparx M314,
M118

To understand what are inequalities, how we represent them on a number line and how we extend our solving equation knowledge to solve them



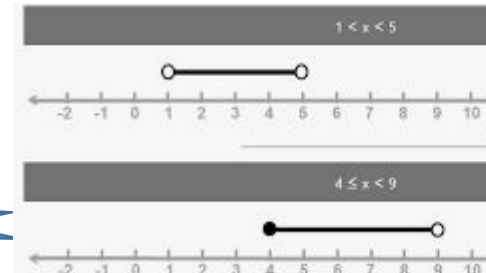
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If your equation involves inequality symbols solve it exactly the same way as you would an equation with an = sign

Solve $6x + 7 > x + 22$

$$\begin{aligned} (-7) \quad 6x + 7 - 7 &> x + 22 - 7 \\ & 6x > x + 15 \\ (-x) \quad 6x - x &> x + 15 - x \\ & 5x > 15 \\ (\div 5) \quad 5x \div 5 &> 15 \div 5 \\ & x > 3 \end{aligned}$$



SCIENCE

Periodic table - Key words and definitions

Atom	Atoms are the building blocks of everything. Atoms can form strong bonds with each other, making molecules.
Element	An element is a pure substance which is made from only one type of atom.
Periodic table	The periodic table is a way of organising the elements which is used by scientists to group elements with similar properties. It has a unique arrangement of rows and columns.
Properties	All substances have properties. These describe how a subject looks and behaves. Substances have both physical and chemical properties.

Key points

- The position of an element on the periodic table provides information about its properties.
- The majority of elements are metals and they are found on the left and in the middle of the periodic table.
- Most metals share a lot of properties, such as being good conductors of heat and electricity.
- Non-metals often have the opposite properties. For example, they are usually poor conductors of heat and electricity.

METALS	NON - METALS
SHINY	DULL
HIGH MELTING POINTS	LOW MELTING POINTS
GOOD CONDUCTORS	POOR CONDUCTORS
HIGH DENSITY	LOW DENSITY
MALLEABLE	BRITTLE

The atom has a central nucleus surrounded by electrons on shells.



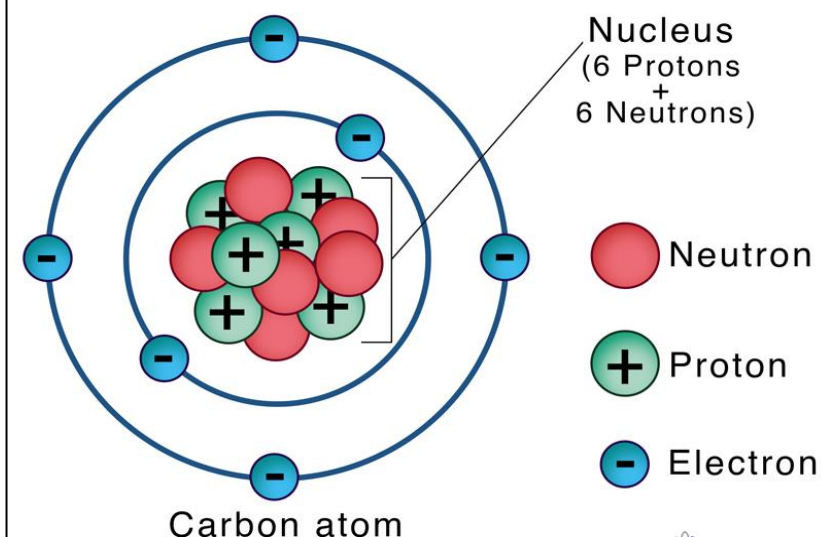
METALS / NON-METALS

H																			He	
Li	Be																			Ne
Na	Mg																			Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr			
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe			
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt												

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Metals

Non-metals



Reproduction - Key words and definitions

Gamete	These are the male and female sex cells.
Reproduction	Male and female reproductive systems allow human reproduction
STI	Sexually transmitted infections (STIs) are spread predominantly by unprotected sexual contact. Some STIs can also be transmitted during pregnancy, childbirth, and breastfeeding and through infected blood or blood products. STIs have a profound impact on health

Sexually-transmitted infections

Sexually transmitted infections (STIs) are passed from one person to another through sexual contact. This includes anal, oral or vaginal sex. There are more than 30 different **pathogens** that cause STIs. These include **bacteria** like Chlamydia and **viruses** like **HIV**. To reduce the spread of STIs people can abstain from sexual activity or use a barrier-type of **contraception** like a condom.

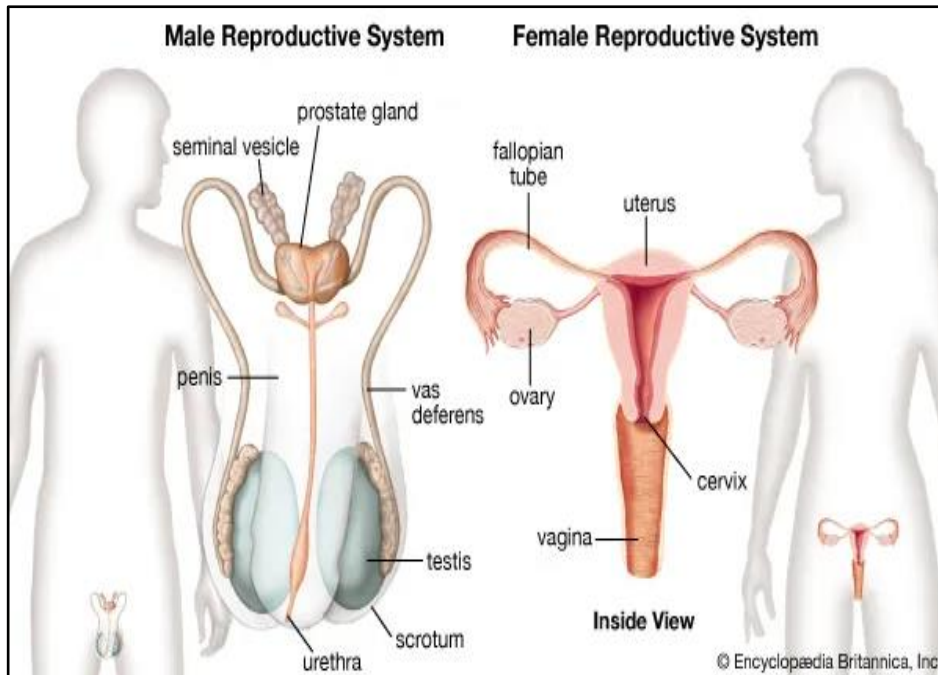
The menstrual cycle

The **menstrual cycle** is a recurring process which takes around 28 days.

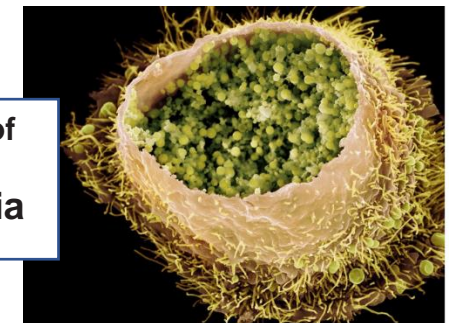
During the process, the lining of the **uterus** is prepared for pregnancy. If implantation of the fertilised egg into the uterus lining does not happen, the lining is then shed. This is known as **menstruation**.

Several **hormones** are involved in the menstrual cycle of a woman:

- **follicle stimulating hormone (FSH)** causes the maturation of an egg in the ovary
- **luteinising hormone (LH)** stimulates the release of the egg
- **oestrogen** is involved in repairing and thickening the uterus lining, while **progesterone** maintains it



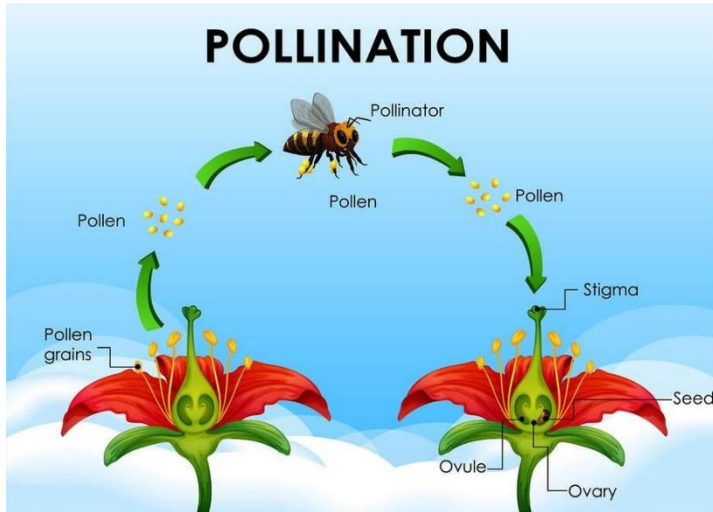
Example of an STI: Chlamydia



Reproduction in plants - Key words and definitions

Fertilisation The action or process of fertilizing an egg or a female animal or plant, involving the fusion of male and female gametes to form a zygote.

- Insect-pollination of flowering plants is responsible for the majority of the world's flowering diversity and is an essential part of plant reproduction.
- Flowers have bright colours, smells and nectar which encourage pollinators to pay them a visit.
- Honeybees along with 1,500 other insect species pollinate plants in the UK.



Germination

Germination occurs when a new plant grows out from a seed. All seeds require three conditions for successful germination:

- Water allows the seed to swell up and all the chemical reactions involved in the growth of the embryo to take place.
- Oxygen is needed for aerobic respiration which provides the energy the embryo needs to carry out cell division and grow.
- Warmth is required for the enzymes to carry out respiration and cell division.

