DIXONS ALLERTON ACADEMY

KNOWLEDGE ORGANISER YEAR 9 2025/2026

Name: _____

Student Number: _____

C1

DIXONS ALLERTON ACADEMY

Every day all students at DAA are expected to be the best they can be.

All students are expected to achieve their mission as detailed below and strive for this every day by giving 100% at all times.

"At DAA, I developed good moral principles and achieved exceptional outcomes that enabled me to have ambitious life choices"

During their time with us they will achieve this through their industry by showing hard work and resilience in all that they do every day.

Our core values are:

Happiness

The joy of life and learning. In the context of your emotional state, including positive and pleasant emotions ranging from contentment to intense joy. It is important you to have a grasp on your own happiness and well-being and your capacity to influence other people's happiness and well being

Industry

(Hard work & resilience) – This is how hard you work and how you overcome the challenges you face in your learning and life; if you can rise to the challenge when it matters you will be successful.

Responsibility

This is being accountable for the choices that you make and making the right choices to be organised, behave properly and achieve as much as you can. Taking responsibility for your learning will help you to be successful at DAA.

Contents

WEEK 2	
1. **tertiary**	A job type which involves providing a **service**.
2. **composition**	The way elements of artwork are **arranged** or **combined.**
3. **monotheism**	Belief in **one** God.
4. **patriarchal**	Ruled or controlled by **men**.
5. **flammable**	Sets on **fire** easily.
6. **precipitation**	Any form of **water** falling from the sky.
7. **hypothesis**	A **prediction** about what you think will happen in an investigation.
8. **exodus**	A **journey**.
9. **protagonist**	**Main character** in a narrative.
10. **integer**	A **whole** number (not a fraction)

WEEK 3	
1. **identity**	**Characteristics** determining who or what something is.
2. **pathogens**	**Bacteria** such as food poisoning bacteria.
3. **chronology**	Historical events in the correct **order.**
4. **misinformation**	A deliberate **lie** to mislead somebody.
5. **melody**	The main 'tune' of the song that you could sing to
6. **segregation**	**Separating** people based on race, class and social factors.
7. **progression**	Getting **better.**
8. **faith**	Having **trust** in someone.
9. **Monarchy**	Country where the Head of State is **King** or **Queen**.
10. **molecule**	A group of atoms **chemically joined** together.

CYCLE 1 SPELLINGS

WEEK 4	
1. **empathy**	Ability to understand and feel **others' emotions**.
2. **century**	Time span of **100** years
3. **hoax**	A **trick** in which someone tells people a lie.
4. **harmony**	Chords that **support** the melody
5. **covenant**	A serious **promise.**
6. **regression**	Getting **worse**.
7. **accent**	The way of pronouncing words associated with an **area** or **place**.
8. **mixtures**	Two or more substances **mixed** together but **not chemically joined**.
9.**dialogue**	The **spoken** script on stage.
10. **source**	Evidence made **at the time** of an historical event.

WEEK 5	
1. **activist**	Someone who is active in **political** and **social** causes.
2. **decade**	Time span of **10** years.
3. **domain**	A **website** name.
4. **conductor**	**Leads** the orchestra and any other large ensemble.
5. **stewardship**	To **look after** the world and each other.
6. **faith**	Having **trust** in someone.
7. **prejudice**	A **preconceived** opinion not based on reason or experience.
8. **corrosive**	**Destroys** living **tissue** such as skin and eyes
9. **culture**	Ideas, **customs** and social behaviour of a group of people.
10. **ensemble**	A **musical group** e.g. orchestra, brass band, choir.

WEEK 6	
1. **injustice**	**Unfair** behaviour or treatment
2. **Millennium**	Time span of **1000** years.
3. **bias**	Feeling or prejudice **for or against** one person or group.
4. **orchestra**	A large ensemble of **musicians playing instruments.**
5. **polytheist**	Believing in **many** Gods.
6. **colloquial**	**Informal** language used in conversation.
7. **opinion**	A **view** or judgement formed about something.
8. **gesture**	An expression or **movement** of the body.
9. **interpretation**	Evidence showing an **opinion** on an event.
10. **atom**	A **tiny particle.**

WEEK 7	
1. **status**	The **level** of society a character is in.
2. **democracy**	System where people can **vote** for the government**.**
3. **tension**	Where the mood atmosphere in a novel is **strained**.
4. **heritage**	Range of **inherited** traditions / cultures.
5. **systemic**	Implies problems are rooted in the way **systems** are set up.
6. **development**	The process of a county **improving over time**.
7. **migration**	People **moving** around**.**
8. **monologue**	**One** person delivering a speech or their thoughts to the audience.
9. **intonation**	**Variation** of spoken pitch.
10. **liberty**	State of being **free** from oppression.

CYCLE 1 SPELLINGS

WEEK 8	
1. **tertiary**	A job type which involves providing a **service**.
2. **composition**	The way elements of artwork are **arranged** or **combined.**
3. **monotheism**	Belief in **one** God.
4. **patriarchal**	Ruled or controlled by **men**.
5. **flammable**	Sets on **fire** easily.
6. **precipitation**	Any form of **water** falling from the sky.
7. **hypothesis**	**Prediction** about what you think will happen in an investigation.
8. **exodus**	A **journey**.
9. **protagonist**	**Main character** in a narrative.
10. **integer**	A **whole** number (not a fraction)

WEEK 9	
1. **identity**	**Characteristics** determining who or what something is.
2. **pathogens**	**Bacteria** such as food poisoning bacteria.
3. **chronology**	Historical events in the correct **order.**
4. **misinformation**	A deliberate **lie** to mislead somebody.
5. **melody**	The main 'tune' of the song that you could sing to
6. **segregation**	**Separating** people based on race, class and social factors.
7. **progression**	Getting **better.**
8. **faith**	Having **trust** in someone.
9. **Monarchy**	Country where the Head of State is **King** or **Queen**.
10. **molecule**	A group of atoms **chemically joined** together.

WEEK 10	
1. **empathy**	Ability to understand and feel **others' emotions**.
2. **century**	Time span of **100** years
3. **hoax**	A **trick** in which someone tells people a lie.
4. **harmony**	Chords that **support** the melody
5. **covenant**	A serious **promise.**
6. **regression**	Getting **worse**.
7. **accent**	The way of pronouncing words associated with an **area** or **place**.
8. **mixtures**	Two or more substances **mixed** but **not chemically joined**.
9.**dialogue**	The **spoken** script on stage.
10. **source**	Evidence made **at the time** of an historical event.

WEEK 11	
1. **activist**	Someone who is active in **political** and **social** causes.
2. **decade**	Time span of **10** years.
3. **domain**	A **website** name.
4. **conductor**	**Leads** the orchestra and any other large ensemble.
5. **stewardship**	To **look after** the world and each other.
6. **faith**	Having **trust** in someone.
7. **prejudice**	A **preconceived** opinion not based on reason or experience.
8. **corrosive**	**Destroys** living **tissue** such as skin and eyes
9. **culture**	Ideas, **customs** and social behaviour of a group of people.
10. **ensemble**	A **musical group** e.g., orchestra, brass band, choir.

CYCLE 1 SPELLINGS

WEEK 12	
1. **injustice**	**Unfair** behaviour or treatment
2. **Millennium**	Time span of **1000** years.
3. **bias**	Feeling or prejudice **for or against** one person or group.
4. **orchestra**	A large ensemble of **musicians playing instruments.**
5. **polytheist**	Believing in **many** Gods.
6. **colloquial**	**Informal** language used in conversation.
7. **opinion**	A **view** or judgement formed about something.
8. **gesture**	An expression or **movement** of the body.
9. **interpretation**	Evidence showing an **opinion** on an event.
10. **atom**	A **tiny particle.**

WEEK 13	
1. **status**	The **level** of society a character is in.
2. **democracy**	System where people can **vote** for the government**.**
3. **tension**	Where the mood atmosphere in a novel is **strained**.
4. **heritage**	Range of **inherited** traditions / cultures.
5. **systemic**	Implies problems are rooted in the way **systems** are set up.
6. **development**	The process of a county **improving over time**.
7. **migration**	People **moving** around**.**
8. **monologue**	**One** person delivering a speech or their thoughts to the audience.
9. **intonation**	**Variation** of spoken pitch.
10. **liberty**	State of being **free** from oppression.

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

WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
1.	1.	1.	1.	1.
2.	2.	2.	2.	2.
3.	3.	3.	3.	3.
4.	4.	4.	4.	4.
5.	5.	5.	5.	5.
6.	6.	6.	6.	6.
7.	7.	7.	7.	7.
8.	8.	8.	8.	8.
9.	9.	9.	9.	9.
10.	10.	10.	10.	10.

WEEK 12	WEEK 13	NOTES
1.	1.	
2.	2.	
3.	3.	
4.	4.	
5.	5.	
6.	6.	
7.	7.	
8.	8.	
9.	9.	
10.	10.	

DAA CYCLE 1 Knowledge Organiser	SUBJECT	English	TOPIC(S)	Gothic Literature	YEAR GROUP	9

1.1 Gothic Conventions	
1. Extreme landscapes	Dark, wild, and **treacherous** place full of **wrathful weather, malevolent forests,** and **ghostly graveyards.**
2. Dark, abandoned buildings	**Haunted houses,** cobwebbed castles, **derelict churches,** and other once-glorious architecture that has fallen into disrepair.
3. Gothic architecture	"Gothic" also alludes to a style of **grand, ornate** architecture in **France in the 12th century**
4. Romanticised past	In line with its settings, Gothic literature often romanticizes and **revisits the past.**
5. Gothic plots	Include **revenge,** familial secrets, prophecies, and **curses.** The past is somehow still living, breathing, and controlling the drama.
6. Terror	**Suspenseful feelings** of fear, **fear of death,** shock, dread, or disgust in the reader.
7. Supernatural monsters	**Demons, witches, ghosts,** banshees, **vampires,** and other supernatural creatures often play parts in Gothic fiction.
8. Byronic Hero	Portrayed as a **flawed, lonesome, isolated,** or **outcast** figure who has to overcome obstacles in order to re-join society.
9. Femme Fatale	An **attractive and seductive woman,** especially one who will ultimately **cause distress** to a man who becomes involved with her.
10. Motifs	**Curses,** prophecies, **hauntings,** insanity, psychological flips and twists, women as victims, doppelgängers, fallen societies.
11. Morality	Gothic literature reveals how good or bad people are. They were written in a time when people were **wary of science** and believed some **scientific theory** was **blasphemy** (evolution).

