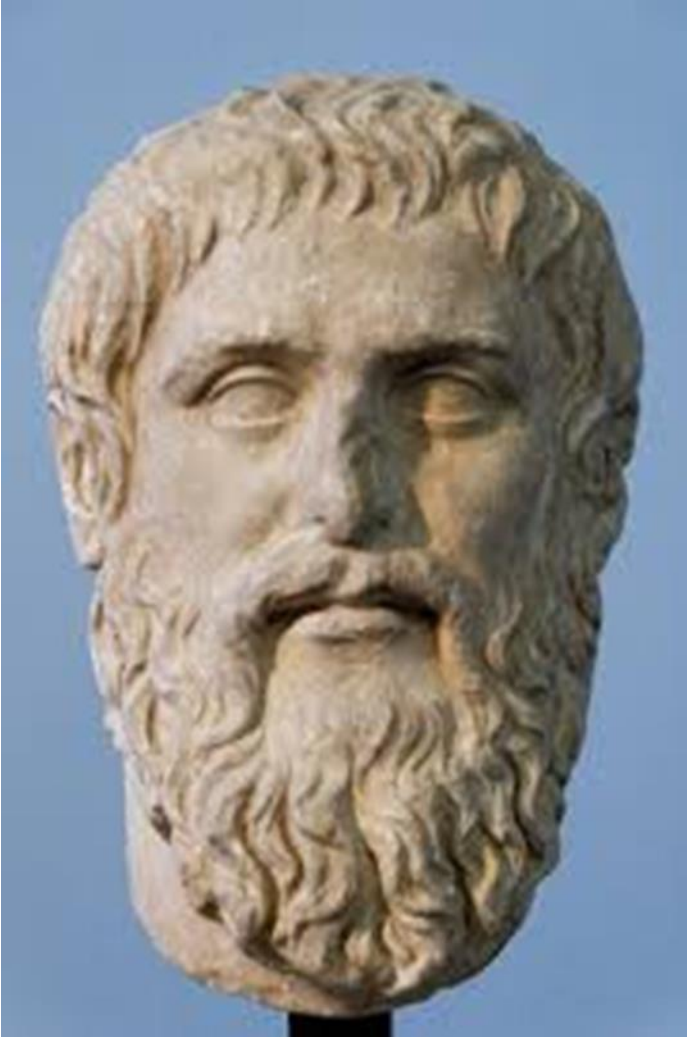


# Knowledge



Name \_\_\_\_\_

Form \_\_\_\_\_



**“ Knowledge is true opinion.”**

Plato

*(research 10 facts about Plato)*

**Year 9  
Knowledge Organiser: Term 1B**

# 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										
Week 7										
Week 8										



# Year 9 English - Term 1B: Gothic Literature

## Subject Specific vocabulary

### Task 1: Learn the spelling and definitions of the following terms.

Appositive	<b>Noun or noun phrase</b> that provides extra information or further identifies another noun/noun phrase.
Epithet	An <b>adjective or phrase</b> describing a characteristic of the person/thing described e.g. the wine-dark sea.
Juxtaposition	The fact of two things being seen or placed close together with contrasting effect.
Protagonist	One of the major characters in a narrative.
Exposition	The opening of a story, introducing characters, setting and plot.
Climax	The most intense, exciting, or important point of a narrative.
Denouement	The solution of a mystery, the winding up of a plot, the outcome of a set of events.

### Task 2: Learn the spelling and definitions of the following terms

Rhetoric	Language designed to have a persuasive or impressive effect.
Metaphor	Language that transports meaning from one 'place' to another. E.g. Juliet is the sun.
Ground	The relationship between the tenor and the vehicle. E.g. 'Juliet is the sun.' Both are bright/warm.
Tenor	The subject of a metaphor. E.g., 'Juliet is the sun,' Juliet is the tenor.
Vehicle	The imagery used to describe the tenor. E.g. 'Juliet is the sun,' The sun is the vehicle.
Sonnet	A poem of <u>fourteen</u> lines using any of a number of formal <u>rhyme</u> schemes, typically having ten <u>syllables</u> per line.



# Year 9 English - Term 1B: Gothic Literature

**Task 3: Complete the definitions and learn the spelling and meaning of the words.**

<b>Vocabulary</b>	<b>Definition</b>
Blasphemy	
Convulsive	
Dissident	
Lustrous	
Pervaded	
Poignant	
Prodigious	
Malevolent	
Ostracised	
Redemption	
Remarkable	
Solitude	



# Year 9 Maths- Term 1B : Inequalities, Quadratic Equations, Formulae, Constructions and Circles

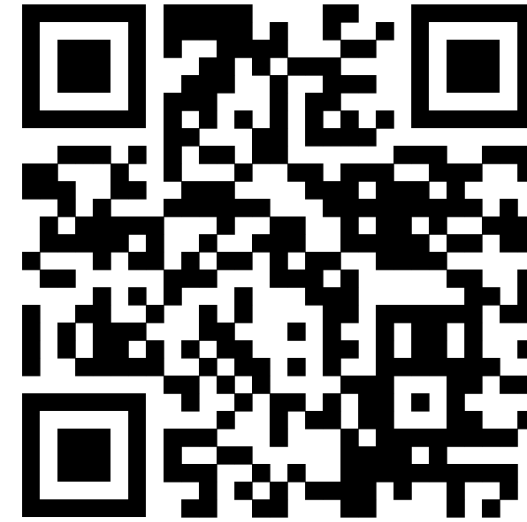
All Maths homework is set online through **Sparx Maths**. Set and due in every **Wednesday at 8am**.

Use the QR code on the right to access the site or go to [www.sparxmaths.uk](http://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.



**Sparx Maths**  
St Cuthbert's Catholic High School

 Student

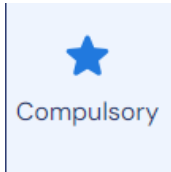
 Teacher

The image shows a digital interface for Sparx Maths. At the top, it says 'Sparx Maths' in a large blue font, with 'St Cuthbert's Catholic High School' underneath. Below this are two buttons: 'Student' and 'Teacher'. Each button has a corresponding icon: a notebook and calculator for 'Student', and a checklist and magnifying glass for 'Teacher'.



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

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



XP Boost

- After you finish your **Compulsory** homework, refine your skills by completing similar problems in **XP Boost**



Target

- Further enhance your skills by completing the **Target** work which is a set of six questions chosen specifically to challenge you



Independent Learning

- You can also complete **Independent Learning** to support you further. You choose the level for this.



## Sparx Maths

St Cuthbert's Catholic High School



Student



Teacher

IF YOU DO NOT HAVE ACCESS TO A PHONE, COMPUTER, LAPTOP, TABLET COME TO THE SPARX CLUB TUESDAY LUNCH TO COMPLETE YOUR HOMEWORK



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

# Year 9 Science – Term 1B

## Reactions: Metals + acids

General equation: Metal + Acid → Salt + hydrogen gas  
 Example (words): Lead + Hydrochloric acid → Lead chloride + Hydrogen  
 Observation (What you see): Bubbles / Fizzing

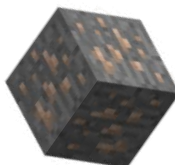
## Reactions: Metals + Oxygen

General equation: Metal + Oxygen → Metal oxide  
 Example (words): Calcium + Oxygen → Calcium Oxide  
 Example (symbol):  $2\text{Ca}_{(s)} + \text{O}_{2(g)} \rightarrow 2\text{CaO}_{(s)}$   
 Observation (What you see): Metals with oxide layers can be dull and when reacting with oxygen they can glow bright and give off heat.



