Year 9
Term 2B

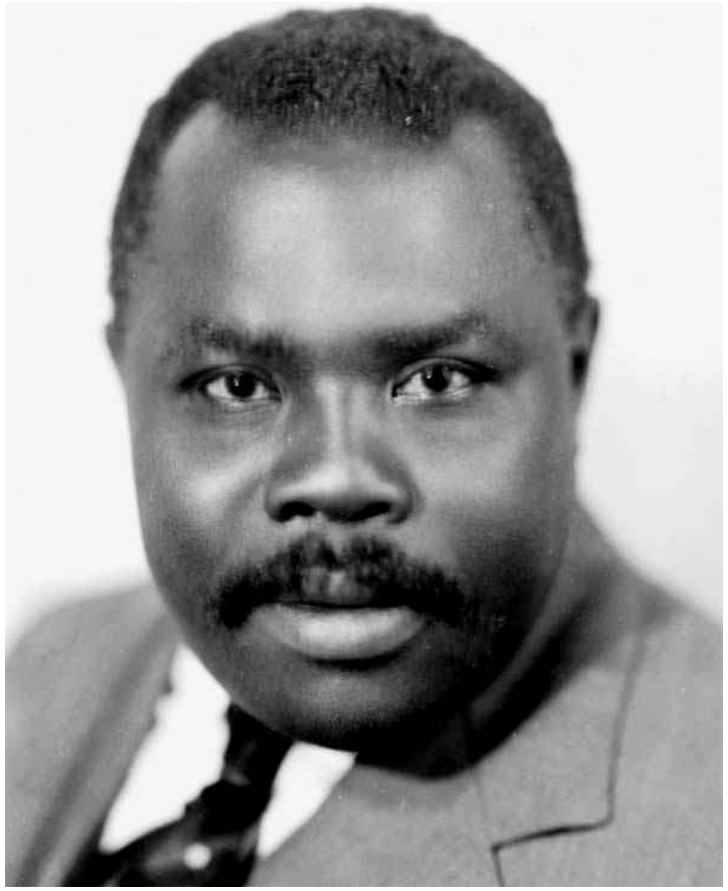
Name _____

Form _____

St Cuthbert's Catholic High School

MORE THAN A SCHOOL

St Cuthbert's
Catholic High School
Live life in all its fullness



"A people without the knowledge of their past history, origin and culture is like a tree without roots."

Marcus Garvey

(research 10 facts about Marcus Garvey)

Year 9 Knowledge Organiser: Term 2B

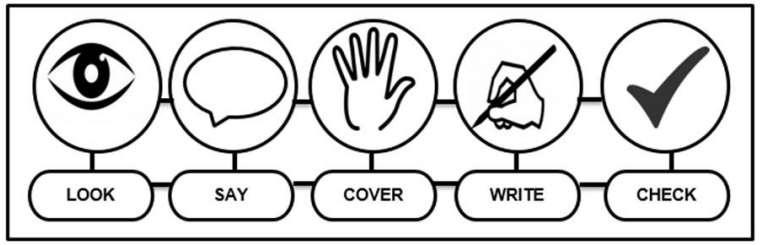
Instructions for using your Knowledge Organiser

The timetable on the next page tells you which subjects you should be studying on which days (it doesn't matter if you have that subject on that day or not, you should follow the timetable).

You are to use your exercise book to show the work you have done. Each evening you should start a new page and put the date clearly at the top.

You need to bring your KO and exercise book with you EVERY DAY to school. Your KO and exercise book will be checked regularly in form time.

You will also be tested in your lessons on knowledge from the organisers.



You must use the revision strategy Look – Say – Cover – Write - Check to learn the knowledge. You can also use your KOs and book in a number of different ways but you **should not just copy** from the Knowledge Organiser into your book.

Presentation

You should take pride in how you present your work:

- Each page should be clearly dated at the top right hand side with the **Subject** written in the middle.
- Half way down the page a line should divide it in two with **Next Subject** written above the dividing line.
- Each half of the page should be neatly filled with evidence of self-testing. There should be an appropriate amount of work.
- Failure to show pride in your presentation or wasting space on your page with large writing or starting a number of lines down will result in a **negative AtL.**

Year 9 Knowledge Organiser Homework Timetable

You are expected to study the subjects shown on your timetable each day. You need to spend 20 minutes on each subject and you will need to evidence your work in your exercise book.

WEEK A	Subject 1	Subject 2	Subject 3
MONDAY	English	MFL	Geography
TUESDAY	Science	Maths	PD
WEDNESDAY	History	Music	Science
THURSDAY	RE	Maths	Food
FRIDAY	Computing	Technology	English

WEEK B	Subject 1	Subject 2	Subject 3
MONDAY	English	Drama	Geography
TUESDAY	Science	Maths	RE
WEDNESDAY	History	PE	Science
THURSDAY	RE	Maths	MFL
FRIDAY	Computing	Art	English

Reading Log

"The more that you read, the more things you will know. The more that you learn, the more places you'll go"

Dr Seuss

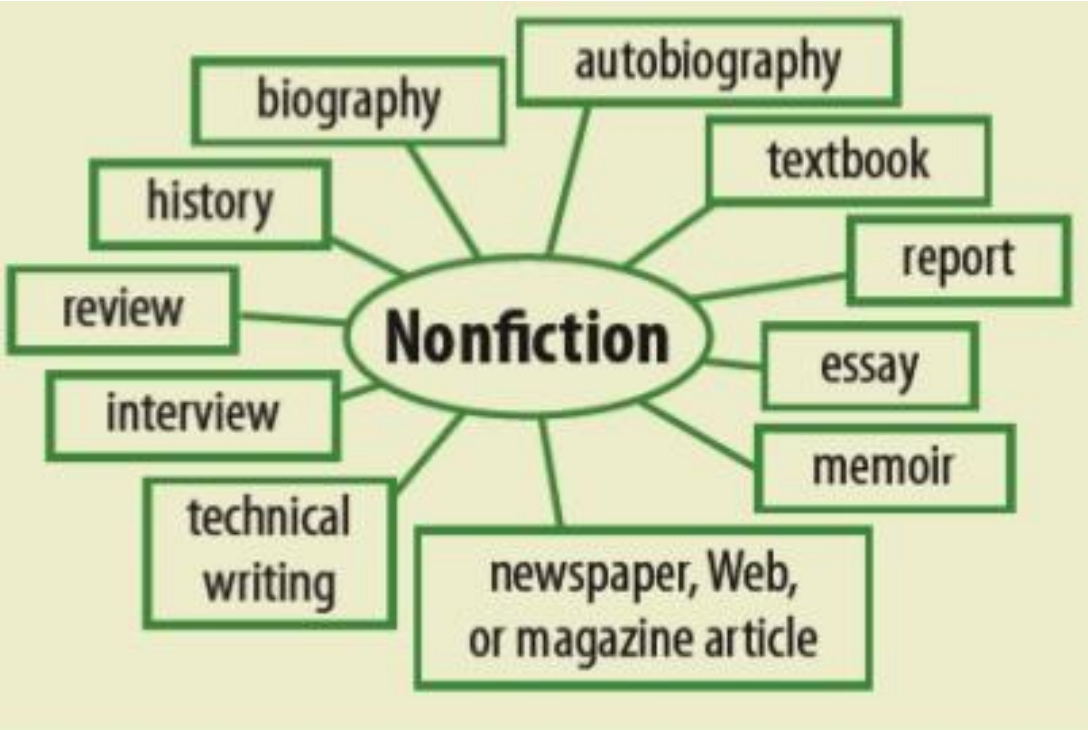
Use this reading log to record the books you read and how long you have spent reading.

