Year 9
Term 2B

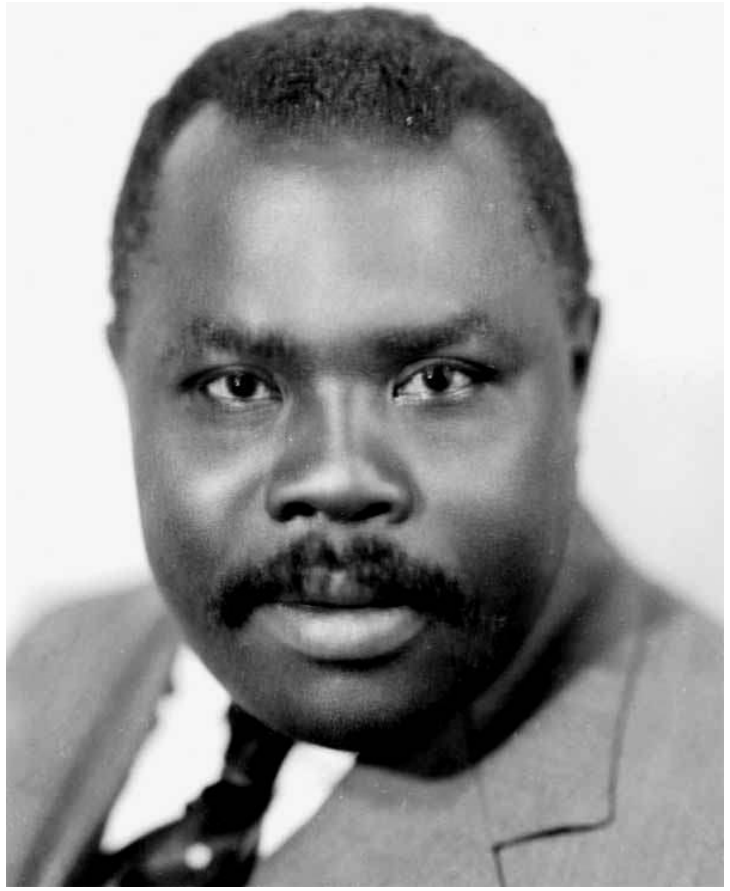
Name _____

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

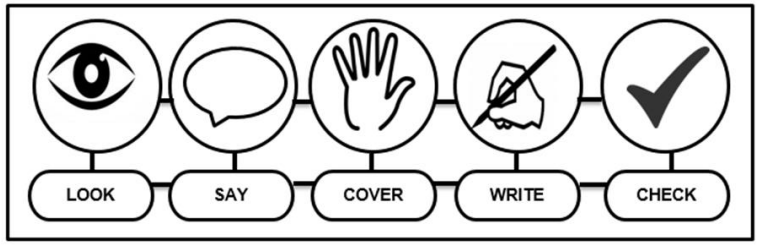
Instructions for using your Knowledge Organiser

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 Religious Education – Term 2B; Desert to Garden

Big Questions:

- Why is the Sinai covenant important?
- What does it mean to say 'Jesus is the New Covenant'?
- What do Christians believe about justice and forgiveness?

Sources of Wisdom and Authority (SOWAA)
'behold the blood of the covenant that the Lord has made with you…' exodus 24:8
'when Christ appeared as a high priest of the good things that have come…..he entered once for all into the holy places….by means of his own blood…securing an eternal redemption' Hebrews 9
The Catechism teaches that Jesus' body is the true temple 'the place where God's glory dwells'
Jesus cried out in a loud voice and yielding up his spirit. And behold the curtain of the temple was torn in two…' Matthew 27:50
'Lamb of God who takes away the sins of the world have mercy upon us' – said in Mass
'Behold the lamb of God who takes away the sins of the world' John 1:29
Forgive us our trespasses (sins) as we forgive those who trespass (sin) against us – the Our Father

1) We know from last year that God made a covenant with Moses on Mount Sinai. For the Jewish people the temple in Jerusalem was a very important place where they could worship God. At that time sacrifice was a common way of worshipping God. The most special place in the Temple was the 'Holy of Holies' – only the High Priest was allowed in there. This was where God's presence was.