## Reactions: Metals + Water

General equation: Metal + Water → Metal hydroxide + hydrogen gas  
 Example (words): Sodium + Water → Sodium Hydroxide + Hydrogen  
 Example (symbol):  $2\text{Na}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow 2\text{NaOH}_{(aq)} + \text{H}_{2(g)}$   
 Observation (What you see): Bubbles / Fizzing

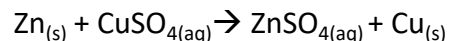


## Displacement reactions

Using the **reactivity series** a more reactive metal will **displace** a less reactive metals from their compounds.

Example (words) / (symbol):

Zinc + Copper sulphate → Zinc sulphate + Copper



Observation (What you see): Iron metal forming  
 A reaction with a less reactive metal will not work.

Example: Thermite reaction mixes 2 powders and heating them strongly. It is a very exothermic reaction.



States of matter

(s) = A solid  
 (l) = A liquid  
 (g) = A gas  
 (aq) = Aqueous  
 (dissolved in water)

When metals react they do so differently. The nearer the top of the reactivity series the more reactive they are.

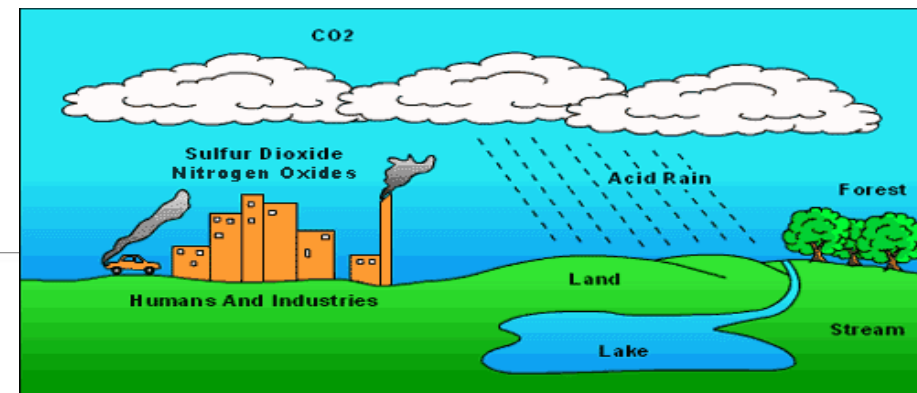
Pretty / Jewellery = Bottom  
 Old fashioned / traditional = Middle  
 -ium = Top

## Reactivity series

REACTIVE  
 Potassium  
 Sodium  
 Lithium  
 Calcium  
 Magnesium  
 Aluminium  
**Carbon**  
 Zinc  
 Iron  
 Lead  
**Hydrogen**  
 Copper  
 Silver  
 Gold  
 UNREACTIVE

## Key Words

Alkali metal	Highly reactive group 1 metals
Alloy	A mixture of two or more elements where at least one is a metal
Chemical property	a characteristic of a particular substance that can be observed in a <b>chemical</b> reaction
Diatomic	Consisting of 2 atoms
Displacement reaction	A more reactive metal displacing a less reactive metal from it's compound
Group	A column of elements on the periodic table
Halogen	Group 7 element
Inert	An element that is unreactive
Ore	A naturally occurring rock that contains metal
Oxidation	The loss of electrons
Period	A row of elements on the periodic table



Acid Rain



# Year 9 Science – Term 1B

**Alkali metals** – all are soft, shiny, low density metals that conduct heat and electricity. They are highly reactive losing their 1 outer electron to form a 1+ ion with non-metals. The alkali metals react with oxygen, water and halogens

**Trends going down Group 1**

1. Reactivity increases
2. Density increases
3. melting and boiling points decrease
4. Atomic radius increases

**Halogens** – The halogens exist as diatomic **molecules**. Each molecule contains two halogen **atoms** joined by a single **covalent bond**. they have 7 electrons in their outer shell meaning they gain an outer electron to form 1-ions. The halogens react with metals to produce **salts** (the word 'halogen' means 'salt former'). For example, chlorine reacts with sodium:  
Sodium + chlorine → sodium chloride  
 $2\text{Na(s)} + \text{Cl}_2(\text{g}) \rightarrow 2\text{NaCl(s)}$

**Trends going down Group 7**

1. Reactivity decreases
2. Melting and boiling point increases
3. Atomic radius increases
4. Colour of the elements tends to get darker

Acid	Formula
Sulphuric acid	$\text{H}_2\text{SO}_4$
Hydrochloric acid	HCl
Nitric acid	$\text{HNO}_3$

**Noble gases** – all conduct electricity, fluoresce, are odourless and colourless, and are inert as they have full outer electron shells.

**Trends going down Group 0**

1. Density increases
2. Melting and boiling points increase
3. Atomic radius increases

## Key Words

Physical property	A <b>property</b> of a substance that can be measured e.g. colour, hardness, boiling/melting point.
Reactivity series	An ordering of metals from most reactive to least reactive
Reduction	The gain of electrons
Salt	A metal salt is a compound formed when the hydrogen of an acid is replaced by a metal.
State symbol	The state symbols in brackets show the physical state of the substance at the reaction temperature. Solid (s), liquid (l), gas (g), or dissolved in water (aq). aq is called aqueous
Trend	A general pattern of change in groups or periods on the periodic table

Group numbers tell us the number of outer shell electrons

1	2	Group numbers tell us the number of outer shell electrons										3	4	5	6	7	0
Li lithium 3	Be beryllium 4											B boron 5	C carbon 6	N nitrogen 7	O oxygen 8	F fluorine 9	Ne neon 10
Na sodium 11	Mg magnesium 12											Al aluminium 13	Si silicon 14	P phosphorus 15	S sulfur 16	Cl chlorine 17	Ar argon 18
K potassium 19	Ca calcium 20	Sc scandium 21	Ti titanium 22	V vanadium 23	Cr chromium 24	Mn manganese 25	Fe iron 26	Co cobalt 27	Ni nickel 28	Cu copper 29	Zn zinc 30	Ga gallium 31	Ge germanium 32	As arsenic 33	Se selenium 34	Br bromine 35	Kr krypton 36
Rb rubidium 37	Sr strontium 38	Y yttrium 39	Zr zirconium 40	Nb niobium 41	Mo molybdenum 42	Tc technetium 43	Ru ruthenium 44	Rh rhodium 45	Pd palladium 46	Ag silver 47	Cd cadmium 48	In indium 49	Sn tin 50	Sb antimony 51	Te tellurium 52	I iodine 53	Xe xenon 54
Cs caesium 55	Ba barium 56	La lanthanum 57	Hf hafnium 72	Ta tantalum 73	W tungsten 74	Re rhenium 75	Os osmium 76	Ir iridium 77	Pt platinum 78	Au gold 79	Hg mercury 80	Tl thallium 81	Pb lead 82	Bi bismuth 83	Po polonium 84	At astatine 85	Rn radon 86
Fr francium 87	Ra radium 88	Ac actinium 89	Rf rutherfordium 104	Db dubium 105	Sg seaborgium 106	Bh bohrium 107	Hs hassium 108	Mt meitnerium 109	Ds darmstadtium 110	Rg roentgenium 111							

**Metals** (left side of the table)

**Non-metals** (right side of the table)

**KEY**

- 1 → relative atomic mass
- H → atomic symbol
- hydrogen → name
- 1 → atomic number

## Metal extraction

Metals come from the Earth's crust. They are found in rocks combined with other elements. A rock you can extract metals from are called **ores**. E.g. Iron ore is a mixture of Iron and oxygen called Iron Oxide.