Week	MON	TUE	WED	THURS	FRI	SAT	SUN	Book(s) read (title and author)	Time spent reading	Parent comment/signature
Week 1										
Week 2										
Week 3										
Week 4										
Week 5										
Week 6										

Year 9 English - Term 2B: Non-Fiction - Crime

Non-Fiction: A type of writing that is factual and informative instead of make belief.

What is crime? an action or omission which constitutes an offence and is punishable by law.

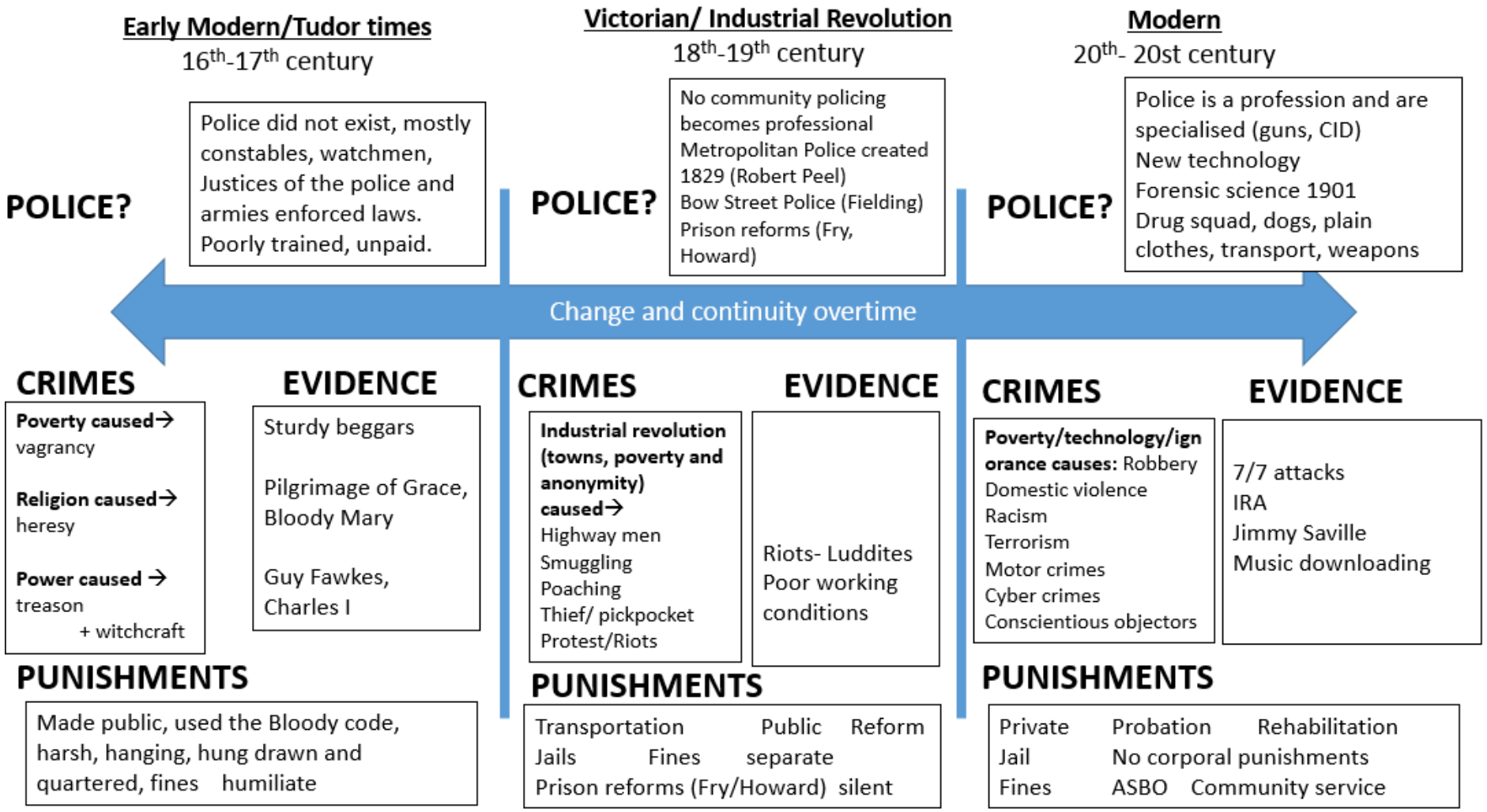


Non- Fiction Features:

- Statistics – facts and figures to support what you're saying
- Repetition – saying something more than once to add emphasis
- Anecdote – a real life example
- Emotive Language – language used to appeal to someone's emotions
- Power of 3 – three powerful words or phrases put together for emphasis
- Oxymoron – two opposite ideas placed side by side

Language Subject Terminology	
Word Classes	
Noun	Identifies a person (girl), thing (wall), idea (luckiness) or state (anger).
Verb	Describes an action (jump), event (happen), situation (be) or change (evolve).
Adjective	Describes a noun (**happy** girl, **grey** wall).
Adverb	Gives information about a verb (jump **quickly**), adjective (**very** pretty) or adverb (**very quickly**).
Sentence Structures	
Fragment	An incomplete sentence (no subject verb agreement). *"Nothing." "Silence everywhere."*
Simple	A sentence with one independent clause. *"She went to the shop."*
Compound	A sentence with multiple independent clauses. *"She went to the shop and bought a banana"*
Complex	A sentence with one independent clause and at least one dependent clause. *"Sometimes, when she goes to the shop, she likes to buy a banana."*

Year 9 English - Term 2B: Non-Fiction - Crime



Year 9 Maths – Term 2B

Problem Solving at St Cuthbert's

K Key Information - Highlight or pick out the important things that you will need

L List the Maths - What Maths topics will you need? Can you write down any rules?

A Attach Numbers -
- Assign numbers to help
- Relate the problem to one you can already do eg.. 3 x 4 = 12

P Picture -
- Annotate the diagram given with any information
- Draw a picture to help you visualise

S Sensible - Does your answer make sense?

Don't forget

Always show your working out

Never round half way through a question

Key Words

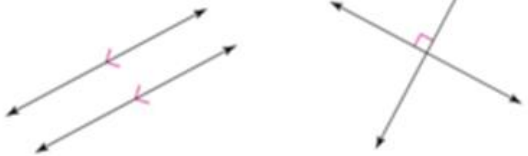
Take care with your spellings of these key words

Parallel	**Alternate**
Corresponding	**Rotation**
Translation	**Transformation**

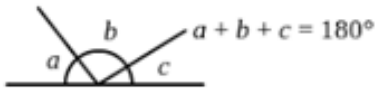
Parallel and Perpendicular Lines

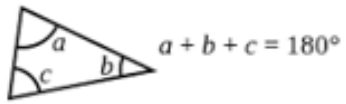
Parallel lines are lines in the same plane that never intersect. They are always the same distance apart.

Perpendicular lines are lines that meet at a right angle, that is, at an angle that measures 90°.