2).Christians believe that Jesus is the new covenant – the new promise from God to his people. The book of Hebrews in the New Testament explains how Jesus' life death and resurrection has now taken over from the Sinai covenant and the old rituals of sacrifice. Jesus is often referred to as the Lamb of God – he is the sacrifice for our sins. We are saved from sin and death through the 'mystery of redemption'.

3) Christians believe that we should work for peace and justice Forgiveness is very important to Christians – but it can be very difficult to forgive. Some people would say that certain actions are unforgiveable.

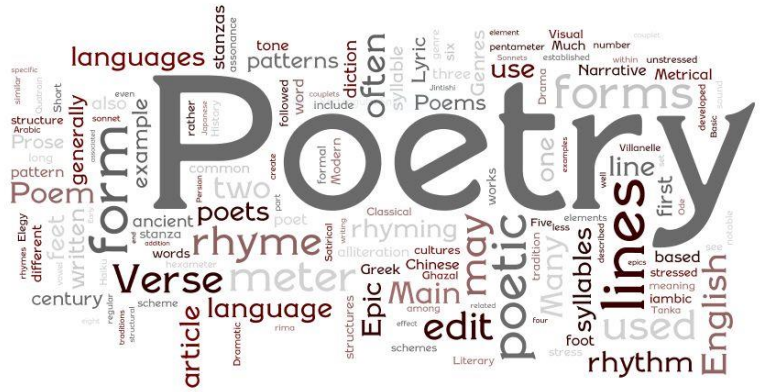
Key words	Definition
Covenant	A promise between God and his people
Sinai covenant	The covenant between God and Moses on Mount Sinai
Temple 	The main building for worship in Jerusalem; it was destroyed a long time ago
Holy of Holies	The most sacred room in the old temple in Jerusalem, where God's presence rests
High priest	The chief priest in the old Jewish Temple in Jerusalem
Mystery of redemption	The divine (from God) process of salvation (being saved)
Grace 	God's love for us even though we don't always deserve it
Atonement	Making amends for sins; making things right with God
salvation 	Being saved – we are saved from sin and death through the death and resurrection of Jesus
sanctification	Making holy

w/b 24/02	Key words & definitions	w/b 17/03	SOWAA 2, 3, 4,5 6 (blue)
w/b 03/03	Section 1 (red) & SOWAA 1 (red)	w/b 24/03	Section 3 & SOWAA 7 (purple)
w/b 10/03	Section 2(blue)	look say cover write check	

Year 9 English Term 2B: War Poetry

Task 1a: Learn the definitions of these poetic terms

Poetic language	Meaning
Simile	A comparison made using the words "like" or "as."
Metaphor	A comparison – made directly or indirectly – without using "like" or "as."
Personification	Giving human characteristics to something which is not human.
Onomatopoeia	Words which attempt to imitate sounds.
Alliteration	A repetition of consonant sounds.
Plosive	"b," "p," "t" and "d" sounds – which can be harsh, aggressive or shocking.
Sibilance	Repeated "S" sounds – most often caused by "s" "ss" and "c." These can be harsh, smooth or sickly.
Assonance	A repetition of vowel sounds.
Anaphora	A repetition of words, phrases or clauses.
Juxtaposition	Two things being placed close together for contrasting effect.
Oxymoron	A figure of speech in which two contradictory things are placed together in a way which makes peculiar sense. For example, "friendly fire."
Semantic field	A set of words relating to the same topic. "Foul" and "Shot" would appear in the semantic field of sports.
Antithesis	Placing contrasting ideas together.



Task 2: Learn the definitions of these poetic terms.

Poetic structures and forms	Meaning
Rhyme	The repetition of syllable sounds – usually at the ends of lines, but sometimes in the middle of a line (called internal rhyme).
Couplet	A pair of rhyming lines which follow on from one another.
Stanza	A group of lines separated from others in a poem.
Enjambment	The running over of a sentence from one line to the next without a piece of punctuation at the end of the line.
Caesura	A stop or a pause in a line of poetry – usually caused by punctuation.
Blank verse	Poetry written in non-rhyming, ten syllable lines.
Dramatic monologue	A poem in which an imagined speaker address the reader.