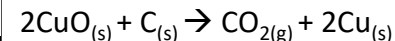
Metal is extracted by 2 stages

1. Remove the oxide from the ore
  2. Extract the metal with chemical reactions.
- Carbon can be used to do this if it is more reactive than the metal

Example (word):

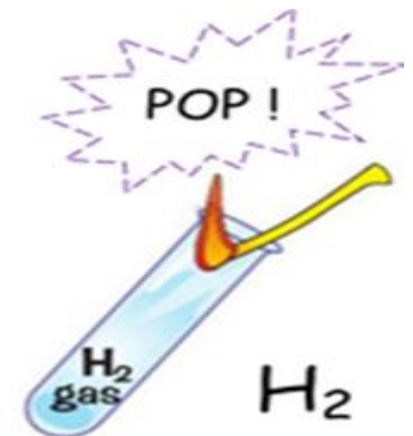
Copper oxide + Carbon → Carbon dioxide + Copper

Example (Symbol):



## Products of metal reacting with acid

When a metal reacts with acid the products are hydrogen gas and a metal salt. We can test the gas to ensure it is hydrogen using a lit splint.



# Year 9 Religious Education – Term 1B: Prophecy & Promise

## Big Questions:


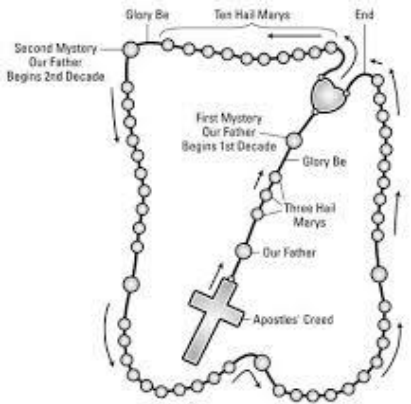


- ✓ Who was Mary?
- ✓ Why is she so important to Catholics?
- ✓ Do Catholics put too much emphasis on Mary?
- ✓ Who are some other important women in the Old Testament – what is the role of women in salvation history? What was life like for these women?
- ✓ How do Catholics show their devotion to Mary today?

1) Christians believe that God's big plan was in motion from the beginning, and the Old Testament foreshadows the coming of Jesus. Typology is the word used to describe this way of studying the scripture, which looks for Jesus in the Old Testament. In the Old Testament there are many bold, influential women; the fact that they have such an important role in salvation history is significant, as these scriptures were written in a patriarchal society.

2) The most important woman in salvation history is Mary, mother of Jesus. Mary plays an important role in the Catholic church. The Church believes that God revealed 4 truths about Mary – known as the Marian Dogmas. They form part of official Church teaching. There are celebrations dedicated to Mary throughout the liturgical year. The Hail Mary and the Rosary are important prayers devoted to Mary. There are many places of pilgrimage associated with Mary, such as Lourdes in France.



Key words	Definition
typology	The idea that God uses people and events in the Old Testament to foreshadow what Jesus would do in the New Testament
protoevangelium	The passage in Genesis, just after The Fall, where God promises to send a redeemer. 
4 Marian dogmas	4 beliefs about Mary – Mother of God, Immaculate Conception, perpetual virginity, and Assumption
Magnificat	'song of Mary'; the song that Mary sang when she was told by the angel that she was going to give birth to God's son
Mother of God, New Eve, Our Lady	Titles for Mary
The rosary	 <p>a form of prayer that helps us to reflect on the life of Mary and Jesus. The string of beads that many Catholics use when they pray the rosary may also be called a rosary.</p>
incarnation	'made flesh' – God becoming human in the person of Jesus

## Sources of Wisdom and Authority (SOWAA)

'The New Testament lies hidden in the Old, and the Old becomes manifest in the New' St Augustine

'Such holy women .....kept alive the hope of Israel's salvation. The purest figure among them is Mary.' CCC

'What the Catholic faith believes about Mary is based on what it believes about Christ, and what it teaches about Mary illumines in turn its faith in Christ.' CCC

'Blessed are you among women, and blessed is the fruit of your womb' Luke 1:42

My soul proclaims the greatness of the Lord, my spirit rejoices in God my Saviour, for he has looked with favour on his lowly servant.

From this day all generations will call me blessed:

the Almighty has done great things for me, and holy is his Name.

Luke's Gospel – the Magnificat

Home learning:

Look	Say	Cover	Write	Check
------	-----	-------	-------	-------

w/b 4 Nov	Key words & definitions	w/b 25 Nov	Section 2(blue)
w/b 11 Nov	Section 1 (red)	w/b 2 Dec	SOWAA 4, 5, (red)
w/b 18 Nov	SOWAA 1, 2, 3 (purple)	w/b 9 Dec	recap all

## Key Words

- **Development** - People reaching an acceptable standard of living/quality of life.
- **Quality of life** – General well-being of people (includes health, income, education etc.).
- **World Bank** – Global company which provides loans, advice and researches economic development.
- **Gross National Income (GNI)** – A country's income per year.
- **Human Development Index (HDI)** – measures development based on living standards (GNI per capita), health (e.g. how long you will live for) and education. Always gives a score between 0 and 1.
- **BRICS** – Countries at the same stage of fast economic development.
- **Exporter** – A country that sells lots of goods (e.g. toys, phones, clothes) to another country.
- **Inequality** – Differences between countries development rate.
- **Life Expectancy** – How long someone is expected to live based on the country's development level and people's quality of life.
- **Gender Inequality** – Girls and boys are treated differently. Examples include forced marriage, not being allowed to go to school or work.
- **Bilateral Aid** – Government in one country gives money/goods to another country.
- **Non-Governmental Aid** – Charities (NGO'S) raise money from the public and give it to other countries.
- **Non Governmental Organisations (NGO'S)** – charities.

## Development

### Key Points

- A country that is developing is improving.
- Development can be social, economic or natural.
- **Natural Development** – To do with nature/environment (e.g. the weather).
- **Economic Development** – To do with money.
- **Social Development** – To do with people.