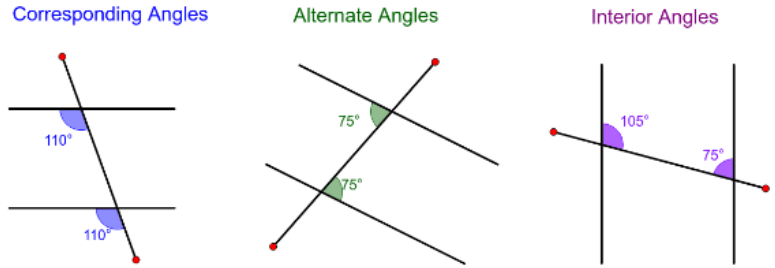
Angle Facts



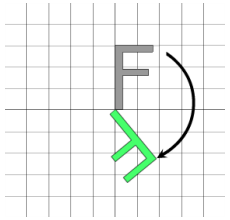


- Angles on a straight line will add up to 180°
- Angles in a Triangle will add up to 180°
- In an Isosceles Triangle, two of the angles will be the same size

Angles in Parallel Lines



- Corresponding angles are equal
- Alternate angles are equal
- Interior angles will add up to 180°



Rotation

To complete a rotation of an object, you will need:

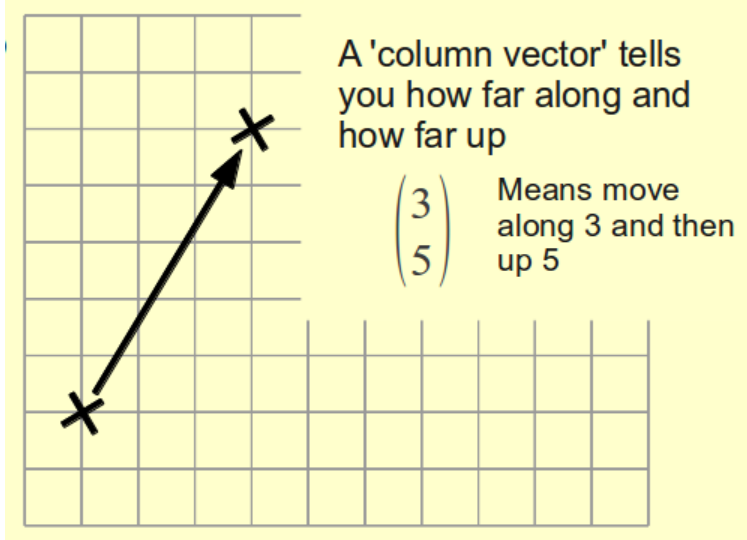
- Amount of turn (usually in degrees)
- Direction (clockwise or anti-clockwise)
- A point to rotate around (could be labelled or given as a co-ordinate)

Year 9 Maths – Term 2B

Translation

A translation is a movement of a shape.

It can be given as a description or as a column vector

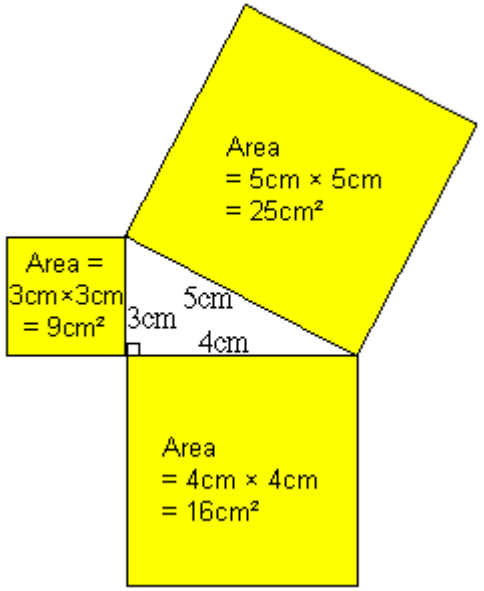


What movements would these column vectors want you to do?

a. $\begin{pmatrix} 0 \\ 4 \end{pmatrix}$ b. $\begin{pmatrix} -1 \\ 3 \end{pmatrix}$ c. $\begin{pmatrix} 2 \\ -4 \end{pmatrix}$ d. $\begin{pmatrix} -3 \\ -1 \end{pmatrix}$

Pythagoras' Theorem

Pythagoras' Theorem states that the square of the hypotenuse of a right-angled triangle is equal in area to the sum of the squares on the other two sides. Using this, we can find a missing side, as long as we know the other two sides, and that the Triangle is a right angled Triangle



The measurements shown in the diagram above, make a Pythagorean triple, as they work using Pythagoras' Theorem, for a right angled Triangle.

Another Pythagorean Triple is 5cm, 12cm, and 13cm.

Year 9 Science – Term 2 B: Skills

New Symbol	Meaning
	**Poisonous** Can cause death if swallowed, breathed in or absorbed by skin
	**Corrosive** Attacks and destroys living tissues, such as skin and eyes.
	**Oxidising** Provides oxygen to make other substances burn more fiercely
	**Radiation** Damaging to living tissue, possibly causing DNA damage and mutations.
	**Highly flammable** Catches fire easily.
	**Biohazard** Biological substances that pose a threat to human health.

Hazards symbols warn about the dangers of a substance. Risk is the chance that a hazard will cause harm. Risk assessments describe how to reduce the risk of harm when carrying out an experiment.

Quantity	Unit	Symbol
Length	meter	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Temperature	kelvin	K
Quantity of substance	mole	mol

Scientists often make measurements when carrying out experiments. SI Units are units of measurement that are used by scientists all over the world.

Key Words

Hazard	Something which can cause harm to someone or damage to something.
Random Error	Errors that are made by the person carrying out the experiment e.g. measuring or timing incorrectly.
Systematic Error	Errors caused by faulty equipment e.g. equipment not starting at zero.
Accurate	A measurement that is close to its true value. It can be improved by repeating the measurement.
Precise	The closeness of two or more values to each other.
Mean	The average of a set of numbers. Add up all the numbers and divide by how many numbers there are.
Median	The middle number when the numbers are arranged in order from lowest to highest.
Mode	The number that appears the most often in a set of numbers.
Range	The difference between the lowest and highest numbers in a set of data.

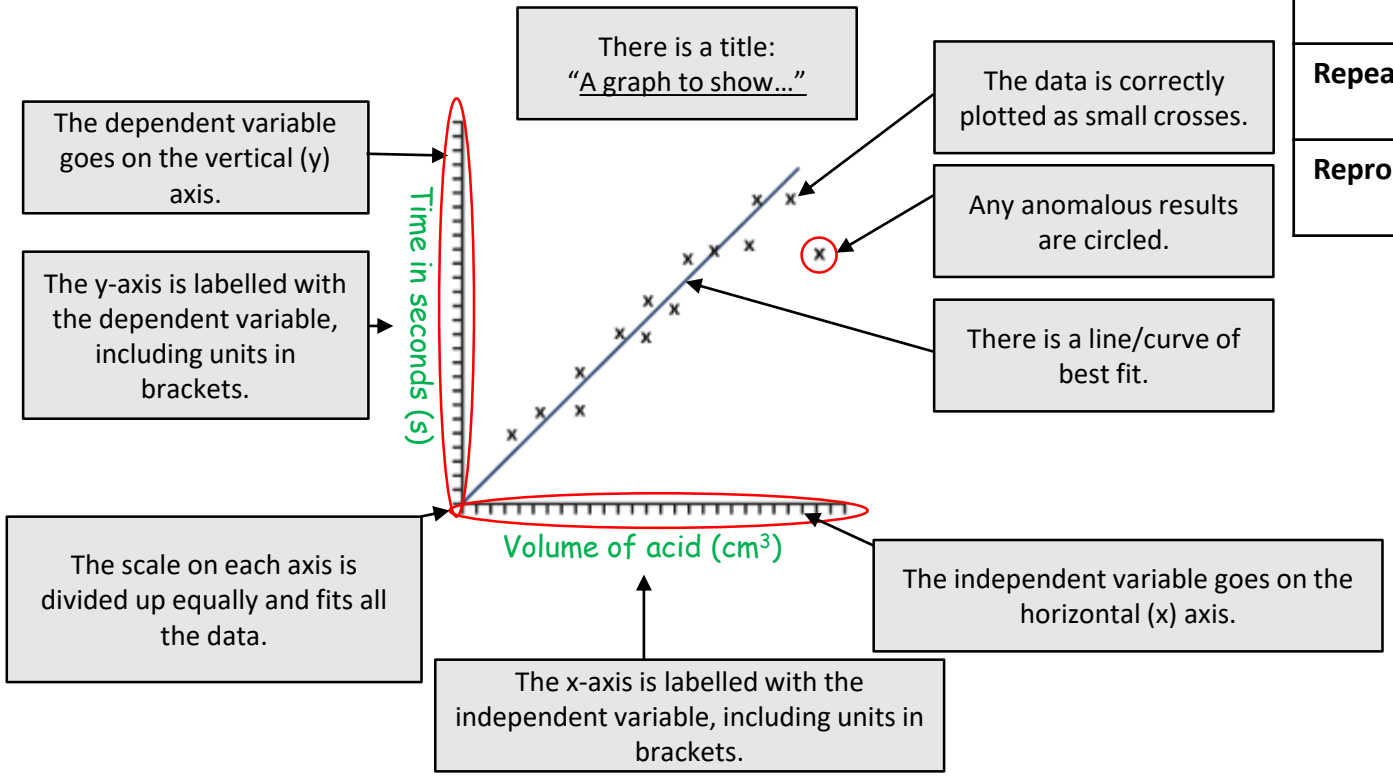
The diagram above shows you examples of accuracy and precision on a dart board.