1.3 Key Writers	
Charlotte Bronte	**1816-1855** was an English novelist and poet, and the oldest of the three Brontë sisters, native to **Yorkshire, survived** into adulthood and whose novels became **classics** of English literature.
Mary Shelley	**1797 – 1851** was an English novelist who wrote the **Gothic** novel **Frankenstein;** or, The Modern Prometheus (1818). She also edited and promoted the works of her husband, the Romantic poet and philosopher Percy Bysshe Shelley.
Robert Louis Stevenson	**1850-1894** was a Scottish novelist and travel writer, most noted for **Treasure Island,** Kidnapped, Strange **Case of Dr Jekyll and Mr. Hyde,** and A Child's Garden of Verses.
Angela Carter	**1940 – 1992** was an English novelist, short story writer, poet, and journalist, known for her **feminist and magical realism.** Carter was especially well known for taking the classic patriarchal fairy tale and creating a **feminist, macabre twist.**
Oscar Wilde	**1854-1900** was an Anglo-Irish playwright, novelist, poet, and critic. He is regarded as one of the **greatest playwrights of the Victorian Era.** In his lifetime he wrote nine plays, one novel, and numerous poems, short stories, and essays.

Key Themes	
Insanity & violence	Gothic literature often focuses on **psychological 'flips,'** losing a grasp of reality, **descending into madness** and **intense violence** against the innocent. Examples include the eponymous Mr. Hyde, who rampages through London, maiming and killing anybody in his way.
The 'uncanny'	The uncanny can often be a **sinister** aspect of the gothic due to its **uncomfortable familiarity** with the human body which is often **distorted.** Examples include IT, zombies and dolls.
The 'sublime'	Landscapes which insight both **awe and terror.** They are often vast and wild.
Death & the supernatural	Humankind's **fear of death** is often a focal point of gothic literature, explored through vampires, ghosts and supernatural monsters who **transcend death.**

DAA CYCLE 1 Knowledge Organiser	SUBJECT	English	TOPIC(S)	Gothic Literature	YEAR GROUP	9

The Social and Historical Context of the 19th Century	
Social Class	1. By 1860, although most people in Britain could read and write, books were well beyond the income of ordinary people. 2. Many novels were published in parts—in the three-volume form, or by a monthly dose, or even in a weekly magazine. 3. Society was strictly layered - not only into rich and poor, or even upper, middle and lower class, but hundreds of 'grades'. People were expected to 'know their place', and the Church taught them to be content in their 'station'. 4. At the time, many people were becoming aware of the need to improve the condition in which the poor found themselves. Britain had narrowly escaped revolution unlike it's European counterparts.
Industrial Revolution	1. From 1780 factory owners in Britain began to use coal-fired steam engines to power the machines in big factories, bringing great fortune. 2. The Victorian period saw many major developments that made travel, communications and trade easier for many people. The railways allowed people to travel cheaply and rapidly, opening up new possibilities for both rich and poor. 3. The 1840s was a time of railway madness. Trains were cheaper and faster than canal boats or horse drawn carriages. 4. Many of the things we take for granted today, such as photography, telephones, electric light bulbs and cars were invented during Queen Victoria's reign. 5. People flocked from the countryside to the cities. London's population between 1800 and 1900 from 1 million to 6 million people. 6. Everything converted from traditional, manual labour to machine-driven, highly-productive labour. This caused a reduction in the amount of men needed for work, which therefore increased poverty levels and crime in the cities. Working with machinery was also was more dangerous and life threatening for the workers. 7. This led to over-crowding and hunger, disease and crime. There were no proper drainage / sewage systems. Many families had to share one tap / toilet. Children suffered the most and were exploited by factory owners who forced them to work long hours in dangerous conditions. 8. The spread of education and affluence in the Victorian era encouraged innovation, experimentation and scientific ideas.
Women's Rights	1. Rights and privileges of Victorian women were limited, and both single and married women had to live with hardships and disadvantages. 2. Victorian women were disadvantaged both financially and sexually, enduring inequalities within their marriages and society. 3. There were sharp distinctions between men's and women's rights during this era; men were allotted more stability, financial status and power over their homes and women. 4. Marriages for Victorian women became contracts which were extremely difficult if not impossible to get out of during the Victorian era. 5. In the Victorian era women were seen, by the middle classes at least, as belonging to the domestic sphere, and this stereotype required them to provide their husbands with a clean home, to put food on the table and to raise their children. 6. Women's rights were extremely limited in this era, losing ownership of their wages, all of their physical property, excluding land property, and all other cash they generated once married.
Religion	1. Christianity held a strong influence in Victorian Britain, especially amongst the middle / upper classes. 2. Good Christians believed in a strict moral code – attending church regularly. 3. Sabbatarianism – when people spent Sunday going to church and resting. Dickens was opposed to this because it meant that working poorer people were denied any enjoyment on their one day off – everything was shut. 4. Charles Darwin's *On the Origin of Species* (1859) seemed to disprove creation (the belief that God created the world and that it had started with Adam and Eve), and substituted the new idea of 'evolution'. 5. Many people saw science and a belief in religion and the supernatural as being at odds with each other. A lot felt they had to choose between the two. And many believed that science had become dangerous and was meddling in matters which only God had control over.
Capitalism	1. The word capital means "something of value". Capitalism is an economic system in which people who own the means of production (factories, land, shops, tools, machines, shipping companies etc.) are able to make a lot of money by producing what people want and need. 2. The profit is not shared with the employees. Some people argue that this system hurts workers, because businesses make more money by selling things than they pay the workers. Business owners become rich while workers remain poor and exploited.

DAA CYCLE 1 Knowledge Organiser	Maths	Maths	TOPIC(S)		YEAR GROUP	9

SECTIONS 1

PROPERTIES OF 3D SOLIDS	
surface	the **outside layer** of an object, it has an **area** and **can be flat or curved**
face	any of the **individual flat surfaces** of a **solid object**
edge	for a 3D shape, the **line segment** where **two faces** meet
vertex (vertices)	for a 3D shape, the **point** where **two or more edges meet**, a **corner**

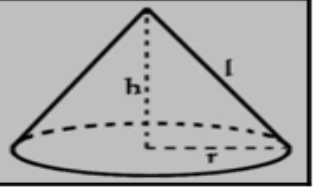
SECTION 2

2D REPRESENTATIONS OF 3D SHAPES	
plan	a **2D view** of a **3D solid** as viewed **from above,** b**irds-eye view**
elevation	the **2D view** of a **3D solid from** the **front** or the **side**
net	a **pattern** that you can **cut** and **fold** to make a **model** of a 3D shape

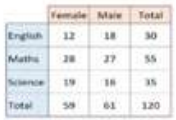
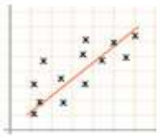
SECTION 3

VOLUME		
volume	the amount of **space a 3D shape** takes up	
volume units	**mm^3, cm^3, m^3…**	
prism	volume = **area of cross section x length**	
cube	volume = **one side cubed** (or, **area of square x length of prism**)	$V = l^3$
cuboid	volume = **area of rectangle x length of prism**	$V = lbh$
triangular prism	volume = **area of triangle x length of prism**	$V = \frac{lbh}{2}$
cylinder	volume = **area of circle x length of prism**	$V = \pi r^2 h$
pyramid	volume = $\frac{1}{3}$ **x area of cross section x length**	
square based pyramid	volume = $\frac{1}{3}$ **x area of square base x height of pyramid**	$V = \frac{lwh}{3}$
cone	volume = $\frac{1}{3}$ **x area of circle base x height of cone**	$V = \frac{\pi r^2 h}{3}$
sphere	$V = \frac{4}{3}\pi r^3$	

SECTION 4

SURFACE AREA		
surface area	the **total area** of all the **surfaces** on a **3D shape**	
surface area method	find the **area of each face** separately, then **add** them together	
surface area of a sphere	$A = 4\pi r^2$	
surface area of a cone	**curved surface area** = πrl **circle base area** = πr^2 **add** these together	

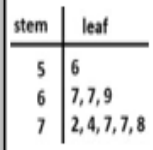
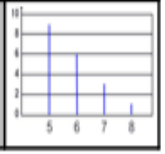
SECTION 5

DISPLAYING BIVARIATE DATA	
bivariate data	data containing **two variables**
variable	something that can **change or vary**
two-way table	shows information about **two variables** which **do not overlap**, the **numbers represent frequencies** 
scatter graph	a **graph** to show **bivariate** data
correlation	when there is a **relationship** between two sets of data, but we don't know if one caused the other
causation	when the independent variable **causes** the dependent variable
positive correlation	as one variable increases, the other **increases** 
negative correlation	as one variable increases, the other **decreases** 
no correlation	there is **no relationship** between the two variables 
line of best fit	a line that **best represents** the data on a scatter graph In maths GCSE it is **always straight**, but in science it can be curved 
outlier	a value that '**lies outside**' most of the other values in a set of data, it is **much smaller** or **much larger** than the other values in a set of data

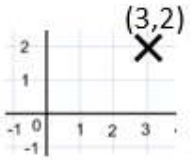
SECTION 6

AVERAGES AND RANGE FROM A FREQUENCY TABLE	
mean	method: **multiply the variables by their frequencies** (fx column), **total the fx column**, **divide by total frequency**
mode / modal class	the most frequent value or class; the one with **the highest frequency**
median	**use half the total frequency** to find the **middle position**, then **locate the row** this occurs in using the 'subtotal' column
range	**difference between** the **largest** and **smallest values of the variable (first column)**

SECTION 7

DISPLAYING UNGROUPED DISCRETE NUMERICAL DATA		
stem and leaf diagram	a way of displaying a **list of numbers** the **stem goes down** and the **leaves go out** to the right, It has a **key**	
vertical line graph	**like a bar chart**, but the **bars have no width**, they are just **straight lines** up the page	

SECTION 8

COORDINATES	
axis (plural: axes)	the **x axis** is **horizontal** the **y axis** is **vertical**
quadrant	the **four regions** separated by the axes
coordinate *e.g.* 	give a **position** of a **point** on a grid the **first number** (**x**) moves **left** (-) or **right** (+) the **second number** (**y**) moves **up** (+) or **down** (-) (**x**, **y**) *e.g. (3,2) means the point that is 3 to the right and 2 up from the origin*
origin	the coordinate **(0, 0)**
line segment	a line joining **two points**
length of line segment	**distance** between two points calculated using **Pythagoras' theorem**.
Pythagoras' theorem	a relationship between the **3 sides** on a **right angled triangle** $\mathbf{a}^2 + \mathbf{b}^2 = \mathbf{c}^2$
midpoint	the **middle** of a **line segment**

2.1 - The Periodic Table

Periodic Table	Contains information about **118 elements**, arranged in order of **atomic number**.
Groups	The **vertical columns**.
Periods	The **horizontal rows**.
Alkali Metals	**Group 1 elements**. Very **reactive**, **soft** and **dull**.
Halogens	**Group 7 elements**.
Noble Gases	**Group 0 elements**. Very **unreactive**.
Transition Metals	Found in the **middle block**.