WOW = Water Oxygen Warmth

As the new plant grows, it produces roots which take in water and minerals from the soil and produces leaves on its shoots which carry out photosynthesis to make food for the plant.

Pollination

Pollination is the act of transferring pollen grains from the male anther of a flower to the female stigma. The aim of most living organisms, including plants, is to produce offspring for the next generation. One of the ways that plants can produce offspring is by making seeds. Seeds contain the nutrition and all the genetic instructions to grow into an adult plant.

There are two types of pollination:

Self-pollination: The pollen grain lands on the same flower it originated from.

Cross-pollination: The pollen grain lands on a different flower to the one it originated from.



Flowers on the apple tree use cross-pollination

How a plant grows from a seed



HUMANITIES

- **Geography**
- **History**
- **RE**

Key Terms	Definitions
Biome	A large scale ecosystem.
Ecosystem	Community or group of living organisms that live in and interact with each other in a specific environment.
Climate	The weather conditions prevailing in an area in general or over a long period.
Development	The process of a country becoming richer.
Population density	The number of people living in an area.
Tourism	The activities of people traveling to and staying in places outside their usual environment for leisure.
Natural hazard	Extreme natural events that can cause loss of life, extreme damage to property and disrupt human activities.
Natural resources	Natural assets (raw materials) occurring in nature that can be used for economic production or consumption.
Hydro electric power	Electricity produced from generators driven by turbines that convert the potential energy of moving water into mechanical energy.
Population distribution	The way in which people are spread across a given area.

Biomes in Russia



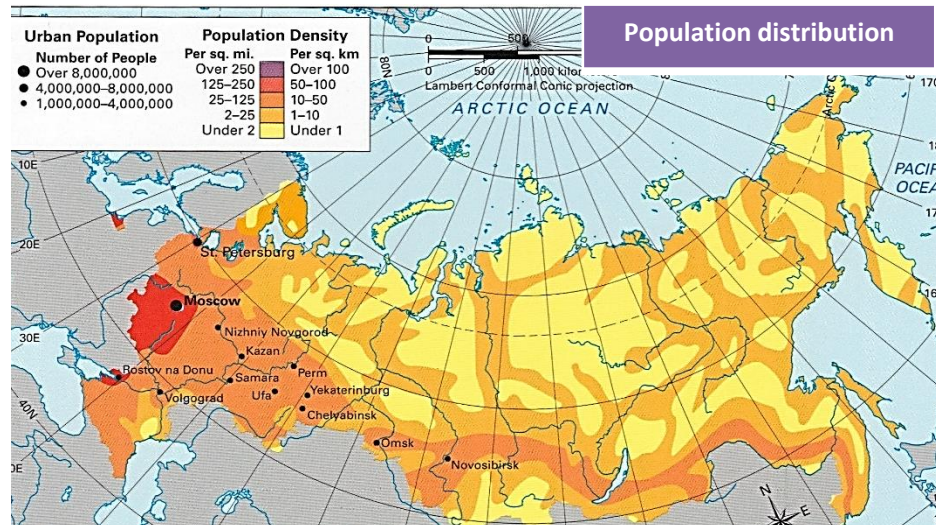
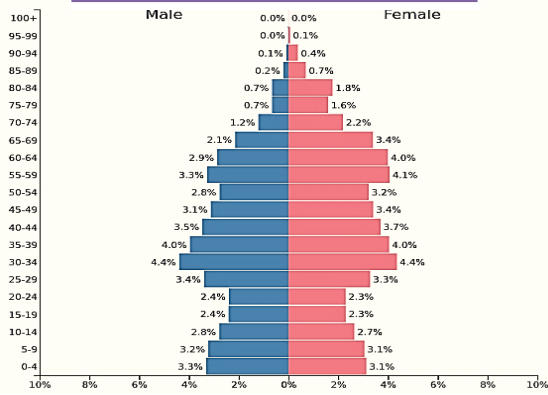
Russian Climate & Ecosystems

- Most of Russia experiences a continental climate. This is characterised by two main seasons; long, dark cold winters and brief warm summers.
- Yatusk is a city located in the East of the continent. It suffers from temperatures dropping to -45°C during the long winters.
- The Tundra and Taiga biomes cover a large proportion of the land in Russia.
- The taiga is a forest of the cold, subarctic region. The subarctic is an area of the Northern Hemisphere that lies just south of the Arctic Circle.
- Nearly one-tenth of Russian territory is tundra, a treeless, marshy plain. The tundra widens to a maximum of about 300 miles (500 km) in Siberia.

Hydro-Electric Dam

- Hydroelectricity, is a form of renewable energy generated by the movement of water.
 - The flow of water is used to spin a turbine, which is connected to an electric generator. The electricity is then fed into the National Grid, and into our homes.
- Impacts of the Volgograd Dam:**
- Produces around 12 billion KW-hours of energy a year.
 - Thousands of jobs created during the construction of the Volgograd Dam.
 - Interrupted migrating fish paths which will mean a decrease in specific species numbers.
 - Great source of clean energy which is used by many Russian cities.

Russian Population Pyramid



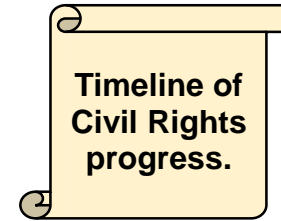
Chernobyl

The Chernobyl disaster was a catastrophic nuclear accident that occurred on 26 April 1986 at the Chernobyl Nuclear Power Plant in Ukraine which was under the jurisdiction of the Soviet Union.

An explosion and fire released large quantities of radioactive particles into the atmosphere, which spread over much of the western USSR and Europe

Key words and definitions	
Slavery	The practice of owning a person and making them work for no remuneration.
KKK	Group active from after the civil war in America which persecuted black people.
Persecution	The act of targeting and treating people with hostility because of the way they are (Eg,, Colour of their skin)
Jim Crow Laws	State and local laws that enforced segregation in the southern United States.
Congress	Part of the US government in charge of passing new laws.
Supreme Court	The highest court in the US, in charge of deciding high profile cases and laws.
Constitution	The set of laws which give all US citizens certain rights which can't be broken.
Boycott	Where people refuse to use or buy a product or service until they change an aspect of it. (Eg, Racism)
Racism	Where someone is treated differently because of the colour of their skin.
Civil Rights	The right to freedom and equality in politics and society.
De Facto Segregation	Separation of black and white through tradition, represented in separate neighbourhoods.
De Jure Segregation	Separation of black and white through laws.
Solidarity	Unity especially among individuals / groups with a common interest e.g. sit-ins and anti-war movement
Black Power Movement	The movement to get equal right through violent methods.

Cycle 4 Knowledge Organiser



The struggle for equal rights between all American's had its roots in the American Civil War (1861-65). Abraham Lincoln, President of the United States, in the Emancipation Proclamation freed all slaves in America

1863	Emancipation Proclamation
1865	KKK founded
1877	Jim Crow laws come into effect in the south
1896	The Supreme Court states that "races should be equal but separate".
1954	Brown vs the Board of Education
1955	Brutal murder of 15 year old Emmett Till in Mississippi
1956	Rosa Parks and the Montgomery Bus Boycott in Alabama
1963	March of Washington "I have a dream speech".
1964	Civil Rights Act of 1964
1965	Voting Rights Act of 1965
1965-75	US involvement in the Vietnam War
1968	Assassination of Martin Luther King.
1968	Fair Housing Act
1970	Voting Rights Act Amendments of 1970
1975	Voting Rights Act Amendments of 1975

Analysing significance: Try to place the above in an order of importance. Decide which is your most important event and why, then judge how others link to it. If you take an event away would the situation be the same?

Year 9 - Cycle 4 in History will focus on: **Significance: The significance of key individuals and events in the progress of Civil Rights in America.**

Brown vs The Board of Education:

The U.S. Supreme Court's decision in **Brown v. Board of Education** marked a turning point in the history of race relations in the United States. On May 17, 1954, the Court stripped away constitutional sanctions for segregation by race, and made equal opportunity in **education** the law of the land.

Presidents who fought for Civil Rights

1861 - 65	Abraham Lincoln - best known for outlawing slavery with his famous Emancipation Proclamation in 1863
1961 - 63	John F Kennedy - proposed a sweeping federal civil rights bill in 1963. The bill ended up being the Civil Rights Act of 1964 which was ultimately signed by Johnson (below)
1963 - 69	Lyndon B Johnson - made all public accommodations (restaurants, swimming pools, hotels, etc.) available and open to all Americans, regardless of race, colour, or religion. The bill also aimed to end legal discrimination in the work place
1969 -74	Richard Nixon - ensured the desegregation of schools was enforced. In 1969 almost 70% of schools were still segregated, By 1974 it was 8%. He also extended the Voting Rights Bill and made sure all literacy tests were ended. He also started “affirmative action” introducing quotas for employment of black Americans in public administration, the police and judges and in government.

The Murder of Emmett Till:

By 1955, African Americans across the country, including in the segregated South, had begun the struggle for justice. Emmett Till's murder was a spark in the upsurge of activism and resistance that became known as the Civil Rights movement.

Significance of Martin Luther King Jr.:

Martin Luther King, Jr. was a Baptist minister and social rights activist in the United States in the 1950s and '60s. He was a leader of the American civil rights movement. He organized a number of peaceful protests as head of the Southern Christian Leadership Conference, including the March on Washington in 1963.

Significance of Rosa Parks:

Called "the mother of the civil rights movement," Rosa Parks helped the struggle for racial equality when she refused to give up her bus seat to a white man in Montgomery, Alabama. Parks' arrest on December 1, 1955 launched the Montgomery Bus Boycott by 17,000 black citizens. The significance of the Boycott is that it led to change in segregation laws.



PEACE AND CONFLICT – KNOWLEDGE ORGANISER

Reasons for war:

What are the causes of conflict?