Year 9 English Term 2B: War Poetry

Task 3: Complete the definitions and learn the spelling and meaning of the words.	
Vocabulary	**Definition**
Agitated	
Angst	
Ardent	
Fatigue	
Ghastly	
Patriotic	
Propaganda	
Solemn	
Vengeance	
Writhing	

Year 9 Maths- Term 2B : Ratio and Proportion and graphs

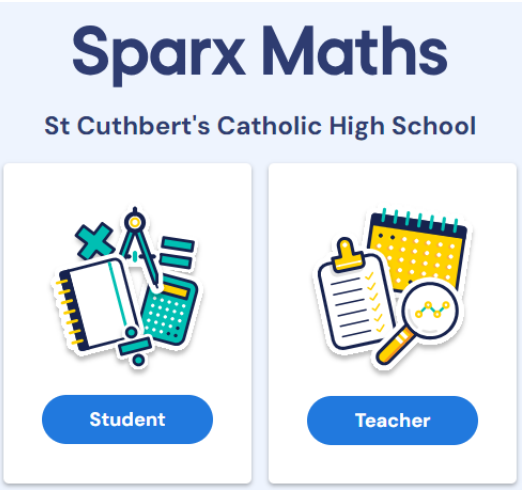
All Maths homework is set online through **Sparx Maths**. Set and due in every **Wednesday at 8am**.

Use the QR code on the right to access the site or go to www.sparxmaths.uk and choose student.

To log in, use your school email address and the password you use to access the school computers.
e.g. Joe Bloggs 22BloggsJ@stcuthberts.com

We have chosen to use Sparx Maths as

- The homework is personalised to you.
- Sparx Maths keeps learning from your attempts to create challenging yet achievable questions each week.
- It is proven to improve students grades in Maths.
- There are support videos for each question, if needed.
- It provides your teachers with lots of insights about which topics you need more help with.
- It has consolidation questions each week to help you remember more.
- Because homework is made specifically for you, you will be able to answer every question correctly, but
  - ❑ some questions may take slightly longer than others
  - ❑ some questions will probably need more than one try to get it right.



Year 9 Maths- Term 2B : Ratio and proportion and graphs

Use your Knowledge organiser book to write down your question number, working out and answers. This will help you to pass your bookwork checks so that you will get fewer.

Compulsory personalised homework is set and due in each week on a **Wednesday at 8am**, this includes questions on topics you have recently covered in class, consolidation work and times tables. If you complete it by Monday 8am you will earn extra class charts points!

Compulsory

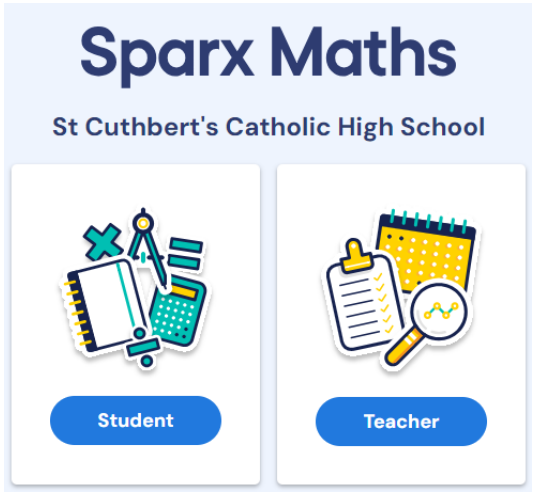
XP Boost

Target

Independent Learning

Sparx produces three personalised task for your each week. Two are optional.

- After you finish your **Compulsory** homework, refine your skills by completing similar problems in **XP Boost**
- Further enhance your skills by completing the **Target** work which is a set of six questions chosen specifically to challenge you
- You can also complete **Independent Learning** to support you further. You choose the level for this.



IF YOU DO NOT HAVE ACCESS TO A PHONE, COMPUTER, LAPTOP, TABLET COME TO THE SPARX LUNCH CLUB TUESDAY (A Week) or MONDAY (B week) TO COMPLETE YOUR HOMEWORK

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.