Year 9 Science – Term 2B: Skills

Continuous Data: The value could be any number, It is a value that you **measure** such as height, weight, time.

Discrete/Discontinuous Data: A value with a limited number of values. It is often a value that you **count** such as the number of people with a certain eye colour or blood group.

Drawing Graphs: We draw graphs in Science to help up **analyse** our data.



Key Words

Anomaly	A result that does not fit in with the rest of the results. It should be removed before calculating an average.
Hypothesis	A prediction about what will happen in an experiment supported by evidence.
Analysis	Looking at the data from the experiment for patterns or trends.
Evaluation	Looking at results to see if; your data is of high quality, it matches your hypothesis and it is accurate.
Repeatable	Measurements are very similar when repeated by the same person or group, using the same equipment and method.
Reproducible	Measurements are very similar when repeated by a different person or group using different equipment and/or methods.

Variable	Definition
Independent Variable	The variable that is changed during the experiment.
Dependent Variable	The variable that is measured during the experiment.
Control Variable	The thing(s) that are kept the same each time the experiment is carried out.

Year 9 Religious Education – Term 2B:

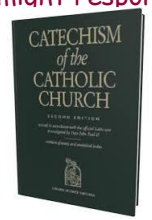
Medical Ethics – how would a Catholic respond to the big decisions about beginning and ending a human life?

Big Questions:

- Is human life special?
- Is it ever right to end a human life?
- Are some human lives more important than others?
- Do medical advances mean we are 'playing God'? – and is that OK?
- How can we decide what the right thing to do is?
- Why do different Christin denominations believe different things about what is 'right'?
- What if…. different moral authorities are telling us different things?

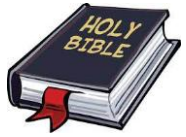
SECTION 1; We have been looking at sources of moral authority for Catholics; the Bible, the teaching and example of Jesus, the authority of the Church, our conscience. We are now going to apply these sources of authority to real life dilemmas and issues and explore how a Catholic might respond to them.

Jesus



Catechism – official teaching of the Catholic Church

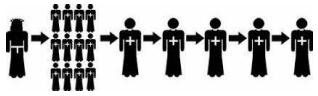
10 commandments; given to Moses by God



Bible – Christian Holy book

conscience – God given voice of right and wrong

The teaching authority of the Catholic Church



Apostolic succession – Catholics believe Jesus passed authority to his apostle Peter and it has been passed on to every Pope since

SECTION 2;

All Christians believe that human life is special. This is called 'The sanctity of life'. They believe human life is sacred because we were created by God, for a purpose, out of love. God does not make mistakes! – every single human is perfect and precious because God has made the. This impacts Christian beliefs about issues to do with life and death. These issues are called 'medical ethics.

We will explore how Catholics, and other Christian denominations might respond or have responded to issues of medical ethics, such as;

- The separating of conjoined twins
- Genetic engineering
- Animal testing

And also the issues surrounding war, peace and reconciliation

Key word	definition
Sanctity of life	Christian belief that all human life is special or sacred because it is created by God
Reconciliation	To be at peace with others
Genetic engineering	the attempt to change an organism, or certain aspects of the organism, by working with its genetic material
Magisterium	The teaching authority of the catholic Church
Laudato Si	'care for our common home' – an encyclical from Pope Francis about caring for the planet and all life that is on it

Complete the learning homework for each week; work in your yellow book		March 11th	Section 2 and SOWAA 1 & 2
Feb 26th	Key words and definitions	March 18th	SOWAA 3, 4, 5, 6
March 4th	Section 1	March 25th	SOWAA 7 & 8

Sources of Wisdom and Authority (SOWAA)

(1) 'So God created mankind in his own image'
Genesis 1:27

(2) 'Then the LORD God formed a man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being.'
Genesis 2:7

(3).'before I formed you in the womb I knew you'
Jeremiah 1:5

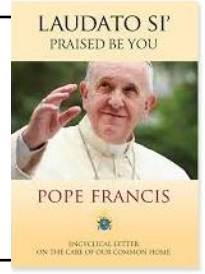
(4) ' Human life must be respected and protected absolutely from the moment of conception. **Catechism**

(5) "Defend the rights of the poor and orphans; be fair to the needy and helpless. Rescue them from the power of evil men." **Psalm 82**

(6) "Love your enemies and pray for those who persecute you " **Jesus, preaching the Sermon on the Mount, Matthew 5:44**

(7) "I have been particularly concerned that a precedent might be set in English law that could allow an innocent person to be killed, or lethally assaulted, to prolong the life of another."
Former Archbishop of Westminster, Cormac Murphy O'Connor, reacting to the 'Jodie and Mary' **conjoined twins ruling**

(8) The Catechism of the Catholic Church teaches that experimentation on animals is morally acceptable only "if it remains within reasonable limits [and] contributes to caring for or saving human lives".
Pope Francis in Laudato Si



Year 9 Geography – Term 2B: How can conflict affect Geography?

Key words:

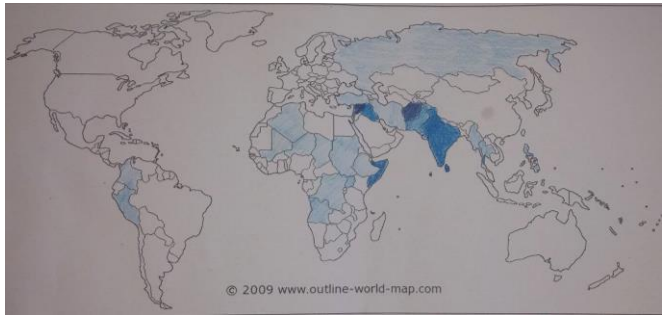
Conflict: A state of opposition between persons or ideas or interests
War: A state of armed conflict between different countries or different groups within a country.
Civil War: A war between people of the same country.
Coup d'état: A group of people who overthrow a sitting government.
Child soldier: A person below 18 years of age who is, or who has been, recruited or used by an armed force or armed group in any capacity.