2.2 - Chemical Symbols of Elements

C	**carbon**	**He**	**helium**	**N**	**nitrogen**
H	**hydrogen**	**F**	**fluorine**	**S**	**sulphur**
O	**oxygen**	**Cl**	**chlorine**	**Be**	**beryllium**
Li	**lithium**	**Br**	**bromine**	**Cu**	**copper**
Na	**sodium**	**Mg**	**magnesium**	**Fe**	**iron**
K	**potassium**	**Ca**	**calcium**	**Ne**	**neon**

2.3 - Properties of Metals and Non-Metals

Properties	Metals	Non-Metals
Periodic Table	**Left** hand side	**Right** hand side
Do they conduct?	**Conductors** of **heat** and **electricity**	**Insulators** of **heat** and **electricity**
Appearance	**Shiny** (when **polished**)	**Dull**
Density	**High density** (heavy for their size)	**Low density** (light for their size)
Mechanical Properties	**Malleable** (can be **bent** or **hammered** into shape)	**Brittle** (**breaks easily**)
	Ductile (can be **pulled** into **wires**)	
Sonorous?	**Sonorous** (makes a **ringing sound** when hit)	**Not sonorous**

2.4 - Elements, Compounds and Mixtures

Element 	Substance made up of only **one type** of **atom**.
Compound 	Substance made up of **two** or **more types** of **atom**, **chemically joined together**.
Mixture 	**Two** or **more** substances **mixed** together but **not chemically joined**.
Chemical Reaction	A change in which **atoms** are **rearranged** and **new substances** are made. Often **irreversible**.
Physical Change	A change in which **no new substances** are made. E.g. **changes of state**. Often **reversible**.
Naming compounds	**Rule 1:** Use for **metal** + **non-metal**. **Metal** goes **first**, then **non-metal** changes ending to **–ide**. E.g. iron + sulphur -> iron sulphide
	Rule 2: Use for **metal** + **non-metal** + **oxygen**. **Metal** goes **first**, then **non-metal** changes ending to **–ate**. E.g. copper + sulphur + oxygen -> copper sulphate

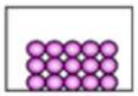
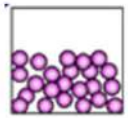
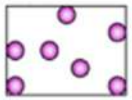
2.5 - Chemical Formulae of Substances

H_2O	**water**	**H_2**	**hydrogen**	**$C_6H_{12}O_6$**	**glucose**
CO_2	**carbon dioxide**	**Cl_2**	**chlorine**	**NH_3**	**ammonia**
O_2	**oxygen**	**CH_4**	**methane**	**NaCl**	**sodium chloride**
N_2	**nitrogen**	**CO**	**carbon monoxide**	**$CuSO_4$**	**copper sulphate**

Y9 Science Cycle 1 - Sheet 1

KS3 Atoms, Elements & Periodic

4.1 – Chemical Equations	
Reactants	Substances which **react together**. Found on **left** side of equation.
Products	Substances **produced** in a reaction. Found on **right** side of equation.
Word Equation	Uses **names** of **substances**. e.g. iron + oxygen -> iron oxide
Symbol Equation	Uses **chemical formulas** of **substances**. e.g. 4 Fe + 3 O_2 -> 2 Fe_2O_3
Balancing Symbol Equations	Must be the **same number** of **atoms** of each **element** on **each side** of the **equation**. Balance equations by putting **large numbers** in front of formulas.
Conservation of Mass	**Mass** is **conserved** (stays the **same**) in a **reaction**. **No atoms** are **lost** or **made**. Total **mass** of **reactants** = total **mass** of **products**.

1.1 - States of Matter	
Solids 	**Particles** are **close together** and **regularly arranged**. Particles **vibrate** around **fixed positions**. **Strong forces** between particles.
	Fixed shape. **Fixed volume**. **Cannot flow**. **Cannot** be **compressed**. **High density**.
Liquids 	**Particles** are **close together** and **randomly arranged**. Particles **move around each other**. **Weak forces** between particles.
	No fixed shape. **Fixed Volume**. **Can flow**. **Cannot** be **compressed**. **Medium density**.
Gases 	**Particles** are **far apart** and **randomly arranged**. Particles **move quickly** in **all directions**. **No forces** between particles.
	No fixed shape. **No fixed volume**. **Can flow**. **Can** be **compressed**. **Low density**.

1.2 - Changes of State	
Melting	When a **solid** is **heated** and turns into a **liquid**.
Boiling / Evaporating	When a **liquid** is **heated** and turns into a **gas**.
Condensing	When a **gas** is **cooled** and turns into a **liquid**.
Freezing	When a **liquid** is **cooled** and turns into a **solid**.
Subliming	When a **solid** is **heated** and turns into a **gas**.
Melting Point	**Temperature** at which a substance **melts** when **heated** or **freezes** when **cooled**. (MP of ice = **0°C**)
Boiling Point	**Temperature** at which a substance **boils** when **heated** or **condenses** when **cooled**. (BP of water = **100 °C**)

1.3 - Solutions	
Solution	A **mixture** formed when a **solute dissolves** in a **solvent**.
Solvent	The **liquid** part of a **solution** e.g. **water, ethanol**.
Solute	The substance **dissolved** in the **solvent** e.g. **sugar, salt, carbon dioxide, copper sulphate.**
Soluble	Will **dissolve** in a **solvent** e.g. **sugar in water**.
Insoluble	Will **not** **dissolve** in a **solvent** e.g. **sand in water**.
Saturated Solution	A **solution** that contains the **maximum** amount of **solute** that can be **dissolved** at that particular **temperature.**

1.4 - Separating Mixtures	
Filtration 	**Separates** an **insoluble solid** from a **mixture**. E.g. sand from water.
	Pour **mixture** through **filter paper** in a **funnel**. **Collect filtrate** in a **conical flask**. **Residue** collects in **paper**.

1 – Structure of Atoms	
Atoms	**All substances** are made of **atoms**. **Radius** of atom = **0.1 nm** (**1 x 10 $^{-10}$ m**)
Protons	Mass = **1**, charge = **+1**, location = **nucleus**.
Neutrons	Mass = **1**, charge = **0**, location = **nucleus**.
Electrons	Mass = **very small**, charge = **-1**, location = **shells.**
Nucleus	Most of the **mass** is **concentrated** here. **Positively** charged. **Radius** of nucleus = **1 x 10^{-14} m** (**1/10000** of radius of atom).
Shells / Energy Levels	**1st shell** = **2** electrons max, **2nd shell** = **8** electrons max, **3rd shell** = **8** electrons max.
Overall Charge on Atom	**Zero charge** (neutral) because **proton** charge = **+1**, **electron** charge = **-1**. **Same number** of protons and electrons so **charges cancel** out.

2 - Atomic Number, Mass Number and Isotopes	
Atomic number	Number of **protons**. (Also gives number of electrons)
Mass number	**Total** number of **protons** and **neutrons**.
Isotopes	Atoms of the **same element** with **same** number of **protons** and **different** numbers of **neutrons**.
Relative Atomic Mass (A_r)	The **weighted average** of the masses of all of the isotopes of an element
Calculating A_r	1. **Multiply** each **mass** by the **% abundance**. 2. **Add** them up. 3. **Divide** by **100**.

3 – History of the Atom	
Dalton's Model	Described atoms as **tiny solid spheres**.
Plum Pudding Model	Described atoms as a **ball** of **positive charge** with **negative electrons** stuck in it.
Rutherford's Experiment	**Fired** positive **alpha** particles at a thin sheet of **gold**.
Rutherford's Result	**Most** alpha particles went **straight through** or slightly **scattered**. Very small number **deflected** back.
Rutherford's Explanation	Nucleus is **tiny** and **positively** charged. Most of the atom is **empty space**. **Cloud** of negative **electrons** surround nucleus.
Bohr's Nuclear Model	Discovered that **electrons** orbit the nucleus in **fixed shells**.
Protons & Neutrons	**Rutherford** discovered **protons**. Later, **Chadwick** discovered **neutrons**.

4 – Elements, Compounds, Mixtures and Separation Processes	
Element	A substance made up of **one type** of **atom**.
Compound	A substance made up of **two** or **more types** of **atom** **chemically joined** together.
Mixture	A substance made up of **two** or **more substances** mixed together but **not chemically joined**.
Filtration	Separates an **insoluble solid** from a **liquid** using **filter paper**.
Evaporation	**Heat** solution to **evaporate** liquid until **dry crystals** are left.
Crystallisation	**Heat** solution until **crystals** form, leave to **cool**, **filter** out crystals and leave to **dry**.
Distillation	Separates out a **liquid** from a **mixture**. Liquid **evaporates** then **condenses**. Two types – **simple** and **fractional**.
Chromatography	Separates a **mixture** of **coloured liquids**.

GCSE Science

Chemistry C1 – Atomic Structure

1 – Modern Periodic Table	
Periodic Table	**118 elements** in order of **atomic number**.
Groups	Vertical **columns**. Contain elements with **similar chemical properties**.
Group number	Tells you the **number** of **electrons** in the **outer shell**.
Periods	Horizontal **rows**.
Period Number	Tells you the **number** of **shells**.
Metals	Found on **left** side. **Conductors** of **heat** and **electricity**, **strong, malleable** and **high melting** and **boiling** points.
Non-metals	Found on **right** side. **Insulators** of **heat** and **electricity**, **dull**, **brittle**, **lower melting** and **boiling** points.