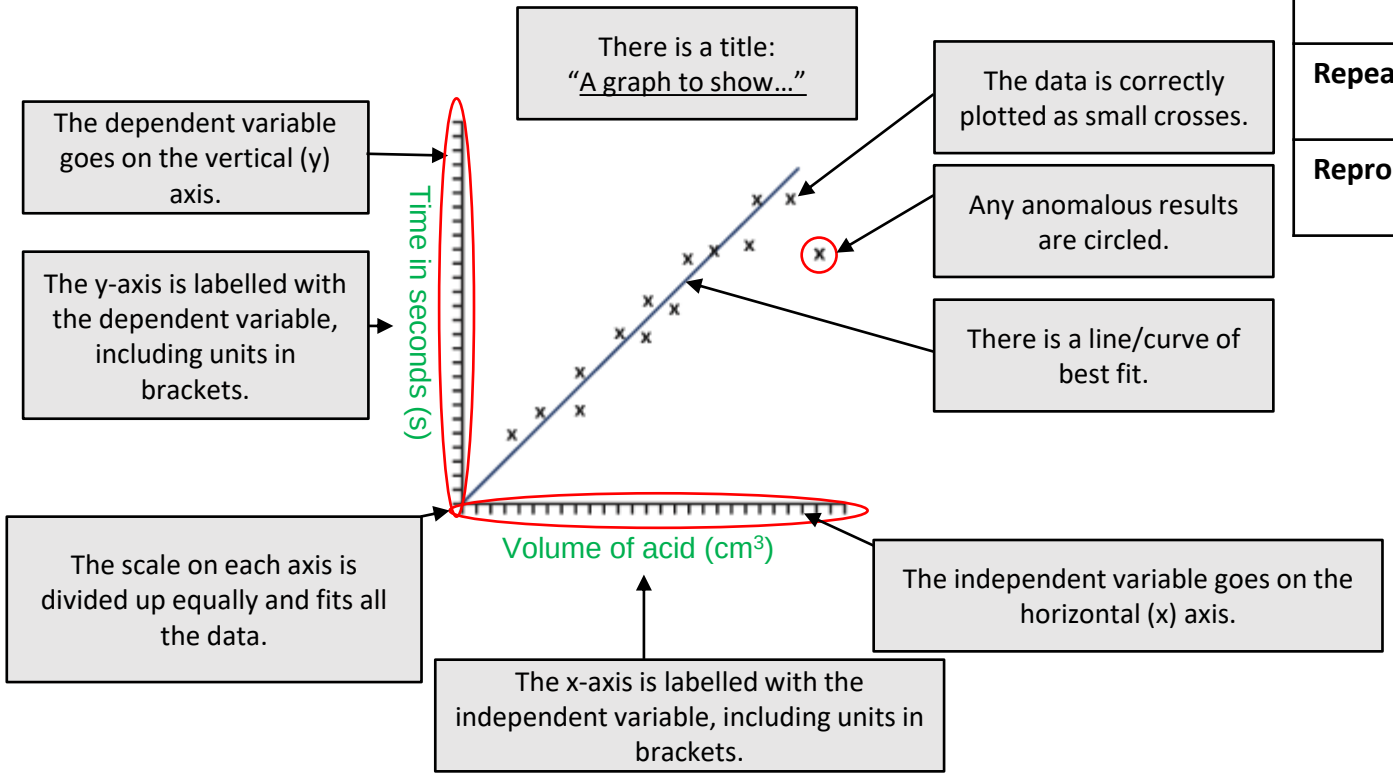
The diagram above shows you examples of accuracy and precision on a dart board.

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 Geography - Term 2B What is climate change and how is it influencing the Earth's future?

Key Words

- **Climate change:** A long- term change in the Earth's climate, especially a change due to an increase in the average atmospheric temperature.
- **Greenhouse effect:** Natural warming of the atmosphere as heat given off from the Earth is absorbed by liquids and gases, such as carbon dioxide.