Factors which can influence the effects of conflict:
- Time
- Money
- Development
- Knowledge
- Location
- Past
- Population

Causes of conflict:
- Religion
- Resources (eg oil)
- Money
- Politics
- Past feuds
- Land

Ways conflict can influence Human Geography:
- Political boundaries
- Population
- Health
- Development

Ways conflict can influence Physical Geography
- Environment
- Weather and climate



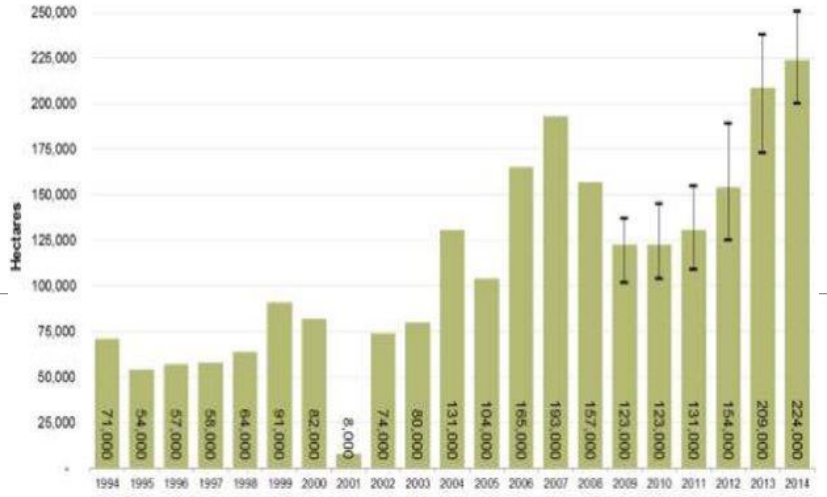
Blood diamonds

From areas controlled by rebel groups rather than governments.

Sold to raise money to buy weapons or fund civil war by these rebel groups.

Development Indicators	
Life expectancy	The average age a person in the country lives to.
Death rate	The amount of people who have died per 1,000 of the population.
Birth rate	The amount of people born per 1,000 of the population.
Literacy rate	The % of the population who can read and write.
Gross National Income (GNI)	The average income of a person in the country.
Access to safe water	The % of the population who has access to clean safe water.
Doctors per 1,000	The number of doctors per 1,000 of the population.
Infant mortality rate	The number of babies who died before their 5th birthday per 1,000 people.

Figure 1: Opium cultivation in Afghanistan, 1994-2014 (Hectares)



Heroin Trail

Opium is a highly addictive narcotic drug acquired in the dried form from the opium poppy (Papaver somniferum) seed pod. Traditionally the un ripened pod is slit open and the sap seeps out and dries on the outer surface of the pod. This sap is then sold and turned into pure opium, which is sold on the black market. Since 1978, opium (the base for Heroin) production has soared in Afghanistan, will a considerable amount of produced being transported to the UK.

Afghanistan as a Narco-state?

Introduction: opium cultivation was introduced into the region in 1978, with the beginning of the soviet occupation of Afghanistan. For a country with limited arable land and access to irrigation, the production of opium – which fetches far higher prices than wheat, fruit, and other agriculture products – has proven to be advantageous to cultivate and profitable for the country. Unlike other agricultural products, the opium is easily stored and transported, and has a high demand pull on the international market. It is often purchased from producers in advance by narcotics traders, which provides a system of credit for the farming communities as well as reliable insurance against poverty and hunger. The production and trade of opium remained effectively legal until 2002, enabling the development of a thriving market to become firmly established and to grow virtually unchecked. Afghanistan has become the source country for approximately 90% of the world's opium, producing as much as 4,500 metric tons each year. Today, the opium production industry of Afghanistan nets at least $3 billion annually.

Year 9 History – Term 2B: The Cold War

Capitalism	Communism
-Countries such as America, Britain and Western Europe -Free elections take place and the people select their leader from a choice of political parties -People have the right to keep the money which they earn -Businesses are privately owned -There is freedom of press -There are class distinctions – upper and lower	-Countries such as Russia and the former USSR (United Soviet State of Russia) -Elections take place but you can only select a Communist leader -All businesses are owned by the government and all wages are paid out equally -Countries are often tightly controlled, the Stasi were the secret police within the Soviet Union and they had the power to arrest without trial -Classless society

1

The Truman Doctrine - 12th March 1947

The Truman Doctrine was an American foreign policy created with the aim of countering Soviet geopolitical expansion. Announced to congress by President Harry S. Truman, the doctrine alleged that communist totalitarian regimes represented a significant threat to international peace. As a result, American support would be provided to countries threatened by Soviet communism.

2

Berlin Blockade

On June 24, 1948, the Soviet Union placed a blockade around West Berlin, a major city in Germany that was under control of the Allied powers. This meant that the Soviet Union blocked all the roads, trains, and waterways into that part of the city. Those in West Berlin could not get food or fuel.

3

The Vietnam War - 1st November 1955 – 30th April 1975

Vietnam was split – the North (backed Soviet Union) and South (backed by USA) engaged in a war lasting over 19 years. It also developed the Laotian and Cambodian Civil Wars, and resulted in all 3 states becoming Communist. It was an extremely deadly war, with around 2 million innocent civilians believed to have perished.

4

The Space Race

The USA and USSR intensified competition for spaceflight superiority. The race had origins in the nuclear arms race, in that successes demonstrated technological strength. USSR completed the first manned spaceflight, whilst USA were the first to send man to the moon.

5

Key words	Definition
Cold War	The Cold War was a long period of tension between the democracies of the Western World and the communist countries of Eastern Europe.
Ideologies	A collection of ideas or beliefs shared by a group of people.
Tyranny	An act or the pattern of harsh, cruel, and unfair control over other people.
Communism	Communism is a type of government as well as an economic system. In a Communist system, individual people do not own land, factories, or machinery. Instead, the government or the whole community owns these things.
Capitalism	Capitalism is an economic system based on the private ownership of businesses, and their operation for profit.
Conflict	A conflict is a serious disagreement between individuals, groups of people or countries.
Containment	The act of containing; keeping something from spreading. In this context, containing the spread of Communism.
Alliances	A strong attachment to a particular country, or nation. It is also called patriotism.
Empire	A group of nations or peoples under one ruler or government.
Imperialism	A relationship in which people, groups, or countries agree to work together.
Soviet Union	a powerful group of Communist republics (= countries without a king or queen) including Russia, Belarus, Ukraine, Georgia, and 11 others that existed in Europe and Asia from 1922 to 1991

7

6

The Cuban Missile Crisis 16th – 28th October 1962

The missile crisis was a 13-day confrontation between the USA and the USSR. The USA initiated ballistic missile deployment in Italy and Turkey, whilst the USSR deployed missiles in Cuba. It is often considered the point at which the Cold War came closest to all-out nuclear war. After tense negotiations, missiles were dismantled.

Year 9 PD – Term 2B: Online Safety

Visit these sites for support:
www.childline.org.uk
www.ceop.police.uk/safety-centre

What is E-Safety?
It's the safe use of digital technologies like your phones, gaming and other devices which connect you to the outside world.