2 – Development of Periodic Table	
Early tables	**Fewer elements** (e.g. no noble gases). Arranged in **order** of **atomic weight** (no knowledge of atomic number yet).
Newland's table	Not well accepted. Elements in **same group** often had **different properties**, some boxes had **2 elements.**
Mendeleev's table	Well accepted. Left **gaps** for **undiscovered** elements and **switched places** of some to ensure elements with **similar properties** in **same group**.
Mendeleev's predictions	Used table to **predict properties** of **undiscovered** elements. Turned out to be **correct**.

3 – Group 1 Alkali Metals (lithium, sodium, potassium)	
Properties	**Soft**, **low density**, **shiny** when **cut** but **quickly** go **dull** when they **react** with **oxygen** in air.
Reactions with water	**Vigorous** reactions - produce an **alkaline solution**. **metal** (s) + **water** (l) -> **metal hydroxide** (aq) + **hydrogen** (g)
Reactions with chlorine	Produce a **white metal chloride salt**. **metal** (s) + **chlorine** (g) -> **metal chloride** (s)
Reactions with oxygen	Forms **dull metal oxide layer**. **metal** (s) + **oxygen** (g) -> **metal oxide** (s)
Trends down the group	**Increasing reactivity** and **decreasing melting** and **boiling points**.

4 – Group 7 Halogens (fluorine, chlorine, bromine, iodine)	
Properties	Fluorine = **pale yellow gas,** chlorine = **yellow-green gas**, bromine = **red-brown liquid**, iodine = **grey solid** with **purple vapour.**
Diatomic Molecules	Made of **pairs** of **atoms** –> **F_2, Cl_2, Br_2, I_2.**
Trends down the group	**Decreasing reactivity** and **increasing melting** and **boiling points**.
Reactions with metals	React with metals to form **metal halide salts.**
Displacement Reactions	A **more reactive** halogen can **displace** a **less reactive** halogen from its **salt.**

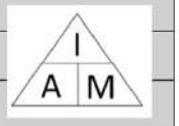
5 – Group 0 Noble Gases (helium, neon, argon, krypton)	
Properties	**Inert** (very **unreactive**), **colourless** gases, **non-flammable**.
Electrons	**Full outer shell** of **electrons** –> very **stable** -> do not **react**.
Trends down the group	**Increasing boiling point**.

GCSE Science

Chemistry C1 – Periodic Table

1 – Cell Structure and Specialised Cells	
Eukaryotic Cell	**Complex** cell with a **nucleus**.
Prokaryotic Cell	Small **simple** cell with **no nucleus**.
Prokaryotic DNA	Stored as **single DNA loop** or small **rings (plasmids).**
Ribosomes	Where **proteins** are **synthesised**.
Cell Wall	Made of **cellulose** -> **strengthens** plant and algal cells.
Sperm cells	**Fertilise** egg cells. Carry **male DNA**. **Tail** for **swimming**. Many **mitochondria**. **Enzymes** in head. **Half** a set of **DNA**.
Nerve cells	Carry **electrical signals**. **Long** and **branched** at the ends.
Muscle cells	Specialised for **contraction**. Cells are **long** and contain many **mitochondria**.
Root hair cells	**Absorb water** and **minerals** from the soil. Root hair **projections** provide a **large surface area.** No **chloroplasts.**
Xylem Cells	Form tubes that transport **water** and **minerals** around plant -> **dead** cells -> **no end walls.**
Phloem Cells	Form tubes that transport **dissolved food** around plants -> **living** cells -> **small pores** in **end walls.**

2 - Microscopy	
Magnification	Higher **magnification** = **larger** image.
Resolution	Higher **resolution** = **clearer** image.
Equation	**Magnification = Image size / Actual size**
Units	From **mm** to **µm x 1000.** From **µm** to **mm ÷ 1000.**
Preparing an Onion Slide	Peel **thin layer** with **tweezers** -> place on **slide** -> add **iodine stain** -> lower **cover slip** gently to avoid bubbles.
Using a Light Microscope	Place on **stage** -> use **lowest** power **objective lens** -> adjust with **course focus** then **fine focus** -> **repeat** with **higher magnification** if needed.
Electron Microscope	Higher **magnification** and **resolution** than a **light** microscope.



3 – Cell Cycle and Stem Cells	
Chromosomes	Molecules of **DNA**, **23 pairs** found in **nucleus,** carry **genes.**
Cell Cycle	Three stages -> **growth & DNA replication**, **mitosis** and **cell division**.
Growth & DNA Replication	Cell **grows** -> number of **subcellular structures increases** -> **DNA replicates** -> forms **X shaped chromosomes**.
Mitosis	Cell division. **Chromosomes line up** in centre -> **pulled** apart by **fibres** -> **two nuclei** formed -> cytoplasm and **cell membrane divides**. Creates two **identical daughter cells.**
Differentiation	Process by which **cells** become **specialised.**
Stem Cells	**Undifferentiated** cells -> can become different **types** of **cell**.
Embryonic Stem Cells	**Grown in lab** -> made to **specialise** -> used to **replace faulty cells** -> treats disease **e.g. diabetes** and **spinal damage.**
Adult Stem Cells	Cells transferred from **bone marrow** -> replaces **faulty blood cells** in patient.
Plant Stem Cells	Found in **meristems** (tissues in the **tips** of **roots** and **shoots**) -> used to **produce clones** of **rare species** and crops with **desired features** (e.g. disease resistance).

4 – Cell Transport	
Diffusion	**Net movement** of particles -> from a **higher to lower concentration** -> **down** a **concentration gradient.**
Osmosis	**Net movement** of **water** molecules -> across a **partially permeable membrane** -> from a **higher** to **lower** water concentration -> **down** a **concentration gradient**.
Active Transport	**Movement** of particles -> from a **lower** to **higher** concentration -> **against** a **concentration gradient** -> requires **energy**.
Factors that Increase Rate of Cell Transport	**Steeper concentration gradient**, **larger surface area**, **shorter diffusion pathway**.

GCSE Science

Biology B1 – Cell Biology

DAA CYCLE 1 Knowledge Organiser	SUBJECT	Science	TOPIC(S)	Cells	YEAR GROUP	9

2.1 - Living Organisms	
Living Organisms	**Living things** that are made of **cells** and carry out the **seven life processes.**
Seven Life Processes	**Movement, Reproduction, Sensitivity, Nutrition, Excretion, Respiration, Growth.** (MRS NERG)
Unicellular	Living organisms made from only **one cell**.
Multicellular	Living organisms made from **many cells**.
2.2 - Parts of the cell found in both plant and animal cells.	
Nucleus	**Controls** the **cell's activities**. Contains **genetic information** (DNA).
Cell Membrane	**Controls** what **enters** and **leaves** the cell.
Cytoplasm	**Jelly-like fluid** where **chemical reactions** occur.
Mitochondria	Where **respiration** occurs which **releases energy** for the cell.
2.3 - Parts of the cell found in only plant cells.	
Cell Wall	**Supports** and **strengthens** the cell.
Chloroplasts	Where **photosynthesis** occurs which makes **food** for the plant. Contains a **green chemical** called **chlorophyll** which **absorbs light**.
Vacuole	Contains **cell sap**.
2.4 - Specialised Cells	
Sperm Cell	**Fertilise** egg cells. Carry **male DNA**. **Tail** to help it **swim**. Many **mitochondria**. **Enzymes** in head. Half a set of **DNA**.
Egg Cell	Contains **female DNA**. Cytoplasm contains **nutrients**. **Cell membrane** only allows **one sperm** in. Half a set of **DNA.**
Red Blood Cell	Carry **oxygen**. **No nucleus**. **Large surface area**.
White Blood Cell	Fight **infections** caused by **micro-organisms**.
Cilia Cell	Tiny **hairs** to sweep **mucus** (containing **bacteria**) out of the **airways**.
Nerve Cell	Carry **electrical signals**. **Long** and **branched** at the ends.
Root Hair Cell	**Absorbs water** and **minerals** from the soil. **Root hair projections** provide a **large surface area**. No **chloroplasts**.
Palisade Cell	Found in **leaves**. Contains many **chloroplasts** for **photosynthesis**.

2.5 - Body Organisation	
Cell	Basic **building block** of life.
Tissue	Group of **similar cells** working together.
Organ	**Different tissues** working together.
Organ System	**Different organs** working together.
Organism	**Different organ systems** working together.
2.6 - Respiration	
Respiration	**Chemical reaction** that occurs in all living organisms.
	Releases energy for **movement, growth and warmth**.
Aerobic Respiration	Requires **oxygen.**
	glucose + oxygen -> carbon dioxide + water (+ energy)
Anaerobic Respiration	Does **not** require **oxygen** – happens in **muscle cells** during **exercise.**
	glucose -> lactic acid (+ energy)
	Lactic acid causes **muscle cramps**.
2.7 - Photosynthesis	
Photosynthesis	Produces **food (glucose)** for plants. Occurs in **chloroplasts**.
	carbon dioxide + water ---Sunlight---> **glucose + oxygen**
Chlorophyll	**Green chemical** which **absorbs energy** from **sunlight** needed for **photosynthesis**.
2.8 - Diffusion	
Concentration	**Number** of **particles** in a **given volume**.
Diffusion	**Movement** of **particles** from an area of **higher concentration** to an area of **lower concentration.**
Factors increasing the rate of diffusion into / out of cells.	**Large surface area.**
	Short distance e.g. thin cell walls
	Steep concentration gradient i.e. large difference between the higher and lower concentration.