Causes of climate change:

Greenhouse gasses lead to climate change. They act like a blanket around the Earth, trapping the heat and keeping the planet warm. They let the sunlight shine onto the earths surface but trap the heat that is reflected back up into the atmosphere. This keeps the Earth warm enough to sustain life but its effect is increasing as more gasses are being created.

Natural causes:

Greenhouse gas is any gas in the atmosphere that takes in or absorbs the heat produced by the sun. They include:

- **Carbon dioxide:** Emitted by volcanoes when they erupt, also emitted by soil and vegetation.
- **Methane:** Is released in low oxygen environments such as swamps and bogs and through the roots of some plants.
- **Nitrous oxide**
- **Water Vapour:** is the most abundant, it occurs as part of the water cycle.

2

Human causes:

Gases such as chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs) are human-made. Human activity is increasing the natural levels of these gases it is making the greenhouse 'blanket' thicker.

Power stations, factories, homes and cars burn fossil fuels. This releases large amounts of carbon dioxide into the atmosphere. Cutting and burning of forests also contributes by reducing the earth's ability to 'clean' the air by turning carbon dioxide into oxygen.

2

How can we combat climate change?

5

Action to tackle climate change requires interna agreement and effort as the scale of the issue is global.

The Paris climate agreement in 2016 set forward 7 key points to try and reduce climate change. These were approved by 195 countries and will take effect from 2020.

The 13th international sustainable development goal is climate action.

Consequences for the UK.

- **Severe water shortages:** Are expected as summers get drier. Increasing demand for water 2.5 times greater than what is available!
- **Flooding**: Number of households at risk of flooding will more than double to 1.9 million by 2050 if global temperature rises by 4°c.
- **Sea level rise:** Cause greater coastal erosion.
- **Heatwaves:** Heatwave of 2003 that peaked at 38.5°c will become a normal summer by the 2040's and related deaths will more than triple.
- **Increase in food prices:** Extreme weather can lead to lost crops and price spikes. The UK imports 40% of its food making it vulnerable to weather conditions aboard.

4

Consequences of climate change

- **Change in temperature**: Some areas are predicted to get between 5 and 10°c warmer by 2100.
- **Change in precipitation**: Some area predicted to get an extra 2mm of rainfall per day, whilst some areas will get a 2mm reduction.
- **Increase in extreme weather events**: Including flash floods and droughts.
- **Increase in frequency and severity of hurricanes and cyclones.**
- **Reduction of glacial ice:** leading to flooding land and reduction in natural storage of fresh water.
- **Sea level rise:** Leading to flooding of coastal areas and land being lost to the sea.
- **Impacts on human health:** Increases chance of heat stroke in more areas.
- **Disrupting harvest cycles:** Leading to possible famine and undernourishment.

3

A Warming world

The data collected by meteorologists and other scientists shows that the average temperature of the planet is rising . It has increased an average of 0.8°c in the past 100 years. 16 of the 17 warmest years have been since 2001. The warmest year was 2016.

This has led to a decrease in the size of the world's glaciers, ice sheets, snow cover and permafrost. Arctic sea ice has decreased 4% (0.6 million kilometres sq) since the late 1970's.

1

The world's oceans are heating up as they absorb the extra heat. More than 90% of the warming that has happened during the past 50 years has gone into the oceans. Water expands as it warms, leading to sea level rise. Ice melting also adds to the increase – this has led to a rise of between 10 and 20 cm in the past 100 years.

Temperature increase leads to an increase in evaporation and in turn global rainfall. This can lead to greater flood risks.

Year 9 History – Term 2B: The Cold War

Capitalism 1	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

The Truman Doctrine - 12th March 1947 2

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.

Berlin Blockade 3

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.

The Vietnam War - 1st November 1955 – 30th April 1975 4

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.

The Space Race 5

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.

Key words	Definition 7
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

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.

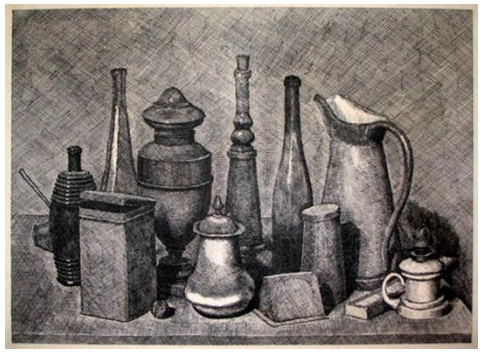
Study: A detailed investigation and analysis of a subject or situation.