The causes of any war are complex. Wars are rarely about just one thing. They can be declared when a state or states act to:

- attack or invade another state, to gain territory or resources
 - resist such an attack or invasion by an aggressor
 - protect another state from attack by an aggressor
- impose domination or political change on another state, or to resist such domination
 - challenge a threat to 'essential national interests' by another state
- counter perceived threats from a different ideology, religion or ethnic group
 - defend the national honour when under threat

Weapons of Mass Destruction:

Weapons of Mass Destruction The first atomic bomb was dropped on Hiroshima in 1945. 80000 people died instantly and the death toll rose to over 140000 due to radiation poisoning and burns. Three days later a second bomb was dropped on the city of Nagasaki. Japan surrendered and this marked the end of the Second World War.

Types of WMD • Nuclear • Chemical • Biological

Arguments for countries having WMDs:

- Having WMDs acts as a deterrent. Countries are much less likely to attack if WMDs are present
- Having WMDs actually keeps the peace
- The use of a WMD on Hiroshima and Nagasaki brought the war to an end. More people would have died if the war had continued
- The use of a WMD at the end of the Second World War gave an important message. No nuclear weapons have been used since. This is a good thing.

Arguments against countries having WMDs:

- There can never be an acceptable reason to have or potentially use WMDs. They kill huge numbers of innocent people
- They are controlled from a distance or dropped from planes or drones. The people who use them never fully understand the damage they cause. Too easy to walk away from this kind of destruction
- WMD production and maintenance is expensive. Money would be better spent on education or healthcare
- WMDs create inequality. Only the rich and powerful can afford them
- WMDs can easily fall into the wrong hands or be used by poor leaders eg the threat posed by the unpredictable leadership in North Korea
- Biological and chemical weapons are frequently used by dictators to keep people living in fear and preserve power eg chemical attacks by the government on Syrian people who want to change the government

What is a just war?

A **just war** is a war which is declared for right and noble reasons and fought in a certain way. A just war is not a war that is 'good' as such – it is a war that Christians feel to be necessary or 'just' in the circumstances, when all other solutions have been tried and have failed. It is a necessary evil and a last resort.

What is the Just War theory?

The **Just War theory** was first developed by **St Thomas Aquinas**. Aquinas was one of the most influential **theologians** of the last 1,000 years. The theory set out conditions against which to judge whether or not a war should be waged (**jus ad bellum**) and if it could be justified, and how it should be waged (**jus in bello**).

Aquinas's conditions for a Just War – jus ad bellum

- The war must have a just cause - eg against invasion, or for self-defence - and not to acquire wealth or power.
- The war must be declared and controlled by a proper authority, eg the state or ruler.
- The war must be fought to promote good or avoid evil, with the aim of restoring peace and justice after the war is over.

Later conditions developed by other Christians - jus in bello

- The war must be a last resort when all peaceful solutions have been tried and failed, eg negotiation.
- The war should be fought with 'proportionality', with just enough force to achieve victory and only against legitimate targets, ie civilians should be protected.
- The good which is achieved by the war must be greater than the evil which led to the war.

Holy wars

Modern people often regard the idea of a holy war as a contradiction. Killing thousands of people and causing wholesale destruction seems to be as far from holiness as one can get.

But religion and war have gone hand in hand for a long time. Armies go into battle believing that God is with them, often after prayers and sacrifices to keep God on their side. In tribal cultures (including Biblical ones) when a people lose a war they often have to change to the worship of the winner's gods.

However involving God as part of the campaign does not make a war a holy war - for a war to be a holy war, religion has to be the driving force.

Holy wars usually have three elements:

- the achievement of a religious goal
- authorised by a religious leader
- a spiritual reward for those who take part

Many of the wars fought in the name of religion do conform to the just war conditions, but not all of them.

Religious causes

Francis Bacon said there were five causes for holy war: (he wrote in a Christian context, but the categories would be usable by any faith)

- to spread the faith
- to retrieve countries that were once Christian, even though there are no Christians left there
- to rescue Christians in countries that were once Christian from 'the servitude of the infidels'
- recover and purify consecrated places that are presently being 'polluted and profaned'
- avenge blasphemous acts, or cruelties and killings of Christians (even if these took place long ago)

The Crusades

The great series of western holy wars were the Crusades, which lasted from 1095 until 1291 CE. The aim was to capture the sacred places in the Holy Land from the Muslims who lived there, so it was intended as a war to right wrongs done against Christianity.

Pacifism

There are several different sorts of pacifism, but they all include the idea that war and violence are unjustifiable, and that conflicts should be settled in a peaceful way.

The word (but not the idea) is only a century old, being first used in 1902 at the 10th International Peace Conference.

People are pacifists for one or some of these reasons:

- religious faith
- non-religious belief in the sanctity of life
- practical belief that war is wasteful and ineffective

LANGUAGES

- **French**
- **Spanish**

Learning Cycle 4 is about leisure and going out. You will revise the perfect tense and the near future tense and learn how to make plans as well as describing your hero and using the conditional.

Key words	Definitions
Subject Pronouns	Whoever is doing the action : Je (I) / Tu (you) / Il/Elle (he/she), Nous (we) / Vous (you (pl)) / Ils/Elles (they (m)/they (f))
Nouns	Used to identify any of a class of people, places, or things
Adjectives	Used to describe a noun
Adjectival Agreement	In French, adjectives 'endings have to change according to the noun they describe
Verbs	A word used to describe an action, state, or occurrence, and forming the main part of the predicate of a sentence, such as hear, become, happen.
To Conjugate	To change the ending of a verb so it fits in a sentence
Infinitive	A verb in its unchanged form / A verb which can be found in a dictionary / A verb which has an ER/IR/RE ending in French (jouer) / A verb which has 'to' in front of it in English (to play)
Present Tense	Used to say what someone is currently doing or usually does (I play / I am playing)
Near Future	Used to describe what you are going to do in the future (I am going to play)
Past Tense	Used to talk about a completed action which took place in the past
Conditional	Used when you say "I would" in English to describe things that might happen

G Using *jouer à* and *jouer de*

- When you are talking about playing a sport or a game, use *jouer à*.
Remember, à + le → **au**, à + les → **aux**.
Je joue au foot. Je joue à la pétanque.
Je joue aux cartes.
- When you are talking about playing a musical instrument, use *jouer de*.
Remember, de + le → **du**, de + les → **des**.
Je joue du piano. Je joue de la guitare.
Je joue de l'harmonica.

Use interesting language

- D'abord – **first of all**
- Alors – **so**
- Puis - **then**
- Ensuite – **next**
- Plus tard - **later**
- Finalemnt – **finally**

The conditional

- Si j'étais** – If I was
- Je serais** - I would be
- Je voudrais être** - I would like to be
- J'aimerais** - I would like
- Je devrais** – I should
- J'irais** – I would go
- J'aurais** – I would have

G *Using a combination of tenses*

Use the **present tense** to talk about what somebody does now, e.g. *il crée des vêtements.*

Use the **perfect tense** to say what somebody did or has done, e.g. *il a travaillé très dur.*

To say what he or she **was like**, use ***il/elle était*** + an adjective, e.g. *elle était courageuse.*



- Look closely at verbs to distinguish between past, present and future: *on a mangé/on mange/on va manger*.
- Sometimes, time expressions can give you a clue. For example, which time frame does *l'année dernière* refer to?
- However, time expressions are not always helpful! *Cette année* (this year) could refer to the past, the present or the future.

The word order changes!

In French, the direct object pronoun goes **before the verb!**

Je **l'**admire = I admire **her/him**

Je **l'**aime = I like **her/him**

Je **le** déteste = I hate **him**

Je **la** déteste = I hate **her**

Direct Object Pronouns in French

Noun	Direct Object Pronoun
Him	le
Her	la
Them	les
It	le/la

"Depuis"

- "**Depuis**" is the word used in French when you want to say you have been doing something for a certain length of time.
- You use "**depuis**" when you are still doing the activity.

"Depuis"

- So...
- In "I have been playing football **for** 2 years" we would use "**depuis**" to translate "**for**".
- In "I played football **for** 2 years" we wouldn't use "**depuis**" because I am not still playing football.



"Depuis"

- In French, we have to use the **present tense** rather than the **past tense** in sentences with "**depuis**".

M	Monté	→	TO CLIMB
R	Rentré	→	TO GO BACK IN
S	Sorti	→	TO GO OUT
V	Venu	→	TO COME
A	Arrivé	→	TO ARRIVE
N	Né	→	TO BE BORN
D	Descendu	→	TO GO DOWN
E	Entré	→	TO ENTER
R	Retourné	→	TO RETURN
T	Tombé	→	TO FALL DOWN
R	Resté	→	TO STAY
A	Allé	→	TO GO
M	Mort	→	TO DIE
P	Parti	→	TO LEAVE

Connectives/Conjunctions

y – and
también – also
o - or
con - with
porque - because
ya que - because
si - if
pero - but
sin embargo - however
al otro lado – on the other hand
aunque – yet/however
mientras que – whilst
además – furthermore
como – like, as
por ejemplo – for example
entonces – so/therefore
así que – so/therefore
afortunadamente – fortunately
desafortunadamente - unfortunately
debido a – because of
gracias a – thanks to

Adverbs / Qualifiers

muy – very
bastante – quite
sumamente – really
un poco – a bit
mucho – lots
demasiado – too much
así - rather
siempre - always
tan – so
muchísimo – extremely

Positive opinions

Me encanta – I love
Me gusta – I like
Me gusta mucho – I really like
Prefiero – I prefer
Me mola – I love
Me chifla – I love
Me interesa – I'm interested in
Lo que me gusta es – What I like is
Lo mejor es – The best thing is
Me encantaba – I loved
Me gustaba – I liked