DAA CYCLE 1 Knowledge Organiser	SUBJECT	Geography	TOPIC(S)	Urban Issues	YEAR GROUP	9

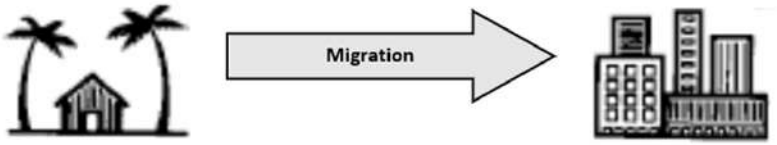
Urban Issues & challenges - global

Key terms (Week 1&5)

Birth rates	Number of births per 1000/ year
Death rate	Number of deaths per 1000/ year
Natural Change	Difference between birth & death rate (can be increase or decrease)
Rural	Area characterised as a sparse population and open space with mainly green areas
Urban	Area characterised as a dense population with limited open space and many buildings
Urbanisation	An increase in the proportions of people living in towns and cities
Migration	The movement of people from one place to another to live
Push factor	A reasons why people leave a place e.g. a lack of access to healthcare
Pull factor	Something attracting people to an area to live e.g. Better job opportunities
Mega city	City with a population of over 10 million people. Tokyo is the biggest with 38 million people
Squatter settlement	Poorly constructed, illegal area of a city built by people due to a lack of houses. Often called **shanty towns** or **slums**. Limited services found in them.
Informal sector	Jobs made by people themselves in cities due to a lack of formal employment e.g. rag-picker. People in these jobs don't pay taxes

Rural to urban migration (week 2)

Poorly paid primary jobs	Access to better paid jobs
Limited education	Education up to university
Lack of healthcare	Hospitals
Limited access to clean water	Clean water systems
Little or no sanitation	Sanitation



3. Importance of Mumbai (week 3)

- Rapidly growing population, 20 million+
- Globally connected via ship & plane trade links
- Many global companies located in city
- Financial capital with Mumbai stock-exchange
- Centre of Bollywood film & media industry
- Connected by road, rail and air to the rest of India
- Wealthiest city in India

Mumbai challenges & solutions (week 4&6)

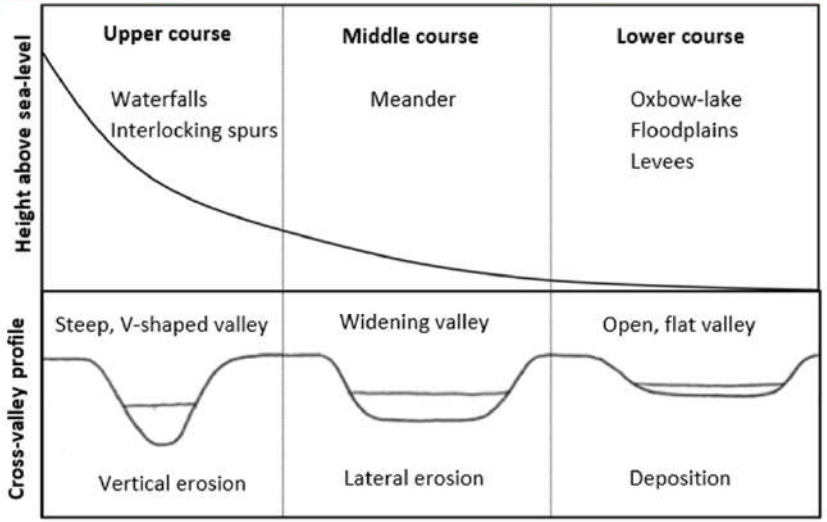
Challenges	Solutions
Improving housing for the 40% of residents in slums	Plans to flatten the slums, replace them with high-rise buildings
Increasing **access to clean water**. Over 50% lack access to this	New high-rise buildings will have clean piped water
Sanitation in the slums; up to 500 people share one public toilet	Build community toilet blocks in areas that aren't redeveloped
Poor **air quality** from industrial practice and vehicles fumes	Urban Air Quality Management Initiative (UAQMI) set up
Level of waste; Mumbai produces 75000+ tonnes of waste daily	New housing & road development will allow waste collection
Traffic congestion, over 3 million commute into the city daily	New technology to use traffic lights to maximise vehicle flow
Crime, nearly one third of the population have been victims	New buildings will be more secure and police can access more easily
Overcrowding, diseases spread easily, e.g. dysentery & typhoid.	Building high-rise apartments will allow more to live in same space

River landscapes in the UK

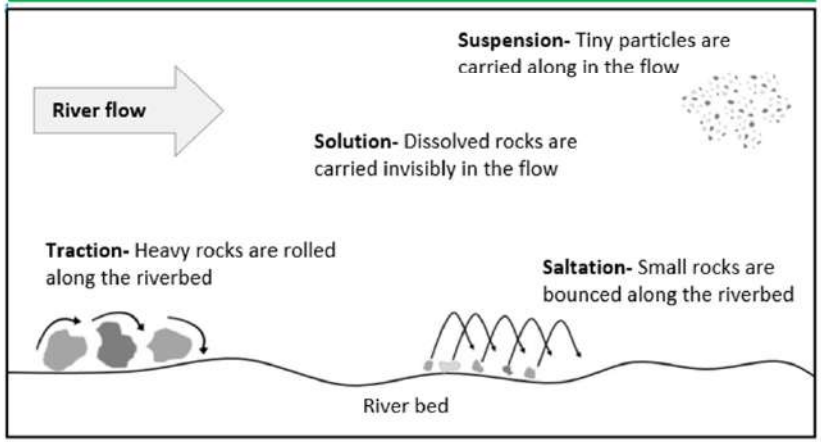
Key terms (week 7 & 13)

Erosion	The wearing away and removal of material by the moving force of the river. Can be vertical (straight down), lateral (to the sides), or both
Weathering	The break-up of rocks where they are found due to natural forces such as temperature and vegetation
Long profile	The gradient of a river, from its source to its mouth
Source	Start of the river, normally in mountainous areas
Mouth	The end of a river where it enters the sea or a lake
Cross-profile	The side to side cross-section of a river channel or valley
Discharge	The quantity of water that passes a given point on a stream or river-bank within a given period of time.
Flood	When river discharge exceeds river channel capacity and water spills out of the channel onto the surrounding areas
Hydrograph	A graph which shows the discharge of a river, related to rainfall, over a period of time
Hard engineering	Building artificial structures using various materials such as rock or concrete to reduce, disrupt or stop river processes.
Soft engineering	Uses the natural environment surrounding a river, using schemes that work with the river's natural processes.

River changes from source to mouth (week 8)



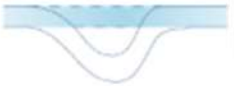
Transportation in a river (week 9)

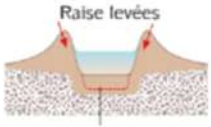


Hard Engineering (week 11)

Build Dams & reservoirs: Hold back flood water, even out river flow

Straighten: Water leaves area quickly





Embankments: Make the channel bigger, less flooding

Soft engineering (week 12)

Flood warning: Give people time to prepare in advance of floods

Plant tree: Less water reaches the river as trees soak it up

Zonation: Keep houses & business away from rivers, use these for crops & parks

DAA CYCLE 1 Knowledge Organiser	SUBJECT	History	TOPIC(S)	What caused and ended the First World War	YEAR GROUP	9

1 Militarism	
Key Term	**Definition**
Arms Race	Competition to make the largest military
Dreadnought	Largest battleship created (1906)
Navy	Military used at sea
Militarism	Desire to have the strongest military

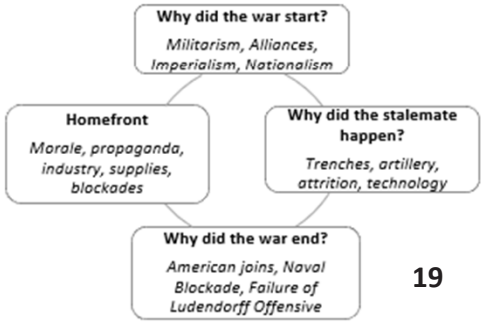
Nation	Key Facts 2
Britain	Largest Navy. Largest empire. Experienced army
Germany	Strong military culture. Growing navy. Well-prepared
France	Outdated army. Aging military leaders. Large army
Russia	Largest army by far. Outdated equipment and tactics. Politically unstable
America	Modern army. Unaffected by the war in Europe. Isolationist until 1917

3 Alliances	
Key Term	**Definition**
Triple Entente	Britain, France, Russia
Triple Alliance	Germany, Austria-Hungary, Italy
Encircled	Surrounded by other nations
Alliance	Agreement between nations

Date	Alliance
1879	Dual Alliance (Germany and Austria-Hungary)
1882	Triple Alliance
1894	Franco-Russian Alliance (France and Russia)
1907	Triple Entente

4 Crisis	Consequence
1905 First Moroccan Crisis	Germany embarrassed at international conference, alliances strengthen
1908 Austria Hungary annex Bosnia	Pan-Slavism increases, Russia back down from war, tension increases
1911 Second Moroccan Crisis	Germany back down and lose colonies, tension at its highest point
1912-1913 Balkan Wars	Austria-Hungary defeated, Ottomans pushed from Europe, nationalism increases

5 Imperialism	
Key Term	**Definition**
Crisis	A time of difficulty or danger
Place in the Sun	Germany's desire to have an Empire
Annex	To take someone else's territory
Imperialism	The desire to increase the size of an Empire



6 Nationalism	
Key Term	**Definition**
Weltpolitik	Germany's desire to be a world power
Pan-Slavism	The movement towards Slavic unity
Isolationism	Desire to take no part in international affairs
Nationalism	Zealous love of one's country over other countries

7 Nation	Culture
German	• Strong military culture • "Young" nation wanting to make history • Ambitious leader • Desire for power on a global stage
British	• Largest global empire • Historically dominant at sea • Wealthy and proud of prominence
Slavic	• Frustrated at Austro-Hungarian imperialism • Nationalist secret societies
France	• Historic rivalry with Germany from 1870 • Wealthy Empire • Historically powerful, but outdated against Germany

DAA CYCLE 1 Knowledge Organiser	History	History	TOPIC(S)	What caused and ended the First World War	YEAR GROUP	9