Useful websites for you and your parents:
http://www.safetynetkids.org.uk/
https://www.childnet.com/
https://www.thinkuknow.co.uk/
https://www.saferinternet.org.uk/
https://www.nspcc.org.uk/keeping-children-safe/online-safety/

Online Gaming:

There's a game out there for everyone. Some might prefer sporting games like FIFA and NBA. Others play adventure games such as Fortnite and Minecraft. Video games are arguably better than ever - because almost all of them allow you to play online with friends.
Did you know that there are over 2 billion gamers across the world? (Newzoo, Global Games Market Report, 2018). And these gamers aren't just wasting their time - the benefits of gaming include improvement of coordination, problem-solving skills and brain speed to name a few.

Gaming is more fun when people...
Treat others with respect
Play fairly and within the rules of the game
Keep personal information private
Make sure that content they're sharing is not racially, religiously or sexually offensive.

Chatting to other gamers can make it more fun too. It's likely that you'll chat to people that you've never met in real life. They might make you laugh, or give you great gaming tips. And it can feel like you know them well, especially if you voice chat with them through an app like Discord. But remember - it's easy for people to lie online, and some gamers might put pressure on you to do things you're not comfortable with.

www.thinkuknow.co.uk

Dealing with pressure online

Saying no
The people we talk to online can try to convince us to do things, even when we have said no. This might be one person you're chatting to online, or it could be lots of people. A tactic we see used in live streaming is encouraging young people to take part in dares, or offering them online gifts or 'game points' in exchange for doing something on video. Their requests can feel uncomfortable, such as asking you to chat one-to-one, asking for your personal information, or asking you to do sexual things such as taking your clothes off. If someone is asking you to do things online that don't feel right, stop and tell someone.

What does pressure look like online?
It can be difficult to spot manipulative behaviour in others, and it might not always be obvious when someone is putting you under pressure online. It might be lots of compliments and flattery, promising online gifts or coins, the promise of more followers, or bombarding you with lots of comments. This can make people feel like they need to do what they are being asked, even if they don't want to. Alternatively it might be something more obvious, such as someone saying that bad things will happen to you if you don't do what they're asking. These are all elements of pressure and blackmail and this is wrong.

www.thinkuknow.co.uk

Year 9 Art – Term 2B: Artist Focus – Still Life

Still life is one of the principal genres (subject types) of Western Art and the subject matter of a still life painting or sculpture is normally anything that does not move or is dead.

Still life (plural: *still* lifes) is a work of art depicting mostly inanimate subject matter, typically commonplace objects which are either natural (food, flowers, dead animals, plants, rocks, shells, etc.) or man-made (drinking glasses, books, vases, jewellery, coins, pipes, etc).

Still Life has been a theme for Art throughout history. Roman mosaics used still life themes to decorate their buildings. Van Gogh explored his painting and colour techniques by producing numerous versions of sunflowers. Patrick Caulfield produced simplistic still life screen prints and paintings using simple flat colours and bold line.

Key Words and Specialist Vocabulary:

Representation: The description or portrayal of someone or something in a particular way.

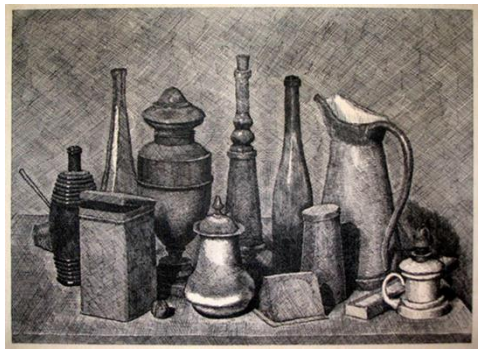
Study: A detailed investigation and analysis of a subject or situation.

Georgio Morandi 1890—1964

Morandi was an Italian painter and printmaker who specialized in still life. His paintings are noted for their tonal subtlety in depicting apparently simple subjects, and items that he readily had in his studio.

He repeatedly **painted** the same selection of familiar items, including bottles, bowls, pots and boxes. In his **paintings**, they lose their domestic purpose, to become sculptural objects that invite meditation and contemplation.

Through the repetitive process of reproducing these simple objects he was able to explore a variety of colour palettes, techniques, compositions, forms and perspectives



Why do Still Life?

Groups of objects have long been a favourite subject for artists and it is an excellent way to improve your observational skills through the study of your selected objects.

Produce your own still life group and see how many ways that you can reproduce them exploring different materials, lines, colours . See how realistic you can make your representation . Take photographs of your objects so you can explore more viewpoints or try and use the influence from another artist like Van Gogh or Caulfield.

Year 9 Computing – Term 2B: Web Design

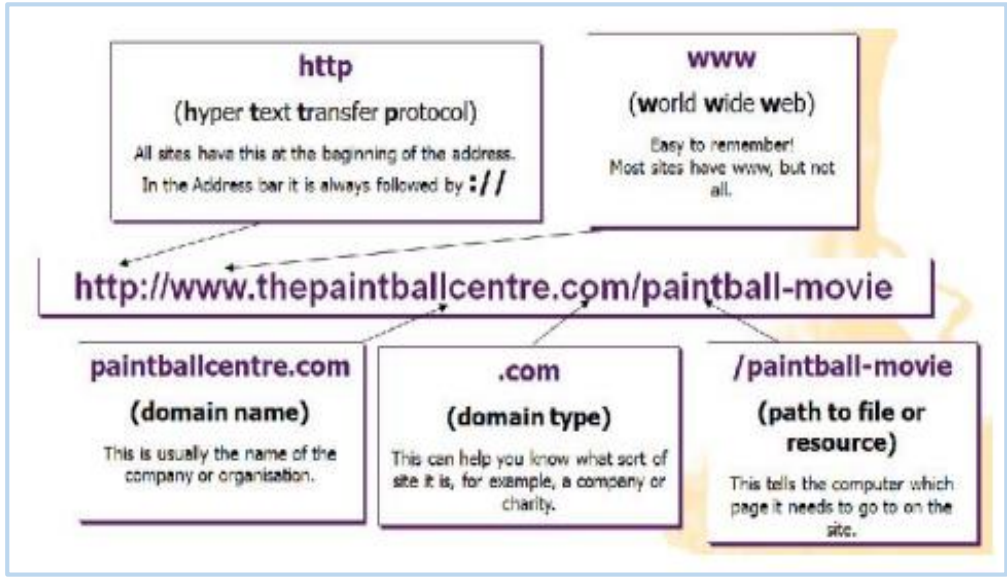
You will need to identify the different website design principles and why these are important when designing websites.

You will need to understand analyse the websites based on:

Tick either Yes or No for each of these questions:
Is the background colour consistent on each page?
Are the images clear and not distorted?
Is the text clear and easy to read?
Is the text all the same font and size?
Is the site easy to navigate?
Is the layout of each page the same?

Key Questions

Which website is the best?
Why is this website better?
Why is it important that the website is clear?
Who are these websites aimed at?



What is the World Wide Web?

The **internet** is a global network of computers. The **World Wide Web** is the part of the **internet** that can be accessed through **websites**. **Websites** consist of **webpages** which allow you to see information.

Websites are accessed using a **web browser**. A **browser** is a **program** designed to display the information held on a **website**. Every **website** has an address at which it can be found, a bit like a house address.

Domain Type	
.com	Company, could be anywhere in the world. US companies use this.
.co	Non-US company
.sch	School
.gov	Government
.edu	University
.ac	University or other academic institution, such as museums, art galleries etc.
.org	Organisation – charities and non-profit organisations often use this
.net	Network – but used very generally
.me	Personal

You will learn how to see if a website is trustworthy. Is the information out of date, is it fictional, is it from an unreliable source, does it have basic errors in it?

Considering your audience

Define your audience clearly
- For example, young or old!

What is the purpose of your website?
- To entertain or to inform?