Negative opinions

Odio – I hate
No me gusta – I don't like
No me gusta nada – I don't like at all
Detesto – I loathe
No aguanto – I can't stand
¡No es para mí! – It's not my thing/cup of tea!
Estoy en contra – I am against
Odiaba – I hated

Sequencing words

primero - firstly
entonces – then
luego – next
después– after
más tarde – later
finalmente - finally

Giving an opinion

En mi opinion In my opinion
Pienso que I think that
Encuentro que I find that
Creo que I believe that
Desde mi punto de vista –
From my point of view
Para mí – For me

Positive adjectives

fantástico/a - fantastic
genial - great
fenomenal – great
bueno/a - good
interesante – interesting
importante - important
entretenido/a – fun
asombroso/a – brilliant/amazing
increíble – incredible
emocionante – exciting
impresionante – impressive
agradable - nice
útil – useful
práctico/a – practical
fácil - easy
delicioso/a – delicious
guapo/a – beautiful/attractive

Negative adjectives

malo/a- rubbish
monótono/a – boring
tedioso/a - boring
fatigante - tiring
horroso/a – awful
molesto – annoying
un rollo – annoying / a pain
desagradable – unpleasant
espantoso/a–scary/frightening
inútil – useless/pointless
difícil - difficult
asqueroso/a – disgusting
feo/a - ugly

Y9 LC4 – Speaking skills

Present tense

- **Tengo** – I have
- **Soy** – I am (perm)
- **Estoy** – I am (temp)
- **Voy** – I go / I'm going
- **Hago** – I do / I'm doing
- **Juego** – I play/ I'm playing
- **Veo** – I watch
- **Nado** – I swim
- **Escucho** – I listen
- **Leo** – I read
- **Uso** – I use
- **Comparto** – I share
- **Envío** – I send
- **Hablo** – I speak
- **Charlo** – I chat
- **Como** – I eat
- **Bebo** – I drink
- **Quiero** – I want
- **Puedo** – I can
- **Debo** – I must
- **Salgo** – I go out
- **Estudio** – I study
- **Llevo** – I wear
- **Trabajo** – I work
- **Paso** – I spend (time)
- **Viajo** – I travel
- **Me quedo/alajo** – I stay
- **Vivo** – I live
- **Hay** – there is
- **No hay** – there isn't
- **Es** – it is / he/she is

Preterite tense

- **Fui** – I went
- **Fue** – it was
- **Hice** – I did
- **Jugué** – I played
- **Nadé** – I swam
- **Vi** – I watched
- **Escuché** – I listened
- **Leí** – I read
- **Usé** – I used
- **Compartí** – I shared
- **Envié** – I sent
- **Estudí** – I studied
- **Comí** – I ate
- **Bebí** – I drank
- **Quería*** – I wanted
- **Tuve que*** – I had to
- **Dormí** – I slept
- **Trabajé** – I worked
- **Pasé** – I spent (time)
- **Viajé** – I travelled
- **Visité** – I visited
- **Compré** – I bought
- **Recibí** – I received/got
- **Salí** – I went out
- **Me quedé/alojé** – I stayed
- **Volví** – I returned
- **Nací** – I was born

+ infinitive verb phrases

- **antes de (+ inf)** – before (doing something)
- **para (+ inf)** – in order to...

Imperfect tense

- **Era** – it was / was
- **Era** – I was / I used to be
- **Tenía** – I had / I used to have
- **Hacía** – I was doing / I used to do
- **Jugaba** – I was playing / I used to play
- **Iba** – I was going / I used to go
- **Había** – There was / There were
- **Hacía sol / calor** – It was sunny/hot

Near future tense

- **Voy a + inf** – I'm going (to...)
- **Voy a ir** – I'm going to go
- **Voy a hacer** – I'm going to do
- **Voy a jugar** – I'm going to play
- **Voy a comer** – I'm going to eat
- **Voy a beber** – I'm going to drink
- **Voy a estudiar** – I'm going to study
- **Voy a ver** – I'm going to see
- **Voy a pasar** – I'm going to spend (time)
- **Voy a salir** – I'm going to go out
- **Voy a celebrar** – I'm going to celebrate
- **Voy a dar** – I'm going to give
- **Voy a ayudar** – I'm going to help
- **Será** – it will be (future tense)
- **Habrá** – there will be (future tense)

hay que (+ inf) – it is necessary to...

No hay que (+ inf) – we mustn't...

Es importantes (+ inf) – it is important to...

Se puede (+ inf) – we/you can ...

No se puede (+ inf) – we/you can't...

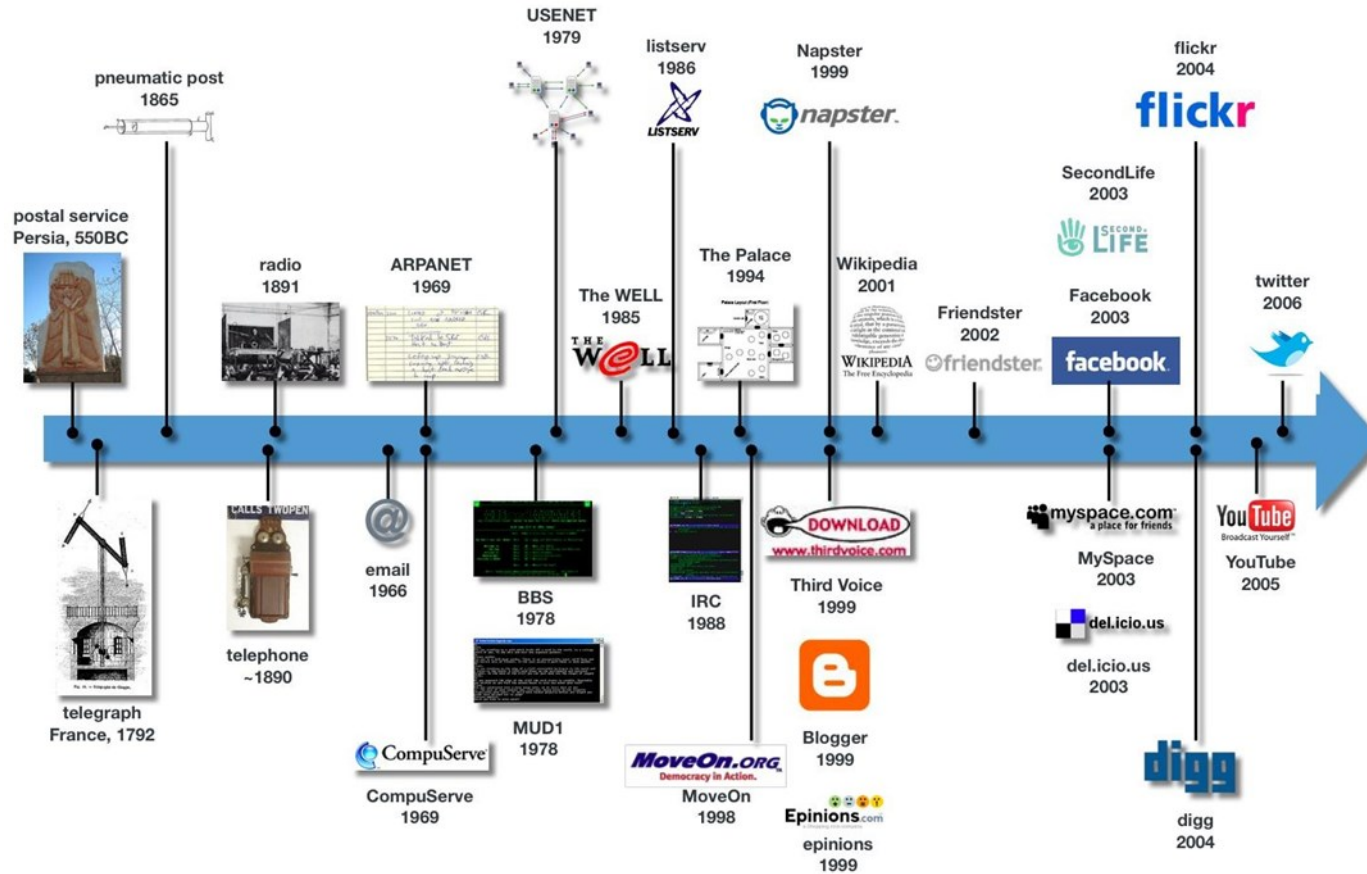
Tenemos que (+ inf) – we must / have to...

Conditional tense

- **Me gustaría** I would like
- **Quisiera** I would like
- **Sería** it would be
- **Me gustaría...** I would like
- **...ser** to be
- **...ir a** to go to
- **...hacer** to do
- **...probar** to try (food)
- **...tener** to have
- **Iría** I would go
- **Haría** I would do
- **Sería** I would be
- **Tendría** I would have
- **Trabajaría** I would work
- **Viviría** I would live
- **Preferiría** I would prefer
- **Podría** I could
- **Debería** I should
- **Diría que** I would say that...

ICT

Cycle 4 will focus on the history of computing including key historical figures and the computers they created. We will also be looking at the ethical issues presented by using computer based technology.



"Due to the demands from my job I am forced to work at a computer for much of the day and this is leading to health problems – I have terrible back ache, RSI and I am putting on weight".

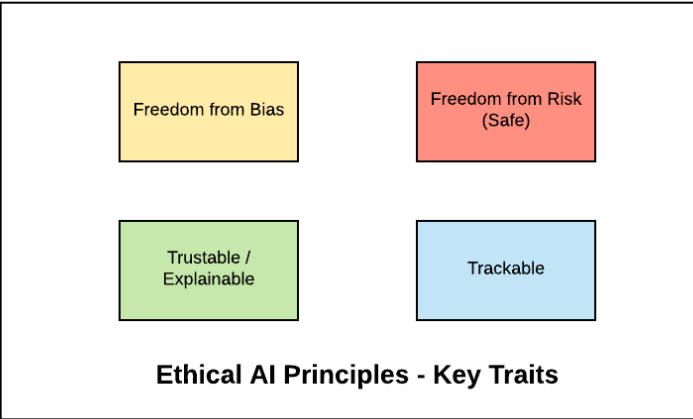
"I find that I cannot switch off from the digital world – I am addicted to my mobile phone which is causing me to be detached from the real world – I don't eat or sleep properly anymore and I have fallen out with my friends."