1

Stalemate

Battle	Nations	Key Moments	Casualties	Consequence
Marne Sept 1914	Germany France	• France stop the German Schlieffen Plan at the Marne river & defend Paris	• 250,000 French • 260,000 German	• German advance stops • Paris protected • Stalemate begins
Verdun Feb-Dec 1916	France Germany	• German general Falkenhayn begins attritional warfare	• 355,000 German • 400,000 French	• France defends Verdun • Britain supports defenders
Somme July-Nov 1916	Britain France Germany	• Heavy British losses in early stages • First use of tank	• 420,000 British • 440,000 German • 200,000 French	• Minimal territorial gain • Germany eventually fall back to Hindenberg line
Passchendaele July-Nov 1917	Britain France Germany	• Quagmire conditions • Constant heavy rain	• 240-400,000 British and French • 200-400,000 German	• British victory • Very heavy losses • Germany badly weakened

3

End of the War

Event	Cause	Consequence
Jutland May – June 1916	• German fleet attempts to break British Naval dominance • No clear victor • German fleet destroyed, British fleet still dominant	• Germans adopt U-Boat warfare • German fleet destroyed • Naval blockade
Russian Revolution February 1917	• Russia suffers heavy casualties on Eastern Front • Russian population starving and angry • Russian Tsar deeply unpopular	• Russia leaves the war • German troops redeployed to Western Front
America joins the war 1917	• Lusitania sunk May 1915 • Zimmerman Telegram 1917 • Submarine warfare damages US ships	• USA commits 2 million troops to war • 90,000 tonnes of meat • USA finances allies
Ludendorff Offensive March 1918	• Germany has more troops on Western Front • America is joining war, German chance of victory is shrinking	• Initial German victory • Unsustainable German advance • German troops cut off and captured
100 Days Offensive August 1918	• Germans are weakened and on brink of defeat • Unified command under General Foch • American troops join allies	• Significant allied territory gains • German army in full retreat • Allied victory close
Kaiser Wilhelm abdicates Nov 1918	• German civilian and military morale at breaking point • Kiel mutiny shows military no longer follows Kaiser's orders • German people starving from the blockade	• Germany cannot continue with war • Armistice signed November 1918

2

Key Term	Definition
Stalemate	When neither army could make a decisive move
Trench	Defensive ditch or fortification soldiers fought and lived in
Artillery	Long-range explosive weapon
Bombardment	Prolonged artillery attack on defences
Shell-shock	PTSD for soldiers following bombardments
Attrition	Grinding down the enemy
Trench-foot	Foot condition soldiers contracted standing in muddy trenches
Tank	Heavily armoured fighting vehicle
Shrapnel	Metals shards that came from explosives, wounding soldiers
No Man's Land	Area of land between two armies' trenches
Outflank	Move around the enemy to attack from a better position
Blockade	Cutting a location off from all supplies and trade
U-Boat	German submarine
Abdicate	Monarch gives up their title
Storm-Troopers	Elite German shock-troops
Mutiny	Soldiers refusing to follow commanders' orders
Armistice	Agreed ceasefire
Homefront	The civilian world during war
Morale	The overall mood of a group of people

DAA CYCLE 1 Knowledge Organiser	SUBJECT	RE	TOPIC(S)	What caused and ended the First World War	YEAR GROUP	9

Trinity	God is the Father, Holy Spirit & Son	**Salvation**	Saving the soul from sin
Incarnate	God is Jesus/Human in flesh	**Resurrection**	Jesus raised from dead
Ascension 1 & 2	Jesus rose up to heaven 40 days after his resurrection & teaching his final lessons.	**Omnipotence** **Omniscience** **Omnibenevolence**	All-powerful All-knowing All-loving
Just **Crucifixion**	God is fair The killing of Jesus/suffering on cross	**Impersonal**	God is beyond human understanding
Stewardship	Humans are carers of the earth	**Grace**	God's unconditional love
Influence *– How does something affect you, inspire you, does it compel certain actions?*			
Similar *– Are there any beliefs, teachings & quotes that are similar?*			

3	**Nature of God**	**The Trinity**	**The Bible** teaches,	**Atheists** argue,
	• Christians see God as: Just, graceful, omnipotent, omnibenevolent, omniscient & merciful • Christians pray to Him; ask for forgiveness	• Christians see God in 3 ways: The Father in heaven, the Holy Spirit that inspires us & the son incarnate – Jesus	• *'I am always with you'* • *'You'll receive power with the Holy Spirit'* • *'Obey God not men'*	• Freud argues God is only in the human mind • God is not real you can't see him / his power

4	**The Creation Story**	**Problem of Evil**	**The Bible** teaches,	**Atheists** argue,
	• Book of Genesis says how God made the world; • Day 1: God made light • Day 2: heavens & earth • Day 3: land & sea • Day 4: Sun, Moon/Stars • Day 5: Fish & birds • Day 6: Animals/humans • Day 7- God rested • We are stewards of the earth	• If an all-loving God exists, how can He allow humans to suffer in the world? Moral (human) evil / natural (beyond this) • Floods, famine, diseases, war…	• *'God made the heavens & earth'* • ***The Prodigal Son****: A father forgives & welcomes his son back after his losses* • ***The Story of Job****: life is a test. Job loses his wealth & family but God returns it testing his faith through suffering.*	• God should not make people suffer; • If God created the world why is it not perfect? Why are their floods, natural & moral evil?

5	**The Original Sin**	**The Bible** teaches,	**Influence**
	• Adam & Eve ate from the forbidden tree inspired by Satan • Everyone sins no one is perfect (Adam/Eve) • Sin breaks God's Law causes separation • Jesus' death atones (makes up) for our sins.	• *'Faith without good action is dead faith'* • *'Christ died for our sins'*	• Wrongs can be made right with the right intention • We must be careful with our freedom

6	**Incarnation**	**The Bible** teaches,	**Some** argue,
	• God comes to the earth as a human • Mary gives birth to a son through the Holy Spirit • Christians appreciate God's link to humanity • God is fully human & divine	• *'The Word (God) became flesh'*	• Difficult to understand – how can an omnipotent God be human at the same time? • Can be seen as a miracle

7	**Crucifixion**	**The Bible** teaches,	**Some** argue,
	• Jesus was nailed to a cross & killed • He spoke to God saying he felt abandoned • This act atoned for everyone's sins • Jesus betrayed by Judas for 30 silver pieces	• *'Jesus died for our sins'* • *Jesus predicts own death*	• Crucifixion reminds Jesus' pain & sacrifice / moral evil • Important for atonement – Christians work to do no sin

8	**Resurrection**	**The Bible** teaches,	**Influence**
	• Jesus rose from the dead on the 3rd day after his crucifixion • Jesus' risen body was different & glowed	• *'Jesus had risen'* • *'The body raised is imperishable'*	• Resurrection possible for everyone • Shows God's power

9	**Salvation**	**The Bible** teaches,	**Influence**
	• Salvation cannot be achieved if you sin • We can achieve salvation by: following God's Law, Holy Spirit & His grace • Jesus spent 40 days spreading God's word	• *'Your word is a lamp'* • *'Obey God rather than men'*	• Christians follow Jesus • Salvation & grace must be taught to others • Some baptise themselves

10	**Ascension**	**The Bible** teaches,	**Influence**
	• After 40 days of resurrection, Jesus rose up to heaven • Jesus told disciples to carry on spreading Christian teachings	• *'He was lifted up'* • *'A cloud took him from their sight'*	• Christians will not stray from God's path; Jesus in heaven comforts others

11	**Afterlife & Judgement**	**The Bible** teaches,	**Influence**
	• Afterlife, God will judge you fairly • Heaven, Hell or Purgatory (in between) • The point of life is to aim for heaven	• *The Parable of Sheep & Goat (evil)* • *'Do not judge for you will be judged'*	• Ask for forgiveness • Give charity & share • Not steal or lie

12	***Tip****: Always unpack quotes*	**Where** is it from? *The Bible / Jesus teaches,*	**What** does it mean? *This means / Some Christians believe* *This influences,*	**Why** is it important? *This signifies / highlights,* *This supports / challenges,*

DAA CYCLE 1 Knowledge Organiser	SUBJECT	SPANISH	TOPIC(S)	Mis vacaciones	YEAR GROUP	9

9.1 What do you do during the summer?	
En verano… / En invierno… ↓	In summer… / In winter… ↓
Chateo en la red	I chat online
Cocino para mi familia	I cook for my family
Descargo canciones	I download songs
Escucho canciones	I listen to songs
Hago natación / esquí / windsurf	I go swimming / skiing / windsurfing
Monto a caballo / en bici	I horse ride / I ride my bike
Nado en la piscina	I swim in the pool
Nado en el mar	I swim in the sea
Salgo con mis amigos	I go out with my friends
Toco la guitarra	I play the guitar
Voy de paseo	I go for a walk

9.2 Where do you go on holiday and how do you travel?	
Voy de vacaciones a… ↓	I go in holiday to… ↓
…España	…Spain
…Francia	…France
…Gales	…Wales
…Escocia	…Scotland
…Italia	…Italy
…Pakistán	…Pakistan
…Cuba	…Cuba
…Alemania	…Germany
Voy en… ↓	I go by… ↓
…avión	…plane
…barco	…boat
…coche	…car
…tren	…train
…autocar	…coach

9.3 Where do you stay on holiday?	
Me alojo / me quedo en… ↓	I stay in…↓
…un hotel de cinco estrellas	…a five star hotel
…un parador	…a luxury state-run hotel
…un albergue juvenil	…a youth hostel
…un camping	…a campsite
…un apartamiento	…an apartment
…una pensión	…a guest house
…una tienda	…a tent

9. 4 What do you do on holiday?	
Voy a la playa	I go to the beach
Visito un castillo	I visit a castle
Tomo el sol	I sunbathe
Juego al voleibol	I play volleyball
Me baño en el mar	I bathe in the sea
Voy al parque	I go to the park
Como en los restaurantes	I eat in restaurants
Me quedo en la cama	I stay in bed
Leo libros	I read books
Esquío	I ski
Hago senderismo	I go hiking
Cuando… ↓	When… ↓
hace sol	it is sunny
hace calor	it is hot
hace viento	it is windy
Llueve	it is raining
hay niebla	it is foggy
hace mal tiempo	it is bad weather
hace buen tiempo	it is good weather
nieva	it is snowing