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: "I am a Network Engineer"

Local Area Networks

What is a Computer Network?

Two or more computers connected together to share information and resources. This can involve physical or wireless connections, or both.

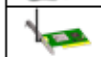
What is a LAN?

A LAN is a Local Area Network. It is a connected set of computers and other devices. Each device is called a node (e.g. computer, printer, etc.). A LAN is installed on one site, over a small geographical area and the network equipment will be owned by the organisation.

Advantages & Disadvantages of Networking Computers

Advantages	Disadvantages
-It allows communication between workers or students -It allows data to be shared -It allows peripherals (e.g. printers) to be shared -It allows computers to be upgraded more easily -It allows distributed processing: the ability for a single program to be run simultaneously at various computers.	-Expertise required to set up and maintain a large network (costly) -Security issues from unauthorised access to data -Measures to secure a network include: *Passwords – strong passwords use a range of character types* *Changing passwords frequently* *Not allowing users to install software* *With wireless access, use encryption*

Devices of a LAN

Image	Equipment
	At least two computers (Nodes)
	Each computer needs a Network Interface Card (either wired or wireless). The NICs convert the data signals from the nodes into data signals that can be transferred across the network.
	Data Transfer Media – the medium through which data is transferred (Wires or Wireless Technology)
	Hub – Connects devices together. Not intelligent – data is sent to all nodes across the whole of the network.
	Switch – Connects devices together. An intelligent device that can sends data to the nodes that the data is intended for, which makes networks faster. *A LAN needs either a hub or a switch, not both.*

Wide Area Networks

A Wide Area Network (WAN) covers a large geographical area – may even be worldwide. Some of the devices in this network may be provided by telecom companies, such as phone lines and satellites.

The Internet

The biggest WAN in the world is 'The internet'. It is a massive network of networks. A ginormous collection of connected computers.

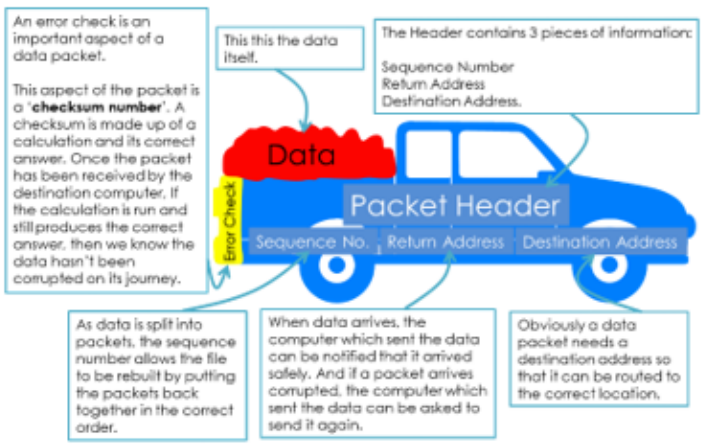
Key Vocabulary

Key Word	*Definition*
Network	Two or more computers connected together to share data and devices
LAN	A network over a small (local) area (building or site)
Network Interface Card	A piece of hardware which converts computer signals into a form that can be sent over a network (and convert them back when network data is received)
Switch	A device which passes networked data to the correct nodes
Data Packets	These are created from the splitting up of a file when data is sent across the internet. It is reassembled at the receivers' end to reform the file.
WAN	A network over a large (wide) area (town, country, the world)
Internet	The largest WAN – A network of networks spanning the world
Internet Protocol Address	The unique address of a website or computer (written in digits)
Internet Service Provider	The company that provides your connection to the internet.
Uniform Resource Locator	The technical term for a web address.
Domain Name Server	Like a "telephone directory" of the internet's websites.

Data Packets

When files are sent across a network, they are split into millions of data packets. Packets get sent by different routes according to availability so therefore some parts of the file might travel one way around the world and other parts may go in the opposite direction! Packets are reassembled at receiving end.