Useful Links:

<https://www.livescience.com/20718-computer-history.html>

<https://www.computerhistory.org/timeline/computers/>

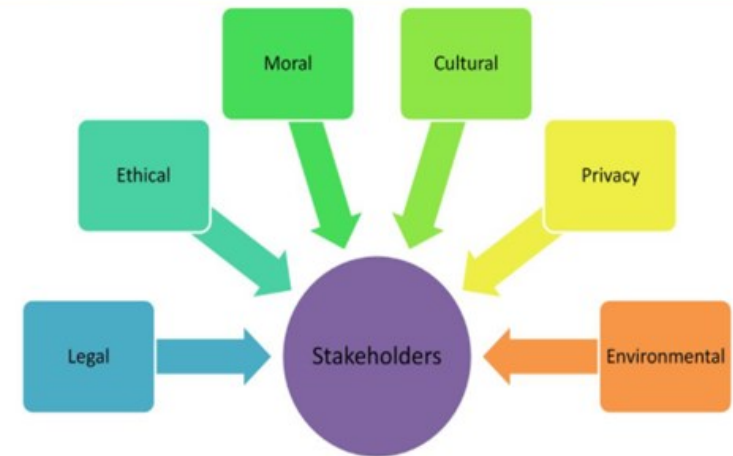
<https://www.bbc.co.uk/bitesize/guides/zbgg4qt/revision/1>



Vocabulary	Definition
Environmental	Relating to the natural world and the impact of human activity on its condition.
Ethical	Relating to moral principles of right and wrong.
Legal	Relating to the law.
Cultural	Relating to the ideas, customs, and social behaviour of a society.
Privacy	The state of being free from public attention.
Digital Footprint	The information about a particular person that exists on the internet as a result of their online activity.

Types of Issues – Information Sheet			
Ethical	Legal	Environmental	Cultural
Ethics is about good practice and behaving in the correct way. Ethical actions are different from lawful actions. Sometimes, actions can be legal, but are they ethical?	Doing something legally is abiding by the law and not breaking the law. If you break the law, you could get into trouble with the police.	Technology and Computer Science have had a massive impact on our environment, local and globally. Some of the impacts are good, but many are bad. We all have a responsibility to help protect the environment	Computer Science technologies have had a great effect on the way people live, work and relate to each other
Legal and ethical questions affect many areas of computing including privacy, sharing of information, hacking and the environment			
<ul style="list-style-type: none"> ➤ Something may be ethical but not legal ➤ Something may be legal but not ethical ➤ Decisions are often made based on what is right or wrong on someone's opinion 	<ul style="list-style-type: none"> ➤ Data Protection Act (DPA 1998) ➤ General Data Protection Regulation (GDPR 2018) ➤ The Computer Misuse Act (1990) ➤ Copyright Designs and Patents Act 	<ul style="list-style-type: none"> ➤ Energy creation and consumption. ➤ Technology refresh ➤ Technology waste ➤ Throw-away society, regular upgrades to hardware (business and home) when not necessary ➤ recycling 	<ul style="list-style-type: none"> ➤ The digital divide ➤ Age divisions ➤ The global divide ➤ Social media ➤ Society's use of technology
Creative Commons Licencing			
Software and Media (videos / music) piracy			


Stakeholders and the issues



Ada Lovelace (1840)

Ada Lovelace

Daughter of the poet Lord Byron, this English mathematician is considered to be the **first computer programmer**. Let me be clear: not the first woman programmer, the first *person* programmer. Ada published an algorithm that could be executed in *Babbage's analytical engine* (if it had been build).



Grace Hopper
1906-1992

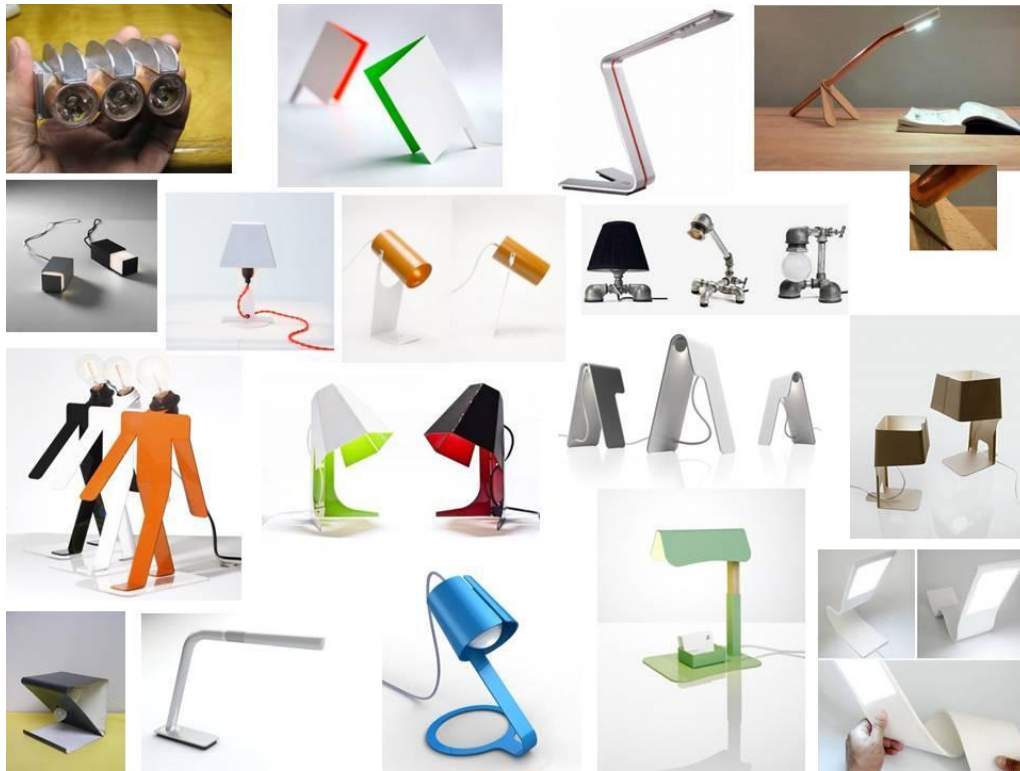
Hopper was computer scientist and US Navy Admiral.

She was the first to use the term "debugging" for fixing computer problems.

Hopper developed the first working compiler and developed COBOL, a programming language still in use today.

DESIGN & TECHNOLOGY

- **Design & Technology**
- **Food & Nutrition**



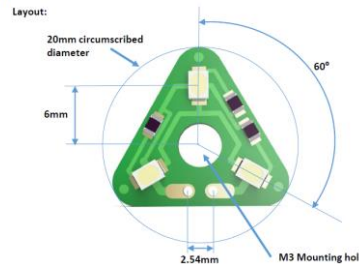
The 3 LED Star is a board designed for low power lighting, such as desk lamps or accent lights.

The board is designed such that it is well within the of the supply rating of a computer USB port (under 100mA)

The triangular shaped PCB has been sized to fit inside a 20mm diameter, and is provided with a single, central mounting hole.



NOTE: Care should be taken when soldering to the + and - pads so that the surface mount LEDs are not inadvertently damaged



Knowledge Organiser

A	is for	Aesthetics	
C	is for	Cost	
C	is for	Customer	
E	is for	Environment	
S	is for	Size	
S	is for	Safety	
F	is for	Function	
M	is for	Material	



USB Copper Light



Pipe Bending

Is a metal forming process used to permanently form pipes or tubing into the shape of a die. Straight tube can be formed using a bending machine to create a variety of single or multiple bends and to shape the piece into the desired form. This process can be used to form complex shapes out of different types of **ductile** metal tubing. However, if the metal tube is not bent properly it will collapse leaving the wall of the pipe wrinkled and deformed. When bent the metal is **work hardened**.



Rotary benders

Here we can see a hand held rotary bender. You simply place the pipe in the rounded channel. Fit the grooved straight block on the outer edge. Use the lever handles to apply pressure against the straight block. Now continue levering so that it gradually draws the pipe around the circular block, bending the pipe as it goes. Bend to the desired angle, then release the handles to remove the pipe.



Flexible Springs

The simplest method of bending a pipe is to use a flexible spring inserted into a pipe to support the pipe walls during manual bending. The spring stops the pipe from collapsing inside. They have diameters only slightly less than the internal diameter of the pipe to be bent. The spring is pushed into the pipe until its centre is roughly where the bend is to be. The pipe is generally held against the flexed knee, and the ends of the pipe are pulled up to create the bend. They are less cumbersome than rotary benders, but are not suitable for bending short lengths of piping.



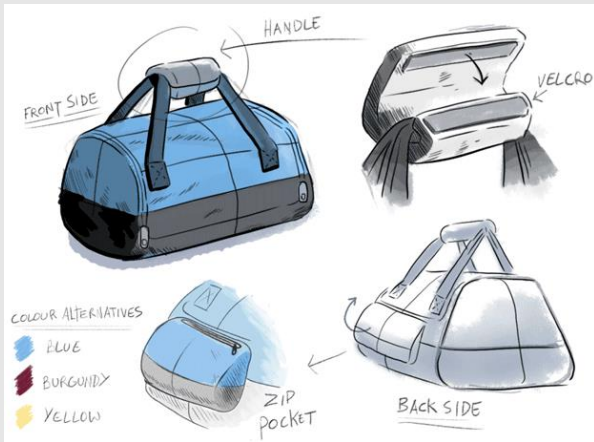
Communication of design ideas

During this topic you will learn different ways that designs can be communicated and modelled.