### How does Development Change Over Time?

- The industrial revolution in 1750 caused the economy to change.
- During the industrial revolution, people left the countryside to work in the cities, which improved the economy.

### UK 1791

- Population: 11 million
- Location: 80 % of people lived in the countryside.
- Education: Only a few children went to school.
- Health: 25 % of people died before they were 5.
- Travel: It took 10 days to travel from London to Scotland.
- Vote: Only 5 % of men could vote.

### UK 2011

- Population: 65 million
- Location: 17 % of people lived in the countryside.
- Education: It is legal for all children under 16 to go to school.
- Health: 5 in every 1 thousand children died before they were 5.
- Travel: It takes 80 mins to fly from London to Scotland.
- Vote: All people over 18 can vote.

## BRICS

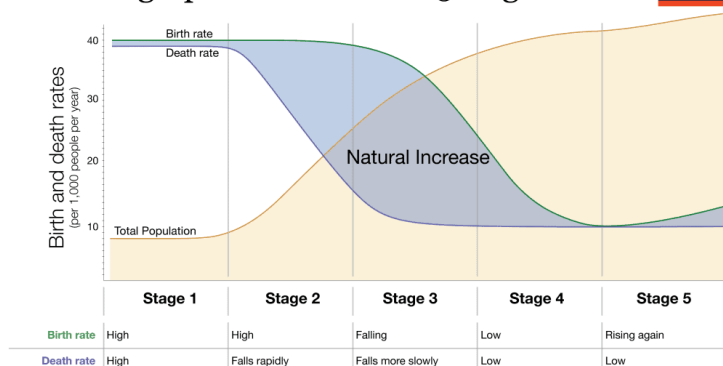
- Brazil, Russia, India, China and South Africa are BRICS.
- All these countries have a fast developing economy.
- Their economy is growing because they are developing inventions and ideas.
- The UK does not develop as quickly as BRICS as they slowly developed inventions.
- China could be more developed than the UK as it is the world's largest exporter of goods and it has removed 800 million people from poverty in 35 years.
- China's workforce in 1990 = 18 % Tertiary, 22 % Secondary and 60 % Primary.
- China's workforce in 2014 = 42 % Tertiary, 28 % Primary and 30 % Secondary.

### Reasons for Poverty

- The world bank thinks that 767 million people live on less than \$1.90 per day.
- 1) **Location:** If a country has no coastline/limited access people cannot earn money from selling goods to different countries (example Mali, Africa).
  - 2) **Climate:** It is hard to grow food in some places as the weather is not right. This means that people don't have enough food.
  - 3) **Politics/War:** Poor government decisions and disrupted services (e.g. education, healthcare) mean that people have to move.
  - 4) **Natural Hazards:** Earthquakes can knock buildings down so the country keeps having to rebuild.
  - 5) **Education:** Lack of education means people do not learn skills, so they find it hard to get jobs.

### The demographic transition in 5 stages

Our World in Data



## SUSTAINABLE DEVELOPMENT GOALS



# Year 9 History – Term 1B: The Second World War

**The Russian Revolution**  
 The Russian Revolution took place in 1917 when the peasants and working class people of Russia revolted against the government of Tsar Nicholas II. They were led by Vladimir Lenin and a group of revolutionaries called the Bolsheviks. The new communist government created the country of the Soviet Union.

1

**Appeasement**  
 Adolf Hitler became Chancellor of Germany in January 1933. He had aggressive and ambitious foreign policy aims. Britain initially pursued a policy of appeasement, seeking to give Hitler some of what he wanted in order to preserve peace. This enabled Britain to get ready for war.

3

**Operation Dynamo**, the evacuation from Dunkirk, involved the rescue of more than 338,000 British and French soldiers from the French port of Dunkirk between 26 May and 4 June 1940. The evacuation, sometimes referred to as the Miracle of Dunkirk, was a big boost for British morale. Prime Minister Winston Churchill recognised however that the greatest challenge still lay ahead, as Nazi ambitions now turned toward Britain.

5

**The Treaty of Versailles June 1919**  
 Treaty = Agreement  
 Versailles = Place in France the agreement was created  
 World War One ended on 11 November 1918, when Germany surrendered to the allies. Delegates from 32 countries met in Versailles in June 1919 and signed a peace settlement called the Treaty of Versailles. The terms of the Treaty of Versailles punished Germany for their involvement in starting World War One. Britain, France and America were the 'Big Three' who decided on how Germany was punished. Germany was not invited to discuss the Treaty.  
 L: Land - Germany was stripped of her empire and return Alsace and Lorraine to France.  
 A: Army - The German Army was limited to 100,000 men and the Navy was allowed only 6 Battleships.  
 M: Money - Germany had to pay 6.6 billion in reparation payments to the allies.  
 B: Blame - Germany had to sign the War Guilt Clause which forced them to accept that Germany had caused WWI.  
 Many Germans found the TOV to be humiliating and it was bitterly hated.

2

**WWII Summary: 1938-1945**

- **Nazi Germany** invaded Poland in 1939 and Britain responded by declaring war. Many other countries were invaded by Nazi Germany. Over several years, Britain, USA and Russia, fought back, successfully completing the 'D-Day' landing back in Europe in June 1944 and pushing back German troops until they surrendered in **May 1945**. Japan continued to fight until they surrendered in September 1945.
- British civilians suffered during the war. They were constantly bombed during the 'Blitz', food was **rationed** and children were **evacuated** to the country for protection. **Women** played a new role in society as they filled gaps left by the men who went to fight in the army.
- In Europe, Hitler and Nazi Germany continued to *discriminate* and *persecute* (treat badly) the Jewish population, leading to the atrocious events of the **Holocaust**. Many Jewish people, such as **Anne Frank**, attempted to hide in safety.

4

Key Vocabulary	
<b>Anti-Semitism</b>	Holding views that discriminate against Jewish people.
<b>Blitz</b>	The bombing of areas of Britain, mainly London, from German Aircraft.
<b>Blackout</b>	Town or cities were made dark so they couldn't be seen from the sky.
<b>Evacuee</b>	Children removed from dangerous areas to safer, rural places
<b>Fascism</b>	A belief system, against democracy and for a powerful armed state.
<b>Kristallnacht</b>	Also know as 'The Night of the Broken Glass' was a campaign of destroying Jewish businesses, buildings and synagogues.
<b>Holocaust</b>	The mass killing of Jews in concentration camps.
<b>Lebensraum</b>	Nazi policy meaning 'living space' - used to invade other countries.
<b>Luftwaffe</b>	The German Air-Force.
<b>Propaganda</b>	Information spread to influence people.
<b>Rationing</b>	The set amount of food that each person/family was allowed.
<b>Reparation payments</b>	The financial payments made to the Allied forces by the Germans, agreed by the Treaty of Versailles at the end of the First World War.
<b>Total War</b>	The idea that war involved civilians as much as soldiers and politicians. Everyone was affected.

6



[Watch this](#) – Money Mule Schemes and Gambling  
[Watch this](#) – Fraud  
[Watch this](#) – Credit and Debt

## Definition of Mental Health

**MentalHealth.gov:**  
*“Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices.”*



## What is fraud?

‘Fraud’ is the word we use to describe when someone tricks you out of your money. They might do this by pretending to be you (‘identity theft’) or by getting access to your bank account and/or your credit cards.