9.5 Where did you go on holiday?	
El año pasado / El verano pasado / Hace (tres) años… ↓	Last year / Last summer / (Three) years ago… ↓
Fui de vacaciones a…	I went on holiday to..
Fui con… ↓	I went with… ↓
…mi familia	…my family
…mi instituto	…my school
…mi mejor amigo	…my best friend
…mis abuelos	…my grandparents
…mis primos y mis tíos	…my cousins and my aunt and uncle
Me alojé en / Me quedé en…	I stayed in…
Lo mejor / peor fue cuando…	The best / worst thing was when…
Aprendí a <u>hacer</u> vela	I learned to sail
Comí helados	I ate ice-cream
Compré recuerdos	I bought souvenirs
Descansé	I relaxed
Fui a la playa	I went to the beach
Fui al acuario	I went to the aquarium
Fui al parque acuático	I went to the water park
Hice turismo	I went sightseeing
Saqué fotos	I took photos
Perdí mi pasaporte / móvil	I lost my passport / mobile
Tomé el sol	I sunbathed
Vi un partido	I saw a match
Visité…	I visited…
Hizo sol / calor / frío / viento	It was sunny / hot / cold / windy
Hizo buen / mal tiempo	It was good / bad weather
Hubo niebla / tormenta	It was foggy / stormy
Llovió	It rained
Nevó	It snowed

9.6 Accommodation	
Estaba cerca de la playa	It was close to the beach
Estaba en el centro	It was in the centre
Estaba en las afueras	It was on the outskirts
Era… ↓	It was.. ↓
…acogedor(a)	…welcoming
…antiguo/a	…old
…barato/a	…cheap
…caro/a	…expensive
…lujoso/a	…luxurious
…moderno/a	…modern
…pequeño/a	…small
…ruidoso/a	…noisy
…tranquilo/a	…quiet
…grande	…big
Tenía / Había…	It had / There was / were…
No tenía ni… ni…	It had neither…nor..
No había ni… ni…	There was neither…nor…
Tampoco tenía…	Neither did it have…
…(un) aparcamiento	…a car park
…(un) bar	…a bar
…(un) gimnasio	…a gym
…(un) restaurante	…a restaurant
…(una) lavandería	…a launderette
…(una) piscina (cubierta)	…a (indoor) swimming pool
…(una) playa privada	…a private beach
…muchos espacios verdes	…lots of green spaces

DAA CYCLE 1 Knowledge Organiser	SUBJECT	SPANISH	TOPIC(S)	Mis vacaciones	YEAR GROUP	9

9.7 Verb tenses & time phrases		
Voy	*Present tense*	I go
Viajo	*Present tense*	I travel
Me alojo / Me quedo	*Present tense*	I stay
Es	*Present tense*	It is
Son	*Present tense*	They are
Hay	*Present tense*	There is / there are
Me gusta	*Present tense*	I like
Prefiero	*Present tense*	I prefer
Hice	*Preterite tense*	I did
Celebré	*Preterite tense*	I celebrated
Fui	*Preterite tense*	I went
Fuimos	*Pretertite tense*	We went
Hice	*Preterite tense*	I did
Monté	*Preterite tense*	I rode
Vi	*Preterite tense*	I watched
Salí	*Preterite tense*	I went out
Nadé	*Preterite tense*	I swam
Leí	*Preterite tense*	I read
Recibí	*Preterite tense*	I received
Saqué	*Preterite tense*	I took
Mandé	*Preterite tense*	I sent
Voy a ver	*Immediate future*	I am going to watch
Voy a ir	*Immediate future*	I am going to go
Vamos a comprar	*Immediate future*	We are going to buy
Voy a comer	*Immediate future*	I am going to eat
Voy a hacer	*Immediate future*	I am going to do / make
Vamos a beber	*Immediate future*	We are going to drink
Me gustaría ir	*Conditional*	I would like to go
Me gustaría montar	*Conditional*	I would like to ride
Me gustaría jugar	*Conditional*	I would like to play

9.8 How was the holiday?	
Me gustaron las vacaciones	I liked the holidays
Me encantaron mis vacaciones	I loved my holidays
Lo pasé bomba / fenomenal	I had a great time
Lo pasé bien / mal / fatal	I had a good / bad / awful time
Fue… ↓	It was… ↓
…inolvidable / increíble	…unforgettable / incredible
…impresionante / flipante	…impressive / awesome
…horroroso	…awful
…un desastre	…a disaster

9.9 Ideal holidays	
Si tuviera mucho dinero… ↓	If I had a lot of money… ↓
Si tuviera la oportunidad… ↓	If I had the opportunity… ↓
Si pudiera… ↓	If I could… ↓
Si ganara la lotería… ↓	If I would the lottery… ↓
…iría a…	…I would go to…
…viajaría en…	…I would travel by…
…me alojaría en…	…I would stay in…
…sería…	…it would be…
Sacaría fotos	I would take photos
Haría piragüismo	I would do canoeing
Haría sol / calor	It would be sunny / hot

DAA CYCLE 1 Knowledge Organiser	SUBJECT	SPANISH	TOPIC(S)	Mis vacaciones	YEAR GROUP	9

9.10 At the accommodation and making a booking	
¿Cuánto cuesta una habitación?	How much is a room?
Quisiera reservar una habitación individual / doble…	I would like to reserve a single / double room…
…con / sin balcón	…with / without a balcony
…con bañera / ducha	…with a bathtub / shower
…con cama de matrimonio	…a double bed
…con desayuno incluido	…with breakfast included
…con media pensión	…with half board
…con pensión completa	…with full board
…con vistas al mar	…with a sea view
¿Para cuántas noches?	For how many nights?
Para (siete) noches	For (seven) nights
¿A qué hora se sirve el desayuno?	At what time is breakfast served?
¿Cuándo está abierto/a (el cine / la cafetería)?	When is the (cinema / café) open?
¿Se admiten (perros)?	Do you admit (dogs)?
¿Hay wifi gratis?	Is there free wifi?
¿Hay aire acondicionado?	Is there air conditioning?

9.13 Essay writing phrases	
A mi modo de ver…	In my opinion…
Que yo sepa…	As far as I know…
Diría que…	I would say that…
Si tuviera la oportunidad…	If I had the opportunity…
Como puedes imaginar…	As you can imagine…
Suelo… (+ infinitivo)	I usually… (+ infinitive)
Siempre he pensado que…	I have always thought that…
Tengo que admitir que…	I have to admit that…

9. 12 Future holidays	
El año que viene… ↓	Next year… ↓
En el futuro… ↓	In the future… ↓
…iré a…	…I will go to…
…viajaré en…	…I will travel by…
…me alojaré / me quedaré en…	…I will stay in…
Será…	It will be…
Sacaré fotos	I will take photos
Tomaré el sol	I will sunbathe
Haré piragüismo	I will do canoeing
Nadaré en el mar	I will swim in the sea
Comeré platos típicos	I will eat typical dishes

9.11 Making a complaint	
Quiero hablar con el director	I want to speak with the manager
Quiero cambiar de habitación	I want to change rooms
El ascensor no funciona	The lift isn't working
La ducha no funciona	The shower isn't working
La luz no funciona	The light isn't working
La habitación está sucia	The room is dirty
Hay ratas en la habitación	There are rats in the bedroom
No hay…	There is no…
Necesito…	I need…
…papel higiénico	…toilet paper
…jabón	…soap
…champú	…shampoo
…toallas	…towels
¡Socorro!	Help!
Lo siento / Perdone	I'm sorry

DAA CYCLE 1 Knowledge Organiser	SUBJECT	URDU	TOPIC(S)	Likes / dislikes and illness	YEAR GROUP	9

Year 9 Urdu: Cycle 1

9.1 Greetings

Urdu	Roman Urdu (pronunciation)	English
السلام علیکم	Ass slaa mu a lay kum	Hello (peace be upon you)
وعلیکم السلام	Wa a lay ku muss slaam	(reply – peace be upon you too)
نام	naam	name
عمر	umar	age
آپ	aap	you
آپ کا کیا حال ہے؟	aap kaa kyaa haal hai?	How are you?
ٹھیک	Teek	good/well
ٹھیک نہیں	Teek nehi	not good/well
خدا حافظ	khudaa hafiz	Bye! (May God protect you)
خوش آمدید	khush aamdeed	Welcome!
صبح بخیر	subah bakhair	Good Morning!
شب بخیر	shab bakhair	Good night!
شکریہ	shukriya	Thank you

Masculine and Feminine

In many languages, including Urdu, most nouns are considered to be either masculine or feminine. e.g. The Urdu word for chair *(kurrsee)* is considered to be a feminine word whereas the Urdu word for door *(darrwaaza)* is considered to me masculine.
Adjectives used to describe nouns will *agree* with them e.g. peelee kurrsee (yellow chair) and peela darrwaaza (yellow door).

9.2 Numbers (continued)

ایک	۱	ayk	one/1
دو	۲	doe	two/2
تین	۳	teen	three/3
چار	۴	chaar	four/4
پانچ	۵	paanch	five/5
چھ	۶	chhay	six/6
سات	۷	saat	seven/7
آٹھ	۸	aaTh	eight/8
نو	۹	nau	nine/9
دس	۱۰	dass	ten/10
گیارہ	۱۱	gyaarah	eleven/11
بارہ	۱۲	baarah	twelve/12
تیرہ	۱۳	tayrah	thirteen/13
چودہ	۱۴	chaudah	fourteen/14
پندرہ	۱۵	pandrah	fifteen/15
سولہ	۱۶	solah	sixteen/16
سترہ	۱۷	satrah	seventeen/17
اٹھارہ	۱۸	aThaarah	eighteen/18
انیس	۱۹	unneess	nineteen/19
بیس	۲۰	beess	twenty/20
آپ کی عمر کیا ہے؟	aap kee umar kyaa hai?		What is your age?
میری عمر ___ سال ہے۔	mayree umar ___ saal hai.		my age is ___ (years).

9.3 Likes & Dislikes – pasand & naapasand

مجھے ___ پسند ہے۔	mujhay __ pasand hai	I like __ .
مجھے ___ ناپسند ہے۔	mujhay __ naapasand hai	I dislike __ .
مجھے ___ اتنا پسند نہیں ہے۔	mujhay __ itnaa pasand nehi	I don't like __ that much
مجھے ___ بہت پسند ہے۔	mujhay __ bahut pasand hai	I like __ a lot
مجھے ___ سے نفرت ہے۔	mujhay _ say naffrat hai	I hate __.
میں ___ برداشت نہیں کر سکتا / سکتی۔	mai __ barrdaasht nehi karsaktaa/ee	I can't stand __.
مجھے ___ دلچسپ لگتا ہے۔	mujhay __ dillchasp lagtaa hai.	I find__ interesting.
مجھے ___ کا شوق ہے۔	mujhay __ kaa shawq hai.	I am interested in __.