Sketching & annotation

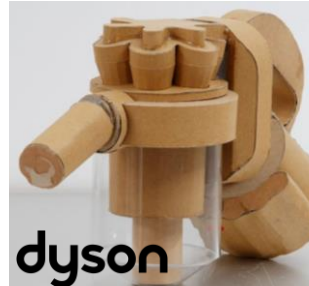
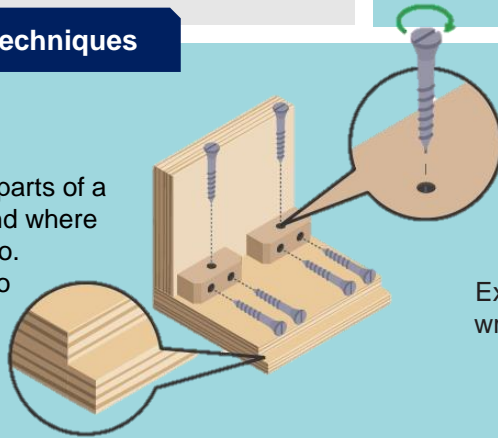
Sketching is a great way of getting initial design ideas down quickly on paper. More detailed sketches can be made for more advanced designs and to specify particular details, such as product dimensions and materials.

Annotation can be added at any point to **show key parts, sizes, materials, components and construction**. The use of shading, colour and different viewpoints can be an easy way of communicating initial ideas.



Communication techniques

These show how the parts of a product fit together and where components should go. They are often used to show how to put together flat-pack furniture or model kits.



Making a model allows designers to visualise and test how a product looks and performs in 3D.

3D Modelling

Modelling involves making simplified versions of the design that can be tested against the design specification to see if the basic design concept is likely to work.

Models should ideally be made of low cost materials that are similar to the materials intended for the final product.

Computer modelling

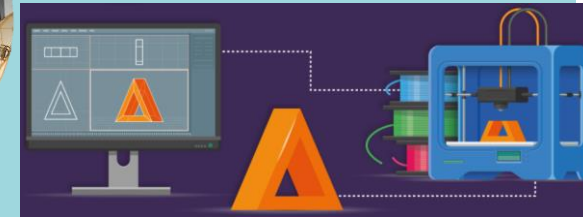
Products can be digitally modelled in detail and viewed from any angle. CAD allows for extensive testing under various specific conditions, such as air pressure, forces and temperature, these are called simulations.



Prototypes can be full size or a smaller scale version. Materials used include paper, fabric, cardboard, Styrofoam or HIPS.

3D printing

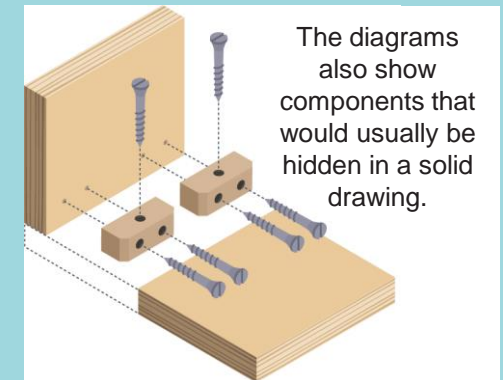
3D printing is a form of manufacturing using thin layers of a material to build a physical object.



Exploded view

These show how a product can be assembled and how the separate parts fit together, with dotted lines showing where the parts slide into place.

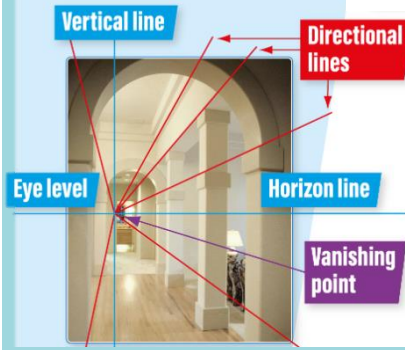
Exploded diagrams can take the place of detailed written instructions, meaning they can explain the construction of something without the barrier of different languages. They are widely used as instructions for self-assembly furniture.



The diagrams also show components that would usually be hidden in a solid drawing.

Communication techniques

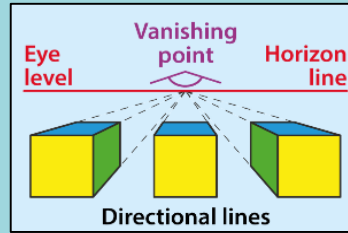
Perspective drawings



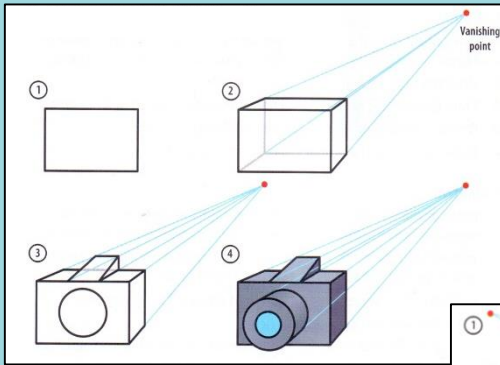
Perspective drawings provide a realistic representation of how objects are seen. As in real life, the further into the distance an object is, the smaller it appears.

If you stand at one end of a corridor and look down it, you will notice the walls and ceiling appear to converge (meet at a point).

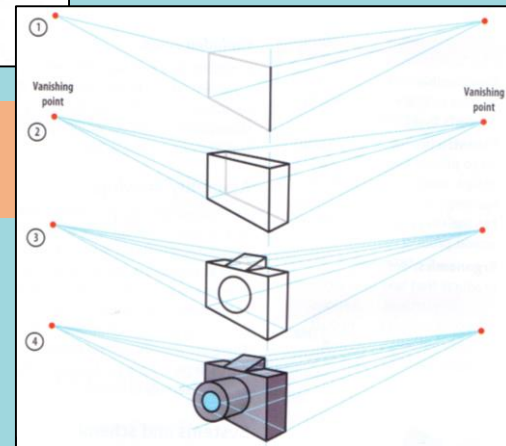
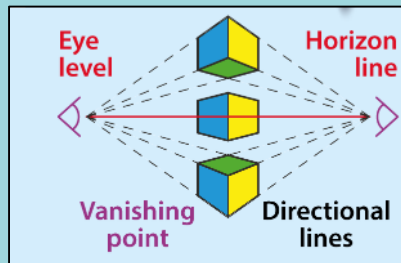
The horizontal, vertical and directional lines can be extended back but will always meet at the vanishing point, which is on the horizon line.



Shows an object as it appears directly in front of the viewer. All lines lead to the one vanishing point.

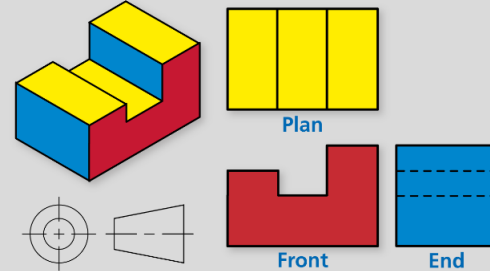


Provides a more realist view by using two vanishing points on either side of the object.



Two-point perspective

Orthographic drawings



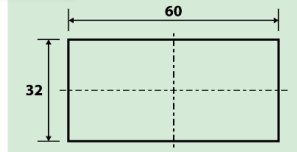
The plan view is drawn at the top, the front view is directly below this and the end view is positioned next to the front view.

Orthographic drawings are often used in manufacturing because they provide detailed information about the design.

Orthographic Drawing Conventions

Key	
Outlines	—
Projection/ construction lines	—
Centre lines	- - - -
Hidden details	· · · ·
Dimension lines	↔

For clarity, lines and dimensions must conform to British Standards.

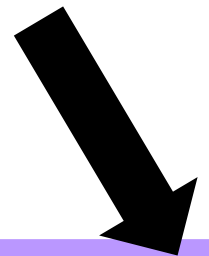


Computer Aided Design

CAD is commonly used by designers to **create design** ideas, **develop** and **model** 2D and 3D products and manipulate before manufacturing.
e.g. 2D design, Autodesk Inventor (3D)

Computer Aided Manufacturing

CAM uses **Computer numerical control (CNC)** to create CAD designs. The CAD software creates coordinates for every part of the design, and the CAM machine then interprets the coordinates to manufacture the design.
e.g. Laser cutter, 3D printer, CNC router and CNC lathes



Knowledge Organiser

During this topic you will learn the types, properties and uses of metals.

Metals are usually produced from rocks mined from the earth, called ore.

Metals can be divided into two groups - **ferrous metals** and **non-ferrous metals**

Ferrous Metals

The word ferrous comes from a latin word *ferrum*, meaning iron. Ferrous metals are metals which **contain iron**. Most ferrous metals are prone to **rusting** and are **magnetic**, which are properties of iron.

Non-ferrous Metals

Non-ferrous metal is a group of metals that **do not contain iron** and are therefore not magnetic and do not rust.

Metal surface finishes





Prevents corrosion of metals by creating a barrier and enhances the aesthetics (appearance) of metals. E.g. paint, plastic dip coating and lacquering.

Key word	Definition
Hard/ Hardness	The ability to resist deformation, indentation and wear and tear.
Malleable/Malleability	The ability to be pressed or bent into shape, and hold that new form.
Ductile/Ductility	The ability to reshape the metal by stretching.
Thermal conductivity	The ability to transfer heat through the material.
Electrical conductivity	The ability to allow electricity to pass along it.
Tough/Toughness	The resistance to indentation or scratching.