- Protect yourself from fraud by:
- Never sharing your personal details (like your PIN and passwords) with anyone
  - Looking after your cards carefully and keeping them in a safe place
  - Checking your bank account regularly to see if there are any transactions you don't remember
  - Shredding or cutting up documents that have your personal details on before throwing them away, e.g. bank statements

How do I keep my finances secure? | 5

## Three things that might have a negative effect on mental wellbeing

**Gambling**  
 Gambling involves playing a game, placing a bet, or taking a risk, in the hope of winning money or something desired.



**‘Money mule’ schemes**  
 Money mule schemes involve someone agreeing to allow their bank account to be used by someone else, in return for money. The person requesting to use the bank account is usually involved in criminal activity, e.g. funding terrorist acts.



**Unmanageable debt**  
 Debt is when someone has borrowed money from a person or organisation, and cannot afford to pay it back.



How can my money choices affect my mental wellbeing? | 5

## Challenge!

Research or ask a parent/carer what their outgoings per month are. Then look at the starting salary per month for a career you are interested in and see if you could afford the lifestyle you have now. Would you need to scale back, or could you splash out a bit more?

## What is a scam?

A scam is a trick that someone plays on you to cheat you out of your money. There are lots of different types of scam, including phishing emails and fake letters.



Protect yourself from scams by:

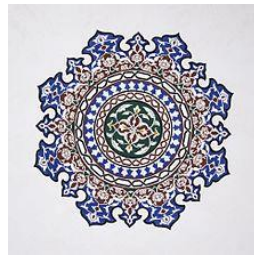
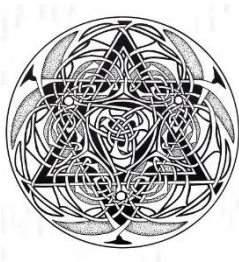
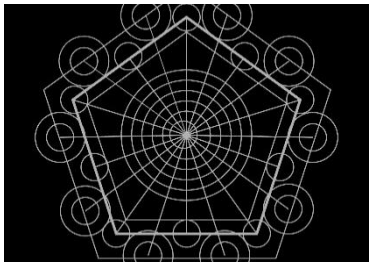
- Never giving all of your bank account information to anyone – real banks never ask for all of your information
- Reading your emails and letters carefully – if an email asks you for money, ask yourself why? Delete suspicious or unknown emails
- Never sharing your personal information on social media

How do I keep my finances secure? | 6

Pattern is one of the **seven formal elements** in Art. A **pattern** is a **design** in which **lines, shapes, forms or colours** are **repeated**. The part that is repeated is called a **motif**. There are two basic types of pattern in art: **Natural Pattern** and **Man-Made Pattern**. Both natural and man-made patterns can be **regular or irregular, organic or geometric**, structural or decorative, **positive or negative** and **repeating or random**.

**Natural Pattern:** The natural patterns that occur in nature, e.g. patterns on animals, fish and insects.

**Man-Made Pattern:** Pattern in art is used for both structural and decorative purposes.



Since the dawn of time Artists have sought to recreate the patterns that they have seen in nature. The three examples above show. 1. an example of **'sacred Geometry'** 2. An example of **ancient Celtic pattern** 3. An example of **ancient Islamic pattern**. The similarities across time and space are striking. The creation of pattern is a little understood human artistic drive.

## Key Words and Specialist Vocabulary:

**Organic:** Shapes which are free-form, unpredictable and flowing in appearance.

**Geometric:** Figure or area closed by a boundary which is created by combining a specific amount of curves, points, and lines.

**Motif:** a decorative image or design, especially a repeated one forming a pattern.



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

## Beatriz Milhazes (1960)

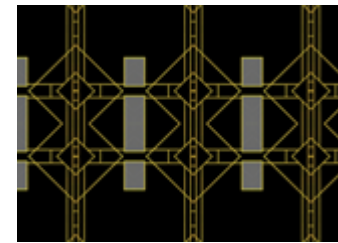
Beatriz Milhazes is a Brazilian-born collage artist and painter known for her large scale works and installations. She has been called "Brazil's most successful contemporary painter". In terms of technique, Milhazes is mostly concerned with the principle of collage, drawing from her combined knowledge of both **Latin American** and **European traditions**.

Milhazes' many other influences come from her own fascination with the **decorative arts, fashion, and geometry**. Milhazes has described her own work in saying "I think of my work as geometric, yet I can't put everything into a square or a circle." Her self-developed process of art making came about during her extensive researching of printing processes in the 1980s.

**Her Process:** Milhazes often starts by painting large sheets of plastic and sticking these to canvas with glue. Then peeling areas of these away. She aims to paint smooth surfaces and leave no brush strokes.



**Decorative Arts:** Humans have always sought to make their surroundings and belongings more attractive by decorating them. **Art movements** such as 1. **'Arts and Crafts'** (1880-1920), 2. **Art Deco** (1908—1935) and the practice of 3. **Illuminating letters** in ancient Medieval manuscripts.





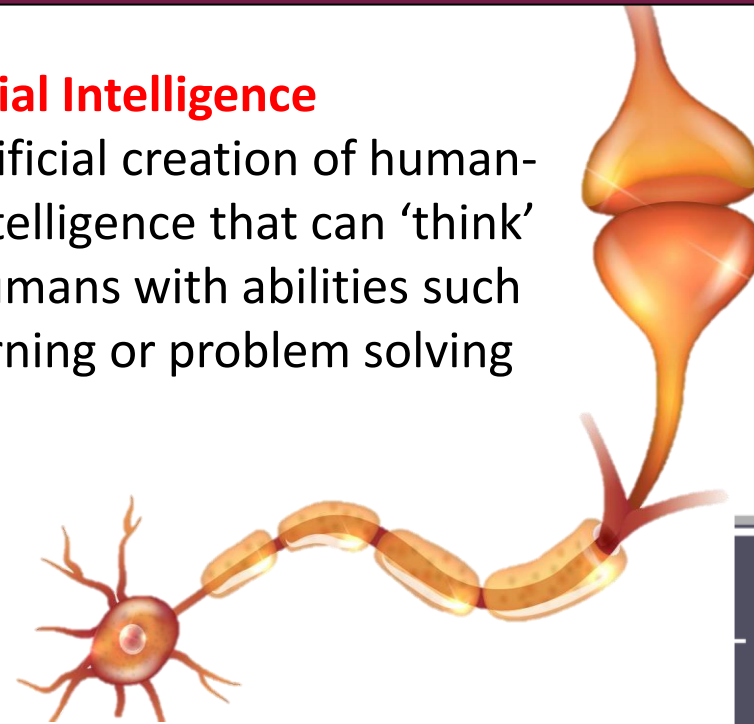


## Artificial Intelligence

An artificial creation of human-like intelligence that can ‘think’ like humans with abilities such as learning or problem solving

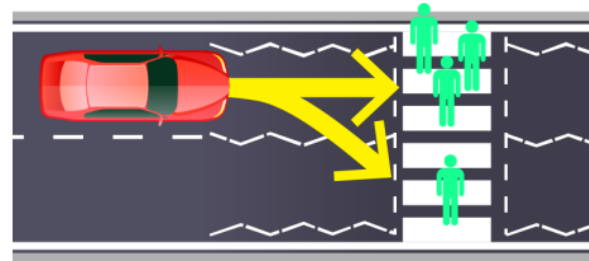
## Neural networks

Works like neurons in the brain. Helps the AI to classify information in the same way a human brain does. This could include classifying an animal in an image, deciding which way to turn in a self driving car, or whether an AI computer player should move towards you in a videogame.