Data Packet Structure



IP Addresses, ISPs, URLs and DNS

There are many acronyms to understand, when studying how the internet works.

Acronym	Description
IP Address	This means INTERNET PROTOCAL ADDRESS. It is a unique number given to every computer on the internet – no two computers can have the same address. E.g. 109.62.187.112. It's just like a postal address – used to identify a house – no two houses have the same address!
ISP	This means INTERNET SERVICE PROVIDER. This is simply the company who provide you with your internet connection. (e.g. BT or Sky)
URL	This means UNIFORM RESOURCE LOCATOR. This is simply a fancy name for a web address, such as: http://www.bbc.co.uk http://www.google.com
DNS	This means DOMAIN NAME SYSTEM. This is the system used to find the computer which hosts the website you are looking for.

How does DNS work?

1. Computers can only connect to other computers if they know their IP address. However, humans can't easily remember IP addresses!
2. So, when we want our computer to connect to a website (e.g. BBC website), instead of typing in the BBC's IP address, we type in the BBC's website URL.
3. The URL is sent to our ISP (internet service provider) and they look up the URL in their DNS 'address book'. They find it and send back the website's IP address.
4. Now our computer can communicate with the BBC website computer (which hosts the website on the internet), directly.

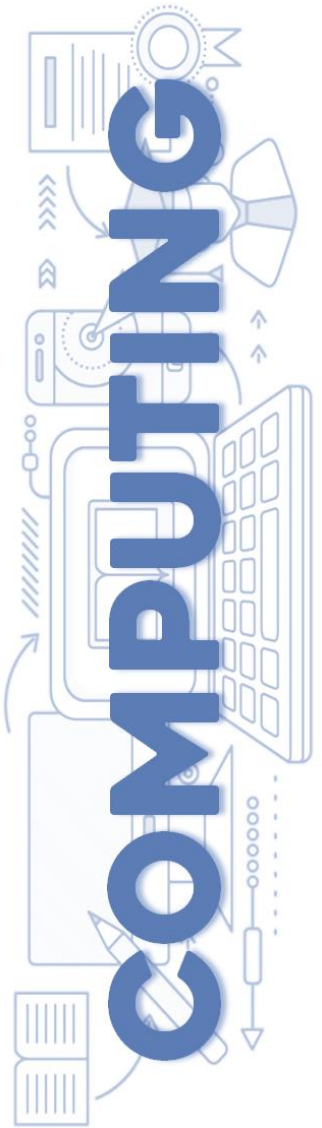
Network Threats & Preventions

Threats

Threat	Description
Malware	Malware is 'Malicious Software'. Examples of malware are viruses, spyware, adware and scareware. Whereas viruses aim to damage the computer system, spyware, adware and scareware all target the user.
Phishing	Phishing seeks to acquire sensitive information about a user such as their usernames, passwords, bank details etc. The way in which this is done is usually through the form of direct electronic communications (emails / phone calls). These emails or phone calls try to impersonate legitimate companies (such as banks) and ask you to give away sensitive information.
Brute Force Attacks	A Brute Force Attack is were criminals will use trial and error to hack an account by trying thousands of different possible passwords against a particular username.
Denial of Service	This method seeks to bring down websites by using up the web server's resources. This is done by acquiring multiply computers (often through malware) to repeatedly try to access (or log into) a website.

Preventions

Prevention	Description
Penetration Testing	'Penetration Testing' is where a company will invite / employ experts to try to simulate a range of network attacks such as Denial of Service attacks (DoS), SQL Injections and Brute Force Attacks.
Anti-Malware	Anti-malware software is dedicated to finding and destroying malware files.
Firewalls	When files are sent across the internet, they are broken down into small packets of data. The part of the computer which receives these packets is made up of 256 ports (you can think of these ports like a country's ports, which manage people in and out of the country). A firewall monitors the data which flows through the ports.
Passwords	Passwords are in place to ensure that a network has no unauthorised access. As seen before, it is important that passwords are strong (long and with a combination of alpha and numeric characters) so that they are harder to crack under a Brute Force Attack.
Encryption	Encryption is where data is scrambled before being sent across a network so that it is unreadable if intercepted.