Alloys

Pure metals are made up from only one chemical element, such as aluminium or copper.
An alloy is a metal which contains more than one metal or non-metal elements. This is usually done to improve the properties of the metal. Alloys can be ferrous or non-ferrous, depending whether they contain iron.

E.g. Brass is a non-ferrous alloy
Copper + Zinc = Brass
Stainless steel is a ferrous alloy
Iron + Carbon + Chromium = Stainless steel

Non-ferrous metal	Properties
Aluminium 	Lightweight, corrosion resistant, malleable, tough, high electrical and thermal conductivity.
Copper 	Tough, corrosion resistant, high electrical and thermal conductivity
Zinc 	Corrosion resistant, ductile. Used mainly for plating (covering) metals like steel and iron.
Brass 	Alloy – Copper, Zinc Corrosion resistant, good thermal and electrical conductivity.

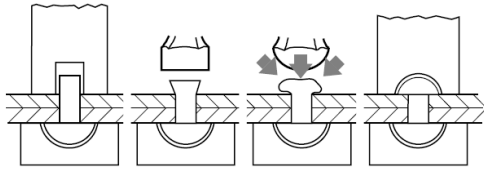
Ferrous metal	Properties
Cast Iron 	Iron + Carbon (2-4%) Hard skin but brittle, soft core. Good in compression Poor corrosion resistance
Mild Steel (low carbon steel) 	Iron + Carbon (0.25%) Malleable, ductile, tough. Poor corrosion resistance
Stainless Steel 	Alloy – Iron + Chromium and other elements. Corrosion resistant Hard, tough.
High Speed Steel 	Alloy – Iron + Carbon + Tungsten Brittle, hard.

Modifying the properties of metals

Annealing is a process that softens metal to make it more malleable and ductile so that it can be worked on again. It involves heating the metal to a specific heat temperature then allowing it to cool slowly.

The process can be carried out repeatedly whenever the metal becomes hard and brittle again.

The riveting process



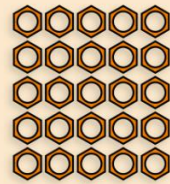
The rivet set is used for setting or pressing together metal plates so that the rivet is pulled all the way into the rivet hole. The hole in the rivet set should be the same diameter as the rivet being used. The rivet snap (dolly) supports the head of a snap or round headed rivet during the process of riveting. A second dolly is used to finish the snap or round head to the correct shape. A combined set and snap incorporates both pieces of equipment in one tool. They are available in a range of sizes to match the rivet's diameter.

Planning, cutting and shaping

When cutting shapes from materials, try to determine the best way to organise the shapes so that as many as possible can be cut from the least amount of material, here are two examples:

Arrange shape efficiently and close together. Reduces amount of waste material between each shape.











Nesting



Tessellation

Used for shapes that fit perfectly together with no space between them. Waste material is kept to the edge.

During this topic you will learn new tools for shaping metal and production planning.

1. 	2. 
3. 	4. 
5. 	6. 
7. 	8. 
9. 	10. 

Tool name	Use	Tool name	Use
1. Metal vice	To hold work whilst cutting/ filing.	6. File/s	Removes fine amount of material from work.
2. Hacksaw	Cutting straight lines in metal.	7. Ball peen hammer	Use to shape metal/ or use with centre punch.
3. Tin snips	Cutting straight lines in sheet metal.	8. Steel rule	Measuring material in mm.
4. Dividers	Marking circles or arcs on materials.	9. Centre punch	Make an indent in metal before drilling.
5. Engineers Square	Marking perpendicular lines on a material.	10. Scriber	Use to mark out lines/ design on metal.



Knowledge Organiser

Allergens

Some people may develop an allergy to peanuts or to the gluten in wheat. If they eat foods containing these, they may become very ill, and possibly die.

The 8 most common food allergies include:

- Cow's milk
- Eggs
- Tree Nuts
- Peanuts
- Shellfish
- Wheat
- Soy
- Fish



Symptoms can occur anywhere from a few minutes after exposure to a few hours later, and they may include some of the following:

- Swelling of the tongue, mouth or face
- Difficulty breathing
- Low blood pressure
- Vomiting
- Diarrhea
- Hives
- Itchy rash

In more severe cases, a food allergy can cause anaphylaxis. Symptoms, which can come on very quickly, include an itchy rash, swelling of the throat or tongue, shortness of breath and low blood pressure. Some cases can be fatal.

Food Labelling Regulations (1996)



Environmental Health Officer (EHO)

The EHO



If a business prepares or serves food it must be **registered** it using either the food business registration service on GOV.UK or via the **local authority website**.

The Environmental Health Officer's (EHO) role is to **inspect premises** in order to ensure the food a establishment produces is **safe to eat**.

FOOD HYGIENE RATING



At the end of their visit, in England, Wales, and Northern Ireland, they will present the establishment with a score from the

Food Hygiene Rating scheme of 0 - 5. The scheme is standardised across England and Wales to maintain a consistent assessment of safety standards. Any business should be able to achieve a "5 - very good" rating.

Scotland has its own equivalent system but will either issue a "pass" or "improvement required" rating.

If an establishment is perceived as high risk, officers will inspect it every 6 months. If it is low risk, EHO officers may visit every 5 years. The risk depends on the type of business (for example, restaurants are higher risk than a shop selling packaged food), and the level of concern a business has caused from past inspections.

Food Sources of common allergens

Like a tree nut allergy, peanut allergies are very common and can cause severe and potentially fatal allergic reactions. However, the two conditions are considered distinct, **as a peanut is a legume.** Nevertheless, those with **peanut allergies are often also allergic to tree nuts too.** While the reason people develop a peanut allergy isn't known, it is thought that people with a family history of peanut allergies are most at risk.

TREE NUTS

- Brazil nuts
- Almonds
- Cashews
- Macadamia nuts
- Pistachios
- Pine nuts
- Walnuts



COW'S MILK



Milk, Milk powder, Cheese, Butter, Margarine, Yogurt, Cream, Ice cream



SHELLFISH

Shrimp, Prawns, Crayfish, Lobster, Squid, Scallops

COMMON CAUSES OF FOOD SPOilage



WHAT FOOD SPOilage LOOKS LIKE



Odour - break down of proteins (rotten egg smell)



Sliminess - tissue breakdown



Gas Formation - swollen packaging



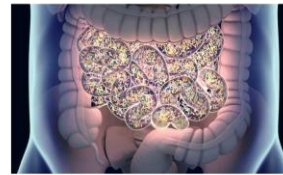
Sourness - production of acid, sour milk



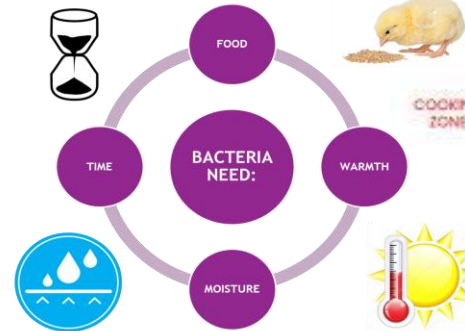
Discolouration - green/blue molds on foods like bread, fruits and vegetables.

BACTERIA

Bacteria are microscopic organisms which are commonly referred to as 'GERMS'. They found everywhere including on and in people, on food, in water, soil and air. Some are good for us, and some are bad!



Bacteria need 4 things to grow:



COOKING ZONE



GOLD ZONE

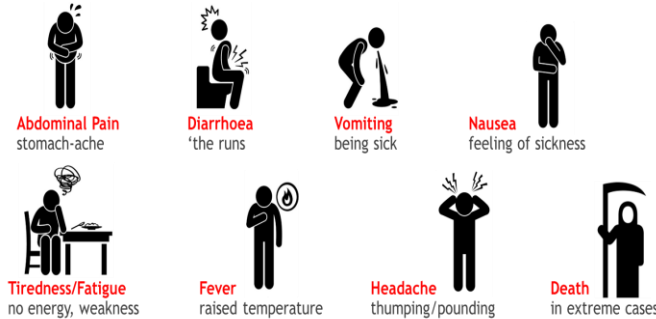


- 100 °C Boiling Water
bacteria will be destroyed
- 75 °C Cooking/Reheating
- 63 °C Minimum Hot Holding
- 37 °C Body Temperature
ideal temperature for bacteria to grow
- 8 °C Food Storage
store food at this temperature or below
- 5 °C Fridge Temperature
- 18 °C Freezer Temperature
bacteria won't grow but may not die

All the above temperatures are guidelines only

Food Poisoning Bacteria
Salmonella
Clostridium Perfringens
Staphylococcus Aureus
Campylobacter
E-coli
Listeria
Bacillus Cereus

Symptoms



Personal Hygiene



AT RISK GROUPS



Pregnant Women



Children



Elderly



People with weakened immune systems



People on certain medications that may suppress the immune system

RED	RAW MEAT
BLUE	RAW FISH
YELLOW	COOKED MEATS
GREEN	SALAD AND FRUIT PRODUCTS
BROWN	VEGETABLE PRODUCTS
WHITE	BAKERY AND DAIRY PRODUCTS



CREATIVE

- **Art**
- **Drama**
- **Music**

Cycle 4 in Art will focus on: Your personal project

You will be researching an artist of your choice and develop a secure understanding of their work. You will be assessed on your own response to their work.

KEYWORD LOG – Personal project

Art Terms	Definition
Experiment	To extend the boundaries of the art in terms of materials or techniques.
Research	To gather and record relevant information about a specific thing
Refine	When refining an artwork we must seek to remove unwanted elements from our creation.
Composition	Is the arrangement or placement of visual elements in a piece of artwork.
Inspiration	The process of being mentally stimulated to do or feel something, especially to do something creative
Design	A plan or drawing produced to show the look, function or workings of an object before it is made
Visual recording	To visually represent your ideas through mark making and use of the formal elements

This cycle we will be developing an understanding of how to research an artist and develop your own ideas from this.