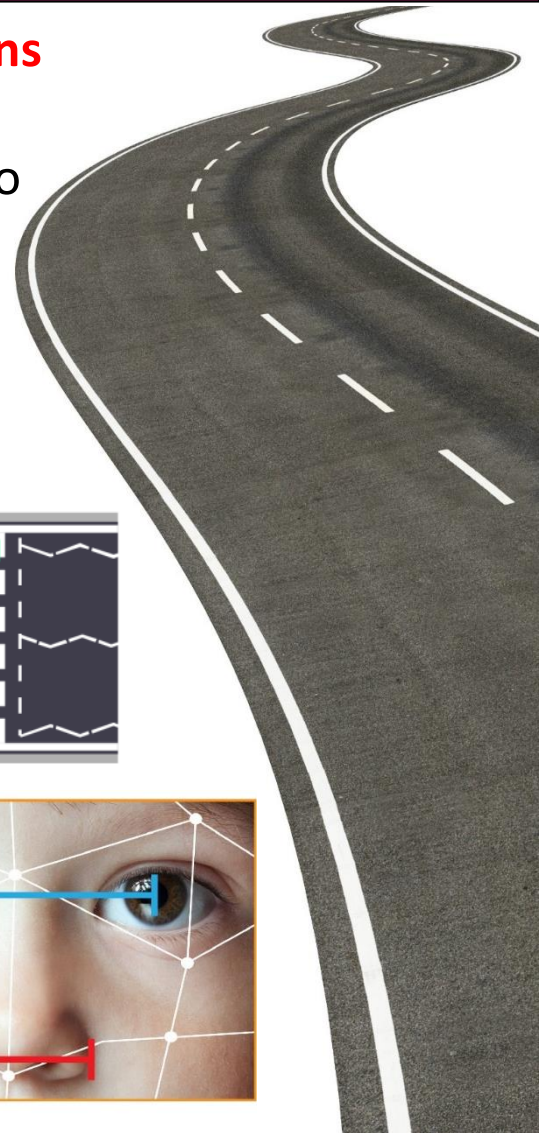
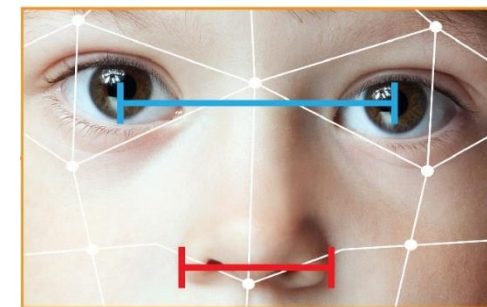
## Self-driving decisions

The AI in a self-driving car needs to consider lots of factors before making any decisions.



## Facial recognition

Uses measurements taken between key points on the image of a face. These can be turned into ratios. It is these ratios that are used to unlock your phone, not the way someone looks.





## Facts and rules

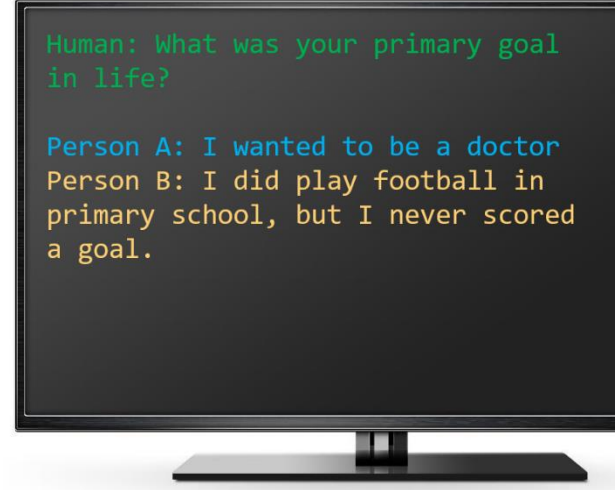
Machine learning will create FACTS and RULES itself based on data that has been provided to it. A fact for classifying a person might be that, ‘people have a mouth’, a rule that helps to classify a person could be ‘people might wear sunglasses’



This test was created by Alan Turing in 1950. A human sits in one room and asks questions through a computer. If the human cannot tell the difference between talking to a computer and a human, the computer passes the test.

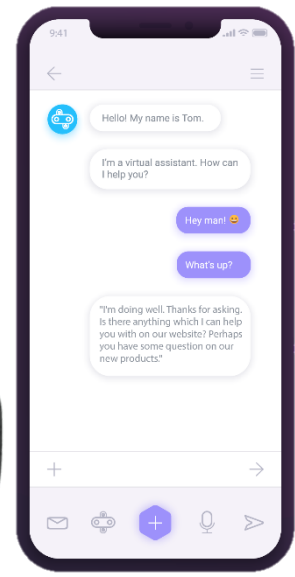


## The Turing Test



## Chatbots

Chatbots, also known as virtual assistants are able to help people by replying to messages or voice commands.



## Issues with machine learning...

If you do not provide enough data to the AI, the machine learning element could get confused – If we tell the AI that ‘people might wear sunglasses’, it could confuse the dog in the top left as a person or the dog above as a Sheep.

# Year 9 Design and Technology – Term 1B: Cam Toy

Scan the QR codes to go to the Automata Museum Website



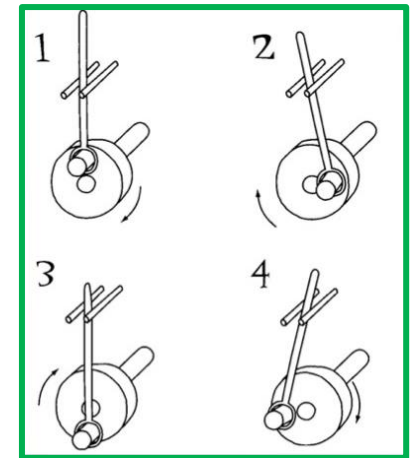
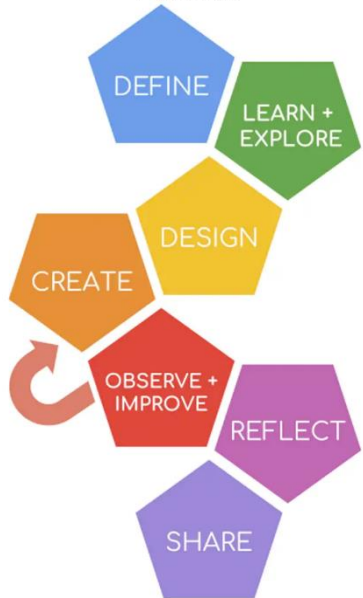
Key vocabulary	Definition
Follower	Follower gear means the gear after the idler gear.
Automata	A mechanical figure or contrivance constructed to act as if by its own motive power.
Specification	As a list of criteria a product needs to address.
Moodboard	A mood board is essentially an arrangement of images that inspire designers.
Cam Shaft	Is a shaft that contains a row of pointed cams, in order to convert rotational motion to reciprocating motion.
Prototype	Is an early sample, model, or release of a product built to test a concept or process.
<b>Fulcrum</b>	Pivot point on which a lever turns.
Flat Follower	Flat followers have a flat bottom that sits on the cam. These cope well under load but aren't very accurate and have a lot of friction.
Gear Tooth	A gear tooth is a single protruding section on the outer edge of a gear wheel.
<b>Kinetic</b>	Refers to motion or movement.