DESIGN & TECHNOLOGY KNOWLEDGE ORGANISER

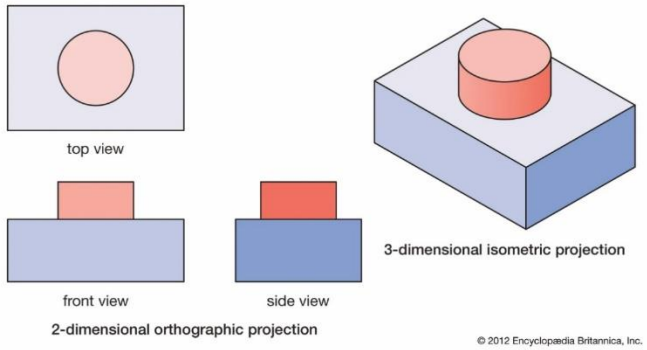
YEAR 9 TERM 2B

KEYWORDS FOR TERM 2B

Orthographic	Involves asking questions, collecting information, and analysing data to find answers or make discoveries.
Specification	A detailed description of the design and materials used to make something.
Brief	A short description of what is being made.
Evaluate	The judgement about something.
Moodboard	A visual collection of images that designers use for inspiration.
Thumbnail	A quick drawing that helps designers plan their product.

ORTHOGRAPHIC PROJECTION

Orthographic and isometric projections of an object



AN ORTHOGRAPHIC PROJECTION IS USED IN TECHNICAL DRAWING TO REPRESENT A 3D OBJECT ON A 2D PIECE OF PAPER. ORTHOGRAPHIC PROJECTIONS ARE USED IN ENGINEERING AND DESIGN JOBS.

SCAN TO OPEN YOUTUBE

THE FOLLOWING VIDEO SHOWS HOW TO DRAW ORTHOGRAPHIC PROJECTIONS.

YOU WILL USE THIS TECHNIQUE LATER IN THE TERM FOR YOUR KAT. WATCH THE VIDEO AND REFRESH YOUR MEMORY, YOU CAN PRACTICE THE DRAWING AT HOME.

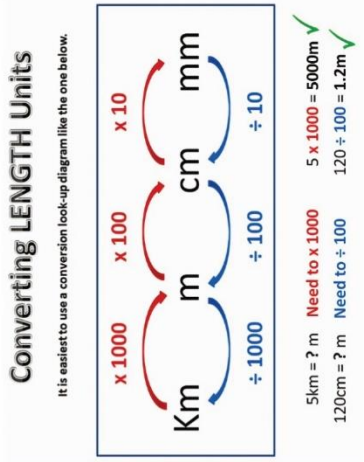
SCAN TO OPEN YOUTUBE

THE FOLLOWING VIDEO IS A LINK TO RUDYARD KIPLING'S POEM "SIX HONEST SERVING MEN" FROM THIS POEM WE GET THE SIX QUESTIONS THAT DESIGNERS NEED TO ASK WHEN CREATING A NEW DESIGN.

WHO WHAT WHY WHEN WHERE HOW

- **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**

CONVERTING MEASUREMENTS



DESIGNERS FOR YEAR 9

Sir Alec Issigonis

Ettore Sottsass

Mary Quant

Coco Chanel

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

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

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

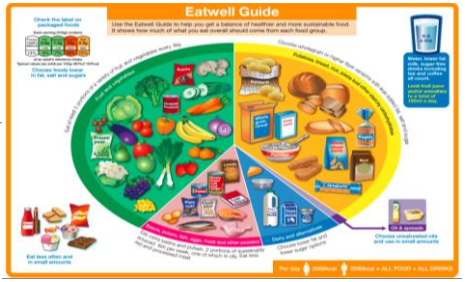
Exist in many forms; they can be divided into three groups: sugars, starches and dietary fibre. Sugars are the simplest form of carbohydrate, starches and dietary fibre are more complex.
Examples of starchy carbohydrates are below.
Scan the QR code to watch a video about this section of the Eatwell guide.

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.



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**

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Notes

Notes

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