You will be able to combine your research with learning from previous cycles on the visual qualities to produce personal outcomes inspired by the artist that you choose.



It is really important that you spell the art terms correctly. Take some time to learn the spellings of these words.



A04 **OUTCOME**

PRESENT
FINAL IDEAS

DEVELOPED AS PLANNED
CLEARLY RESPONDS TO
ARTISTS EXPLORED

CONNECTION

CONCLUSION



1-

You will be able to choose an artist to research and analyse an example of their work.

2-

You will be able to experiment with different ideas relating to your artist and then refine your work as it develops.

Personal project

3-

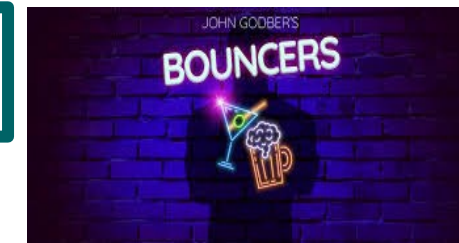
You will be able to record your ideas through drawings, designs and annotations

4-

You will be able to produce an outcome or outcomes showing your artist inspiration as well as your own ideas.

Cycle 4 in Drama will focus on: exploring extracts from Godber’s play’s *Bouncers and Shakers*, considering playwrights intentions as well as developing multi-role techniques to communicate a character to the audience.

KEYWORD LOG - Bouncers



Bouncers is a play about one night in a Yorkshire disco in the 80s.

The characters of in this play are bouncers who are working on the door of a nightclub and the different characters they meet.

Shakers is a play about a group of girls who work in a trendy cocktail bar and the different characters that visit their bar.

The play focuses on the reality that is behind the fake façade of the happy smiling faces of the waitresses.

Both plays focuses on the weekend culture in a working class environment. Both plays are comedies, highly physical and requires minimal set.



Drama Skill	Definition
Blocking	The process of putting together your piece. Blocking is deciding where the actors should stand, sit or move to and then setting and rehearsing it.
Body language	An acting skill. The way you use your body to express your characters feelings and attitudes.
Characterisation	The act of changing your voice, body language, movement, stance, posture, facial expressions and gesture to become a character. Characterisation is the act of changing yourself physically to become another person in a drama.
Cross-Cutting	A stage split in two or more sections to highlight a different location or time period happening at the same time on stage
Direct Address	Directing all speech and action to the audience.
Facial expressions	An acting skill. The way you use your face to express your characters feelings and emotions.
Multi-role	An actor playing more than one character
Pace	The speed of movement/speech
Performance	An act of presenting a play, concert or other form of entertainment.
Physicality	The shape/posture of the body Characterisation The creation of a character – voice, physicality, facial expressions
Projection	The volume and clarity of your voice
Proxemics	The distance between the characters to show their relationship.
Transition	The process of moving from one scene or set to the next.

John Godber

From Upton, a working class part of West Yorkshire.

Godber has made his place of birth a focal point for his plays.

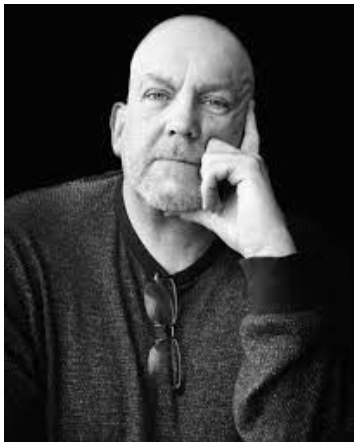
One of his aims is to reflect the lives of the people around him and the challenges that working class people face.

Born in 1956, he is the son of a mining family who went on to be a drama teacher at the school he went to as a child.

He has written 17 plays and has directed all of their first performances.

Godber sets his plays at the time of writing as he aims to reflect life as he sees it around him and to attract contemporary audiences.

His influence comes from the world around him, his own experiences and the people that he meets and so the majority of his plays are set in the North West and are based around working class characters.



Godber-esque

John Godber has developed a distinctive style of writing that appeals to a wide range of audiences. He creates worlds and characters that ordinary people can relate to. Godber wrote his first, and to date most successful play, 'Bouncers' in 1977 and continues to write and direct to the present day.



Godber writes with a fast paced and energetic style to keep audiences on their toes and intrigued about what's coming next. Although his work has varied throughout his extensive career, there are a number of recognised techniques and devices that John Godber uses, and his experimentation with theatrical convention has become a trademark.

Many conventions of Brecht can be seen in 'Bouncers and Shakers' – multi role-play, direct address, music, minimal set and props, changing characters on stage. These are designed to keep an active audience.

Aims

- Godber believes in theatre for the masses and so explores universal themes in his plays.
- He believes in the theatre as an instrument of social change for the better.
- Using comedy to engage the audience but also to make them think. He described 'Teachers' as a comedy that was 'deadly serious' as it made audiences laugh but then question the fairness of the education system.

Conventions

- Use of stereotypes or 'stock' characters.
- Colloquial language - dialogue is largely realistic and conversational.
- Direct address is used to engage the audience and involve them in the action of the play.
- Actors use multi role - actors need to use precise vocal and physical skills to portray distinctive characters that the audience can easily recognise.
- Social commentary veiled in humour
- Episodic structure with quick paced scenes
- Music is used to add atmosphere to a particular moment or to enhance the meaning of a scene.

Film Music – Cycle 4

Music in a film is there to set the scene, enhance the mood, tell the audience things that the visuals cannot, or manipulate their feelings. Sound effects are not music!

Some music is **composed specially** for a film. Much of this is broadly classical in style.

Some music used in film soundtracks was composed for other (non-film) purposes, but is **adopted** for use in a film because it fits the film-maker’s intentions.

Sometimes a song, usually a pop song, is used as a **theme song** for a film. This helps with marketing and **publicity**.

Instruments & Common Associations (Musical Clichés)	
Woodwind	Natural sounds such as bird song, animals, rivers
Bassoons	Sometimes used for comic effect (e.g. a drunkard)
Brass	Soldiers , war, royalty, ceremonial occasions
Tuba	Large and slow-moving things
Harp	Tenderness , love
Glockenspiel	Magic , music boxes, fairy tales
Timpani / Drums	War, fighting , thunder
Strings	Often used to portray emotions : passion, grief, etc.
Tremolo Strings	Tension , fear, drama

KEY TERMS

Metronome	A click track that helps the composer follow the PULSE
Cues	The parts of the film that require music . This is agreed between the director and the composer.
Diagetic	Music that is part of the action: The characters can hear it!
Non-diagetic	Music that is NOT part of the action: The characters CANNOT hear it.
Leitmotif	A short melody that is associated with a character or idea in a film.
Mickey Mousing	When the music fits precisely with a specific part of the action in a film.
Sync Point	A precise moment where the timing of the music needs to fit with the action.
Underscore	Where music is played at the same time as the action or dialogue.



John Williams composed the music for Star Wars, Jaws and Indiana Jones

KEY COMPOSERS

John Williams, Hans Zimmer, Danny Elfman, Rachel Portman, Anne Dudley

PE

Cycle 4 Knowledge Organiser

QR code to basic cricket rules video



Basic Rules

Players: 11 players per side.

The game: A run is scored when the batsmen at either end cross and reach the opposite end before the fielders can take the balls off the stumps.

How to score: A run is scored when the batsmen at either end cross and reach the opposite end before the fielders can take the balls off the stumps.

If you hit the cricket ball over the boundary without it bouncing you get 6 runs. If you hit the ball over the boundary but it bounces before going over, you get 4 runs. The team that scores the most runs, wins.

A batter is out if:

If the batter leaves the crease and the keeper stumps the wickets.

A batter is caught out when they hit the ball in the air and a fielder catches it without it touching the floor.

If 2 batters are running between the wickets and a fielder throws the balls at the stumps without the batters being in the crease they are run out.

You double hit when you deliberately hit the ball in the same movement more than once.

Leg before wicket When you are hit in the leg by the ball, in line with the stumps which could have gone on to hit the stumps

It is a no ball:

If when bowling you over step the crease line it is a no-ball.

If you bowl a ball and it bounces more than 2 times before the batter it is a no ball.

If you bowl a ball above waist height it is a no-ball

If you bend your arm more than 15 degrees while bowling it is a no-ball.

The same bowler can not bowl consecutive overs.

A wide ball is called when the ball is out of reach of the batter in his original stance.

Principles of Training

Speed

The ability to move your body or some parts of your body quickly.

How to test: 30m sprint test

Strength

The extent to which a muscle or muscle groups can contract against resistance

How to test: 1 rep max/ hand grip dynamometer

Agility

Being able to move quickly and change direction under control (e.g. weaving between objects or opponents in a zig-zag motion).

How to test: Illinois agility run

Coordination

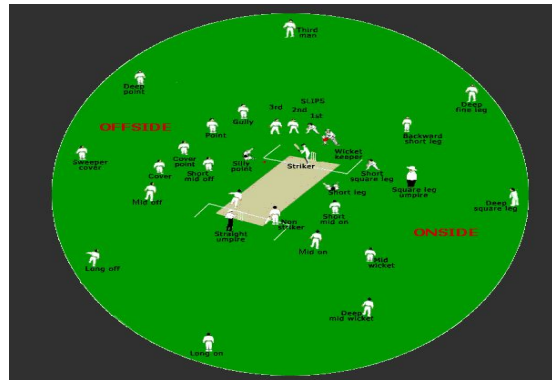
The ability to use two or more body parts together accurately and fluently

How to test: Alternate hand wall toss

Reaction time

The length of time a performer takes to respond or move when they see something happening.

How to test: Ruler drop test



TBAT understand rules of cricket and identify principles of training