How will this affect your design?

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.

Key Words

HTTP | DOMAIN | WWW | DOMAIN NAME | DOMAIN TYPE | CROP | DOCTOR | RELIABILITY | SOURCE | TRUSTWORTHY | ANNOTATE | SCREENSHOT | INFORMATION

Year 9 Design and Technology – Term 2B: Cam Toy

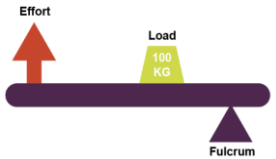
Tech Health and Safety

- Wear an APRON at ALL times.
- ALWAYS follow instructions and rules.
- Do not take shortcuts.
- Ask for help if you need it.
- When using machinery ALWAYS wear EYE PROTECTION & MACHINE GUARDS.
- Do not TOUCH machines or equipment unless you have permission.
- NEVER run in the workshop.

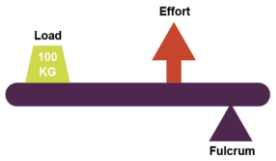
Scan the QR codes to watch a video about health and safety.

Key vocabulary	Definition
Isometric drawing	This is a form of 3D drawing, which is set out using 30-degree angles.
Linkage	Is the stored energy possessed by a system.
Lever	Plastic can be heated and shaped many times.
Equilibrium	High-density polyethylene, a thermoplastic.
Driver	Plastic that can not be reheated or remoulded.
Mechanism	Anything that can cause harm or danger.
Kinetic energy	Is the force which is faced by the vehicle as it moves through the air.
Revolution	Is the push that lets something move up.
Tolerance	The difference between the maximum and minimum dimensions of error.
Marking Out	Measure in mm and mark using a pencil and steel ruler for accuracy.

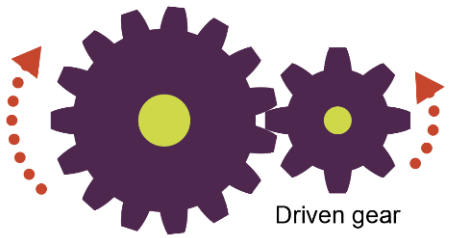
1st Order



2nd Order



3rd Order



Measuring

Materials are measured in different ways depending if they are small or large quantities. Here are some of our most used measurements and their abbreviation. Centimetres (cm) Millimetres (mm)
Angles are measured in Degrees, 90°

$$MA = \frac{\text{Load}}{\text{Effort}} = \frac{300N}{100N} = \frac{3}{1}$$

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Most used measurements
Centimetre = 10mm
cm x 10 = mm
Right Angles = 90°

Mechanisms in life and industry

Scan the QR codes to watch a video about Mechanisms in life and industry.

Product Analysis.

A product analysis is where we look at a product in greater detail and break it down to help us understand certain aspects of the product to help further generate design ideas.

Aesthetics: What does it look like?

Client: Who is it for?

Environment: How does it impact?

Safety: How safe is it?

Size: How big is it?

Function: What is it used for?

Material: What is it made from?

Design specification: is what your product must have in order to meet the clients needs.

Design brief: outlines what you are going to make.

Year 9 Drama – Term 2B: study of text and cultural context

Key terminology	Definition
Context	The background of a play-the social, historical and cultural events which surround it and help us understand it
Atmosphere	The mood and feeling created on stage for the audience
Performance skills	The vocal and physical acting skills we would use to convey a certain character, line or emotion
Interaction	How actors act and respond to others.
Interpretation	Our understanding of a character inferred from the play
Motivation	Is the reason a character does or says something. Connected with what they want.
Subtext	Is the deeper meaning behind lines. What is being implied rather than what is said
Cross cutting	Means to cut from one scene to another on stage
Spotlight	A tightly focused beam of light used to light small areas of the stage
Cyclorama	A screen at the back of the stage which can be lit or projected onto
Flats	Scenery that can be painted to represent any location
Rostra	A platform to raise an actor up. Can be built on to create different levels
Revolve	Stage that can move in a circle to reveal different scenes

Year 9 Food – Term 2B: Food safety/hygiene and carbohydrates

Food hygiene and safety

FATTOM is a mnemonic device that is used to describe the six aspects that contribute to the growth of foodborne pathogens.

Food - Microorganisms need a constant source of nutrients to survive. Moist, protein-rich food are potentially hazardous (meat, seafood, eggs, dairy, cooked rice).
Acidity - Bacteria grow best in a slightly acidic environment (pH 4.6 - 7.5).
Time - Food should not be in the temperature danger zone for more than two hours.
Temperature - Bacteria grow best between 5°C to 63°C the 'temperature danger zone'.
Oxygen - Almost all foodborne pathogens are aerobic, that is, requiring oxygen to survive and grow.
Moisture - Water is essential to bacterial growth. Microorganisms grow faster in foods that are moist and not dry (meat, dairy)

Scan the QR codes to watch a video about food safety and complete your homework quiz.

SCAN TO WATCH

SCAN FOR QUIZ

Key vocabulary	Definition
Aeration	Air is trapped in a mixture. Fat and sugar creamed together traps air.
Amino acids	The basic components of proteins, each has a specific function in the body.
Blind baking	Baking a pastry case without the filling to ensure it is properly baked.
Carbohydrate	A macronutrient that supplies energy and essential dietary fibre.
Fat	A macronutrient which supplies a concentrated source of energy (1g = 9kcals)
Obesity	Being very overweight. A body mass index of over 30 is classed as obese.
Protein	A macronutrient made up of building blocks called amino acids.
Roux	A mixture of melted fat and flour, which is used as a base of a sauce
Shortening	When fats give biscuits, shortbread and pastry a crumbly texture.
Symptom	Sign of an illness, e.g., food poisoning symptoms of diarrhoea/vomiting/nausea

Cooking term - Gelatinisation

Starch has a very useful property which is to thicken mixtures.
The process in which moist heat is applied to starch grains, which swell, increase in size and then break open. This releases amylose which thickens the mixture around boiling point.
Stirring is needed to prevent lumps forming.
Starches can be made to make sauces, custards, gravies, batters and glazes.

SCAN TO WATCH

Scan the QR codes to watch a video about gelatinisation and complete your homework quiz.

SCAN FOR QUIZ

Carbohydrates

Exist in many forms; they can be divided into three groups: sugars, starches and dietary fibre. Sugars are the simplest form of carbohydrate, starches and dietary fibre are more complex.
Examples of starchy carbohydrates are below.

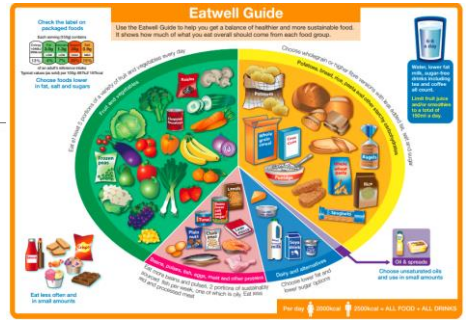
Scan the QR code to watch a video about this section of the Eatwell guide.

SCAN TO WATCH

Cooking term - Baking blind

A pastry base is baked prior to the filling being added.
· Pastry is rolled out.
· The baking tin is lined with pastry.
· Baking parchment placed on top for the baking beans to sit on.
· Even layer of baking beans added to prevent the pastry rising.
· Pastry is baked to seal before adding the filling.

Baking beans are ceramic so get very hot.
Baking blind prevents a soggy base.