## Automata Toys.



Scan the QR code to watch a video about Designer Amedeo Capelli Automatas.

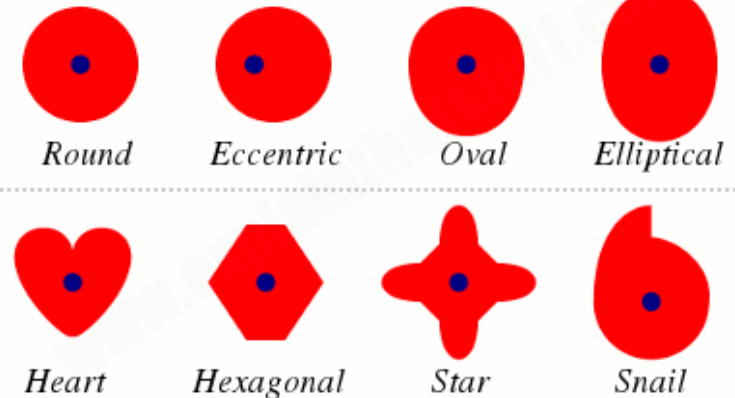
ENGINEERING DESIGN PROCESS



## 5 Habits

1. Look at other designers' work.
2. Do not be afraid to experiment.
3. Think about what they want to be known for.
4. Listen to what clients have to say.
5. Explain your work.

## Some common types of cams



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

# Year 9 Drama- Term 1B: Bertolt Brecht - Epic Theatre



## WHO

Bertolt Brecht was born in Germany in 1898 and died at the age of 58 in 1956. He is one of the most famous people in the world of theatre. He was a playwright, a director, an actor and developed many ideas and theories about theatre and acting which means he is considered to be a theatre practitioner. His plays are still performed around the world and his theories are still used in the performances of other plays.

## WHERE AND WHEN

After serving as a medic in the First World War and appalled by the effects of the war, he went first to Munich and then to Berlin in pursuit of a career in the theatre. That period of his life came to an end in 1933 when the Nazis came to power in Germany. Brecht fled and during this period the Nazis removed his citizenship, so he was a stateless citizen. By the time of his death in 1956, Brecht had established the **Berliner Ensemble** and was regarded as one of the greatest theatrical practitioners.

## WHAT

Brecht made many changes to the theatre of his day. He disagreed with the fact that an audience should be swept along with the emotion of a production. Before Brecht, the theatre of the day would use realistic story lines and high emotion, it would expect the audience to believe in the characters and the situations.

Brecht felt that the theatre should be something that made the audience feel more than simple emotion -he wanted it to make the audience **think** or **learn** something and to **make a change for the better** as a result.

## THE V EFFECT

**Songs**-to remind the audience that they are watching a performance and to change the tone or atmosphere.

**Spass**-fun -making the audience laugh and then making them question why they are finding serious things funny.

**Design**-The audience were reminded that they were in a theatre watching a performance as the house lights were left on, all of the set was visible from the start and the actors did all of the set changes. Costumes were also changed on stage and the actors played the instruments used for the songs on stage.

**Placards**-Signs were held up to tell the audience the title of the scene and even what was going to happen in them, this was to take away suspense and emotion and allow the audience to think about the scene instead.

**Direct address** -The actors speak directly to the audience, sometimes in the form of questions, this reminds the audience that what they are seeing isn't real and forces them to think about what they are watching. This is called '**breaking the fourth wall**'.

**Multi role-play** -The actors play more than one part in the performance, changing characters in front of the audience's eyes and reminding the audience that they are actors and not the characters. This technique also stops the audience from becoming too emotionally involved with the characters.

**Representational costume** -The actors would simply put on one item of clothing, or an accessory such as a hat or glasses to represent that they were a particular character -they didn't try to 'become' the character.



## The effect of heat on protein

Functional and chemical properties of food

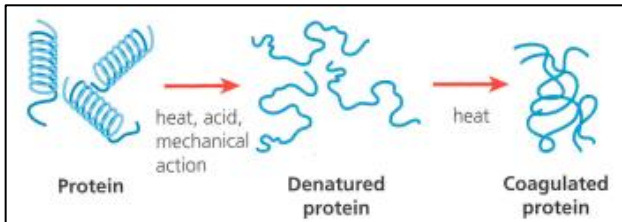
### Denaturation

Denaturation happens when the long chains of amino acids that make up proteins unfold. This happens in recipes when protein foods are either heated, beaten or exposed to acidic foods. Examples are below:

- **heat** from a pan when frying an egg
- **acid** (lemon juice) in a meat marinade
- **mechanical action** when whisking egg whites for a meringue.

### Coagulation

Coagulation happens when the protein in food sets during the cooking process. We cook protein foods to make them nicer to eat. A cooked egg is nicer than a raw egg.




The diagram shows proteins denaturing (change shape) and then coagulating (set).


Scan the QR code to watch a video about the protein section of the Eatwell guide. Scan to complete the quiz on fish processing/fish in the diet.


Key vocabulary	Definition
Binding	To bring ingredients in a mixture together using a binding ingredient (egg).
Coagulation	When protein sets during the cooking process.
Coating	To add another ingredient to create an attractive finish or protective layer.
Conduction	Heat transfers from a cooking pan/tray to the food, e.g., cookies on a tray.
Convection	Heat travels through air and water, e.g., boiling eggs, baking in the oven.
Denaturation	When long chains of amino acids in proteins unfold and change shape.
Denature	Heat, acid and mechanical action cause proteins to denature.
DRVs - Dietary reference value	These are estimated amounts of nutrients that are needed by different groups of healthy people. They relate to a person's age, gender and activity.
Fibre	Fibre makes us feel full. It is essential for a healthy digestive system.
Polysaccharide	Starch is a complex carbohydrate which takes the body longer to digest.

### Protein foods including fish



SCAN TO WATCH






SCAN FOR QUIZ

This section of the Eatwell guide supplies us with the macronutrient protein. It includes food from animal and plant sources. Most animal sources have all the amino acids our body needs to make new proteins so they are called **High Biological Value (HBV)**. Most plant sources have some amino acids missing so are called **Low Biological Value (LBV)** so have to be combined with others to get protein complementation.

### Processing of fish




SCAN TO WATCH


Scan the QR code to watch a video about processing fish.

### Carbohydrates

One of the three macronutrients; primary function is energy. Complex carbohydrates supply slow release energy that our body has to break down so will last longer.



SCAN TO WATCH

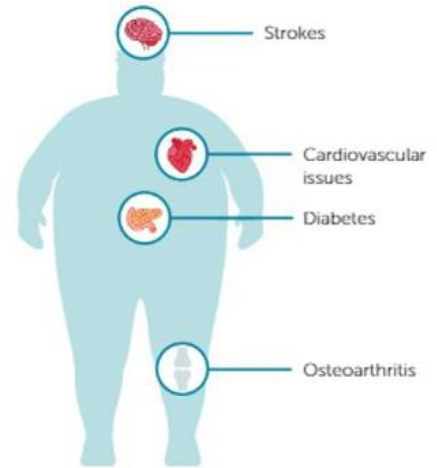


SCAN FOR QUIZ

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

### Takeaways

A restaurant or shop selling cooked food to be eaten elsewhere. There are many different types of takeaways - pizza, Chinese, Indian, fish and chips are just a few. Takeaways can be high in fat and salt, for these reasons they should be eaten infrequently as they can cause people to put weight on. Some health effects of being overweight are in the diagram below.



# Year 9 Music – Term 1B: Decades – Keywords

## 50s – Rock and Roll

Music in the 1950s was dominated by the birth of **rock and roll**. Rock and roll was a powerful new form of music that combined elements of **rhythm and blues (R&B), pop, blues, and hillbilly** music to create a sound that truly shook America.



## 60s – The British Invasion

On February 7 the **Beatles** arrived in New York for their inaugural U.S. visit, and two days later played on The Ed Sullivan Show to hysterical response and record viewership, thereby effecting a cataclysmic cultural shift and triggering a musical movement that would come to be known as the **British Invasion**.



## 70s - Disco

Disco is a genre of dance music and a subculture that emerged in the 1970s from the United States' urban nightlife scene. Its sound is typified by four-on-the-floor **beats, syncopated basslines, string sections, horns, electric piano, synthesizers, and electric rhythm guitars.**



## 80s

Synth-pop (also known as electropop or technopop) is a music genre that uses the synthesizer as the dominant musical instrument. What does synth pop sound like? Early synth-pop has been described as "**eerie, sterile, and vaguely menacing**", **using droning electronics** with little change in inflection. Common lyrical themes of synth-pop songs were **isolation, urban anomie, and feelings of being emotionally cold and hollow.**

## 90s - Britpop

Britpop, movement of British rock bands in the 1990s that drew consciously on the tradition of **melodic, guitar-based British pop music** established by the Beatles. Like nearly all musical youth trends, Britpop was about **songs, guitars, jackets, and attitudes**—though not necessarily in that order. Lyrics written by Britpop bands were made to be relevant to young people in Britain, and the **songs released during this movement embraced and emphasised 'Britishness'**.

Britpop sparked a period of greater pride in the culture of the United Kingdom, in a cultural movement known as **Cool Britannia**.



# Year 9 Physical Education – Term 1B: Aerobic and Anaerobic Exercise



The **anaerobic** respiratory system supplies energy very quickly for sports such as vaulting in gymnastics or throwing a javelin where the activity only lasts a few seconds.

This system breaks down glucose into lactic acid. Glucose is derived from carbohydrates. It produces energy very quickly.

**Glucose → energy + lactic acid**

The lactic acid energy system produces the majority of the energy for moderate to high intensity activities such as running 400 metres. However, lactic acid is a fatiguing by-product of this energy pathway and causes pain and discomfort in the working muscles. It is for this reason that the winner of a 400 m race is typically the athlete who slows down the least.



Athletes showing signs of fatigue and pain towards the end of a 400 m race.



The **aerobic** respiratory system is responsible for producing the majority of our energy while our bodies are at rest or taking part in low-intensity exercise for long periods of time such as jogging or long-distance cycling.

**Glucose + oxygen → energy + water + carbon dioxide**

Glucose from carbohydrates and fats supply the energy for the aerobic energy system and can supply energy for long periods of time.

Carbohydrate food sources include rice, bread, potatoes, bananas and energy drinks. Fat food sources include butter, oils, cheese, milk and nuts.



# LA TELE Y EL CINE




TV/film	<p>Suelo ver - I tend to watch</p> <p>Me encantan - I love</p> <p>Me molan - I like</p> <p>Me chiflan - I'm crazy about</p> <p>Prefiero - I prefer</p>	<p>los concursos - gameshows</p> <p>los programas de deportes - sports programmes</p> <p>los documentales - documentaries</p> <p>las series policiaca - crime series</p> <p>los realitys - reality TV shows</p> <p>los culebrónes/las telenovelas - soaps</p> <p>las comedias - a comedys</p> <p>el telediario/las noticias - the news</p> <p>los dibujo animados - cartoons</p> <p>el meteo - the weather</p>	<p>porque son - because they are</p>	<p>divertidos/as - fun</p> <p>entretenidos/as - entertaining</p> <p>informativos/as - informative</p> <p>emocionantes - exciting</p> <p>interesantes - interesting</p> <p>adictivos/as - addictive</p>
	<p>No aguanto - I can't stand</p> <p>No soporto - I can't stand</p> <p>Odio - I hate</p>	<p>los misterios - mysteries</p> <p>las películas de amor - love films</p> <p>las películas de terror - horror films</p> <p>las películas de acción - action films</p> <p>las películas de aventuras - adventure films</p> <p>las películas de animación - animated films</p> <p>las películas de ciencia - ficción - sci-fi films</p> <p>las películas de fantasia - fantasy films</p> <p>las películas extranjera - foreign films</p>		<p>aburridos/as - boring</p> <p>tontos/a - silly</p> <p>malos/as - bad/rubbish</p> <p>infantiles - childish</p>



# LA TELE Y EL CINE



TV/film	<p>Anoche= last night                  Ayer= yesterday                  Después del colegio= after school                  El fin de semana pasado= last weekend.</p>	<p>La protagonista= the main character                  El argumento= the plot                  La historia= the story                  La música= the music                  La ropa= the clothes/costumes</p>	<p>Fue                  =                  it was</p> <p>Fueron                  =                  they were</p>	<p>divertidos/as - fun                  entretenidos/as - entertaining                  informativos/as - informative                  emocionantes - exciting                  interesantes - interesting                  adictivos/as - addictive</p>
	<p>Vi= I watched                  Fui= I went                  Comí= I ate                  Bebí= I drank                  Me gustó= I liked it                  Me gustaron= I liked them</p>	 <p>las palomitas de maíz</p>	<p>aburridos/as - boring                  tontos/a - silly                  malos/as - bad/rubbish                  infantiles - childish</p>	

# Notes

A series of horizontal dotted lines for writing notes.



# Notes

A series of horizontal dotted lines for writing notes.





# **St Cuthbert's Catholic High School**

*Live life in all its fullness*