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Year 9 Music – Term 2B: Music Technology

Key Information	Why it is Important	History	Composition
Digital music technology encompasses digital instruments, computers, electronic effects units, software, or digital audio equipment by a performer, composer, sound engineer, DJ, or record producer to produce, perform or record music. The term refers to electronic devices, instruments, computer hardware, and software used in performance, playback, recording, composition, mixing, analysis, and editing of music.	Almost every aspect of music creation is now reliant on music technology whether it be: - Composition - Production - Recording - Editing - Performance - Distribution - Consumption	'Analogue' music technologies such as tape recorders, analogue synthesizers and audio effects have been used since the 50s. In the 1960s, bands such as The Beatles began to experiment with this equipment, becoming reliant on it to achieve their desired sound. Now, multitrack recording and effects are commonplace in every studio.	Music technology is not just useful for studios and professionals, but it has opened up a world of possibilities for amateur and hobbyist musicians too. A whole generation of 'bedroom' producers emerged in the 2000s, some of them (such as Avicii) gaining success in the music industry. Technologies such as DAWs, virtual instruments and more powerful computers has meant that no longer is a fully-fledged recording studio needed for producing a record. Almost everything (including instruments!) can be contained inside a computer, in a piece of software called a Digital Audio Workstation (DAW).

Key Words			How to use bandlab
DAW	**Multitrack**	**Sample Rate**	
Effects	**Edit**	**Reverb**	
Processors	**Audio Interface**	**Delay**	
Digital	**Plug-In**	**EQ (Equalisation)**	
Analogue	**Virtual Instrument**	**Compression**	
Synthesizer	**MIDI**	**Mixing**	
Samples	**Bit-Depth**	**Master Bus**	

M	A	D	T	S	H	I	R	T
melody	**articulation**	**dynamics**	**texture**	**structure**	**harmony**	**instruments**	**rhythm**	**tempo**
the tune	how notes are played	loud / soft and any other volume changes	layers of sound and how they fit together	sections of music and how they are organised	chords used	types of instruments heard	the pattern of notes	the speed

Year 9 Physical Education – Term 2B: Methods of Training

Method	Description	Advantage	Disadvantage
Continuous (Recap Y8)	A minimum of 20 minutes sub-maximal work. Target **heart rate** range between 60% - 80% maximum heart rate (max HR).	Can be done with very simplistic activities like running, swimming etc. Minimum cost.	Can be very tedious. Over-training the same muscles can increase risk of injury.
Interval (Recap Y8)	Periods of intense work interspersed with timed rest. A wide variety of fitness types can be developed. Structured in reps and sets.	Intensity is measured by % max HR. Therefore, training very personalised to the athlete.	Maximal nature of intervals can be too challenging for some participants.
Circuit (Recap Y8)	This develops muscular endurance, strength and/or cardiovascular fitness. An interval form of training. Stations are set out that train one or more components of fitness.	Circuits can be designed so that they are sport-specific.	As circuits can be adapted to suit many sports, sometimes can lose focus on key areas to improve.
Fartlek	A continuous form of training. Changes in speed, incline and terrain are used to provide changes in exercise intensity.	**Aerobic** and **anaerobic** work can be done in the quantities that suit the performer.	Some urban areas have little variety of incline and terrain
Plyometric	High intensity exercise involving explosive movements. The muscle is lengthened and then rapidly shortened to develop the explosive capability of the muscle.	Very useful for developing power.	Can cause injury if athlete is not in excellent condition.
Weight	Intensity is measured in a percentage of the most weight a person can lift one time and is known as % 1 REP MAX. Time is structured in reps and sets with specific timings for recovery.	Huge range of possible lifts combining machines, free weights and body weight exercises.	many performers use poor technique while striving for an even heavier weight.

Year 9 Spanish – Term 2B: Free time

1

to play (a ball sport)		**jugar al** (the **el** needs to contract to **al**)	
football	**el fútbol**	badminton	**el bádminton**
hockey	**el hockey**	tennis	**el tenis**
basketball	**el baloncesto**	volleyball	**el voleibol**
cricket	**el cricket**	golf	**el golf**
table tennis	**el ping-pong**	netball	**el netball**
to do	**hacer**	to practise	**practicar**
judo	**el judo**	swimming	**la natación**
sailing	**la vela**	dance	**el baile**
boxing	**el boxeo**	gym	**la gimnasia**
windsurfing	**el windsurf**	skiing	**el esquí**
climbing	**la escalada**	cycling	**el ciclismo**
skateboarding	**el monopatín**	horse riding	**la equitación**
ice skating	**el patinaje sobre hielo**	skating	**el patinaje sobre ruedas**

to go shopping	**ir de compras**	to do shopping	**hacer las compras**
to go fishing	**ir de pesca**	to listen to music	**escuchar la música**
to dance	**bailar**	to sing	**cantar**
to cook	**cocinar**	to paint	**pintar**
to surf the web	**navegar por internet**	to play video games	**jugar los video juegos**
to chat Facebook	**chatear en Facebook**	to horse ride	**montar al caballo**
to watch TV	**ver la tele (visión)**	to ride a bike	**montar en bici**
to read a book/novel/magazine/newspaper		**leer un libro/una novela/una revista/un periódico**	

3 weather

it's good weather	**hace buen tiempo**
It is hot	**hace calor**
it's sunny	**hace sol**
it's snowing	**nieva**
it's bad weather	**hace mal tiempo**
it's cold	**hace frío**
it's windy	**hace viento**
it's raining	**llueve**
when	**cuando**

Example : ***Cuando llueve escucho la música en mi dormitorio pero el fin de semana si hace buen tiempo voy a ir al parque y voy a jugar al tenis con mi amigo.***
(When it rains I listen to music in my bedroom but at the weekend if the weather is good I am going to go to the park and I am going to play tennis with my friend.)

Year 9 Spanish – Term 2B: Free time

4 places

Voy a la playa=
I go to the beach.
Vamos al parque=
We go to the park.
(a+el > al)

swimming pool	**la piscina**	sports centre	**el polideportivo**
bowling alley	**la bolera**	cinema	**el cine**
cafe	**la cafetería**	restaurant	**el restaurante**
at home	**en casa**	in my room	**en mi dormitorio**
the museum	**el museo**	the beach	**la playa**
the park	**el parque**	the mountain	**la montaña**
the theme park	**el parque temático**	the stadium	**el estadio**

Did you know that if you add 'que' *(K)* to the verb tener = to have to +inf
Anoche <u>tuve que hacer</u> mis deberes
Last night <u>I had to do</u> my homework

5 opinions

I'm interested in	**me interesa(n)**	I'm into	**me mola(n)**
I'm facinated by	**me fascina(n)**	I like	**me chifla(n)**
I find it(them) masc	**lo(s) encuentro**	I found it(them)	**la(s) encontré**
I enjoy	**disfruto**	…bores me	**me aburre(n)**
I tend to+ INF	**suelo + INF**	…bugs me	**me molesta(n)**
it's the bomb	**lo paso bomba**	it was the bomb	**lo pasé bomba**
extraordinary	**extraordinari@**	disappointaing	**decepcionante**
marvellous	**maravillos@**	awful	**horroros@**
exciting	**emocionante**	ridiculous	**ridícul@**

6 music

to play (an instrument)		**tocar (un instrumento)**	
drums	**la batería**	piano	**el piano**
guitar	**la guitarra**	saxophone	**el saxofón**
trumpet	**la trompeta**	flute	**la flauta**
To download		**descargar**	
artist	**artista**	A song	**Una canción**
singer	**cantante**	group	**Un grupo**
classical music	**la música clásica**	Rock music	**la música rock**

Notes

Notes

Notes

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