Pronouns

Urdu does not have different pronouns (he,she,they etc.) for masculine/feminine or singular/plural. All you need to look at is if someone/thing is here or there. If it is here, we use *yay*. If it is there, we use *wo*.
So, the word *wo* is used for ***that*** and also, **he, she, they** and **it**. Similarly, *yay* is used for ***this*** and also for **he, she, they** and **it.**

9.4/5 Birthdays, Months and Higher Numbers

آپ کی سالگرہ کب ہے؟	aap kee saal-ghira kab hai?	When is your birthday?
میری سالگرہ	mayree saal-ghira	My birthday
---میں ہے۔	___ may hai	is in ___
---کو ہے۔	___ ko hai	is on ___
یکم ---	yakam ___	first of (month)

اکیس	۲۱	ikkeess	twenty-one/21
بائیس	۲۲	baaeess	twenty-two/22
تئیس	۲۳	taeess	twenty-three/23
چوبیس	۲۴	chaubeess	twenty-four/24
پچیس	۲۵	pacheess	twenty-five/25
چھبیس	۲۶	chhabbeess	twenty-six/26
ستائیس	۲۷	staaeess	twenty-seven/27
اٹھائیس	۲۸	aThaaeess	twenty-eight/28
انیس	۲۹	unteess	twenty-nine/29
تیس	۳۰	teess	thirty/30
اکتیس	۳۱	ikatteess	thirty-one/31
پینتیس	۳۵	painteess	thirty-five/35
چالیس	۴۰	chaaleess	forty/40
پینتالیس	۴۵	paintaaleess	forty-five/45
پچاس	۵۰	pachaass	fifty/50

DAA CYCLE 1 Knowledge Organiser	SUBJECT	URDU	TOPIC(S)	Likes / dislikes and illness	YEAR GROUP	9

9.6 Feeling unwell		
آپ کو کیا مسئلہ ہے؟	Aap ko kya mas'alah hai?	What is the problem?
مجھے دردِ سر ہے۔	Mujhay dard-e-sarr hai	I have a headache
مجھے بخار ہے۔	Mujhay bukhaar hai	I have a fever
میرا گلا خراب ہے۔	Mayra galaa khraab hai.	I have a sore throat
مجھے زکام ہے۔	Mujhay zukaam hai.	I have a cold
دانت میں درد	Daant may dard	Toothache
کان میں درد	Kaan may dard	Earache
پیٹ میں درد	payT may dard	Stomach ache
مجھے تھکن ہے	Mujhay thakan hai	I feel really tired

Tenses		
میں نے کھیلا	Mai nay khaylaa	I played
میں کھیلتا ہوں۔ میں کھیلتی ہوں	Mai khayltaa hoo / Mai khayltee hoo	I play
میں کھیلوں گا میں کھیلوں گی	Mai khayloongaa Mai khayloongee	I will play
مجھے کھیلنا چاہیے تھا	mujhay khaylna chahiyay thaa	I should have played
میں کھیلتا تھا۔ میں کھیلتی تھی	Mai khaylta tha / khayltee tee	I used to play

9.7 Parts of the body		
سر	sarr	head
آنکھ / آنکھیں	aankh/ay	eye/s
کان	kaan	ear/s
گردن	garrdan	neck
بازو	baazoo	arm/s
پیٹ	payT	stomach
پیٹھ	peeT	back
ٹانگ / ٹانگیں	Taang/ay	leg/s
گھٹنہ / گھٹنے	ghuTna/ay	knee/s
پیر	pair	foot/feet
مُنہ	moo	mouth
ہاتھ	haath	hand/s
ناک	naak	nose
کندہ / کندے	kanda/ay	shoulder/s
دانت	daant	teeth
انگلی / انگلیاں	ungli/yaa	finger/s
پیروں کی انگلیاں	pairo ki ungliyaa	toes
ہونٹ	haunt	lips
انگوٹھا	angooTa	big toe / thumb

9.8 Going to the Doctor's		
کتنی دیر سے آپ بیمار ہیں؟	kitnee dayr say aap beemaar hai?	How long have you been ill?
کل سے	kal say	since yesterday
دو دن سے	do din say	for two days
آپ کو آرام کرنا پڑے گا۔	aap ko aaraam karnaa paRay ghaa.	You must rest.
آپ کو زیادہ پانی پینا پڑے گا۔	aap ko zyaada paani peena paRay ghaa.	You must drink more water.

9.9 Healthy living		
صحت مند رہنے کے لیے میں۔۔۔	sihhat-mand rehnay kay liyay...	To stay healthy I ...
۔۔۔ تھوڑا کھاتا / کھاتی ہوں۔	... mai thoRa khaata/khaati hoo	...eat less.
۔۔۔ روزانہ دوڑتا / دوڑتی ہوں۔	... mai rozaana daRta/dauRti hoo	... run everyday.
۔۔۔ جلدی سوتا / سوتی ہوں۔	... mai jalldi sota/soti hoo	... go to sleep early.
۔۔۔ پھل سبزی کھاتا / کھاتی ہوں۔	phal sabzi khaata/khaati hoo	... eat fruits and vegetables

9.10 Exercise		
ورزش کرنا	warrzish karrna	to exercise
کھیلوں کا مرکز	khaylo kaa marrkaz	sports centre
وزن اٹھانا	wazn uTaana	to lift weights
سائیکل چلانا	cycle chlaana	to cycle
عموماً	umooman	normally

Notes

n – an underlined n is pronounced with a very soft *n* sound from the nose. It sounds like the letter *n* in the word *uncle* or *long*.

CaPiTaL LeTtErS – any Roman Urdu words with capital letters will be pronounced with a hard sound. e.g. *D* will be pronounced like a normal *D* in English. However, a *d* will be pronounced very softly with your tongue touching your front teeth. This is the same with *T* and *t*.

Masculine and Feminine

In many languages, including Urdu, most nouns are considered to be either masculine or feminine. e.g. The Urdu word for chair *(kurrsee)* is considered to be a feminine word whereas the Urdu word for door *(darrwaaza)* is considered to me masculine. Adjectives used to describe nouns will *agree* with them e.g. peelee kurrsee (yellow chair) and peela darrwaaza (yellow door).

High frequency words in Urdu

میں	تم	آپ	ہم	وہ	یہ	ہیں	ہے	پسند	مجھے
mai	*tum*	*aap*	*ham*	*wo*	*yay*	*hain*	*hai*	*pasand*	*mujhay*
I	you (informal)	you (formal)	we	that/he/she/ it/they	this	are	is	like	me

اچھی	اچھا	اس کی	اس کا	بھی	کیونکہ	نہیں	ہوں	میری	میرا
achee	*achaa*	*uss kee*	*uss kaa*	*bhee*	*kyoonkay*	*nehi*	*hoon*	*mayree*	*mayra*
good (feminine)	good (masculine)	his/her (feminine)	his/her (masculine)	also, as well	because	no/not/don't	(am) used with میں	my (feminine)	my (masculine)

پچھلے	اگلے	ہر روز	عام طور پر	کبھی	لیکن	خوبصورت	بڑا/بڑی	بری	برا
pichhlay	*aglay*	*har roz*	*aam taur par*	*kabhi*	*laykin*	*khoobsoorat*	*baRee/baRaa*	*buree*	*buraa*
previous/ last	next	daily	normally	sometimes	but	beautiful	big (feminine/ masculine)	bad (feminine)	bad (masculine)

تاریخ	انگریزی	حساب	سکول	پیچھے	آگے	میں	تین	دو	ایک
taareekh	*angrayzee*	*hisaab*	*school*	*peechay*	*aagay*	*may*	*teen*	*do*	*ayk*
History	English	Maths	school	behind	in front	in	three	two	one

ART: Year 9 Basic Skills

DIXONS ALLERTON ACADEMY

Section 1 Making objects look 3D

To prevent your drawings from looking flat, you should use a range of tones and marks. Pressing harder and lighter and layering with your pencil creates different tones. Use the direction of your pencil to help enhance the 2D surface, and you can also include shadows which will also help objects appear 3D.

Section 2 Markmaking

To make your drawings look more realistic, you should try to use different marks to show textures and surfaces. You can do this by changing the direction, pressure or length of your marks.

Key Vocabulary: Section 4

Scale (noun) SIZE. The size or level of something, especially when this is large.

Line (noun) Type of mark that contains both a direction and a length. curved, bent, thick, wide, broken, vertical, horizontal, blurred or freehand.

Shape (noun) A 2D area that is enclosed by a line. E.g. square, circle, rectangle.

Ellipse (noun) a regular oval shape.

Tone (verb) The lightness or darkness of something – how dark or light a colour appears.

Form (Noun) objects that have three dimensions. 3-D shape E.g. sphere or Head

Proportion (plural) the size, shape, or level of something.

Perspective (noun) representing 3D objects on a 2D surface so as to give the right impression of their height, width, depth, and position in relation to each other.

Composition (noun) the way that people or things are arranged in a painting or photograph.

Texture (noun) the feel, appearance, or consistency of a surface or a substance. "skin texture and tone"

(Verb) give (a surface) a rough or raised texture. "wallcoverings which create a textured finish"

Still Life (noun) a painting or drawing of an arrangement of objects, typically including fruit, flowers and

Painting Techniques Section 3

Sfumato the technique of allowing tones and colours to shade gradually into one another, producing a softened look.

Pointillism the practice of applying small dots of colour to a surface so that from a distance they visually blend together

Scgraffito a form of decoration made by scratching through a surface to reveal a lower layer of a contrasting colour

Texture Background adding papers and other materials to the surface of an artwork, this creates texture when you paint over it.

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	PHOTOGRAPHY	TOPIC(S)	FORMAL ELEMENTS	YEAR GROUP	9

Section 1,2,3 & 4

AO1
Research.
Using artist styles and writing about them. Using images/text from the internet, magazines , books and galleries. Independently finding further techniques to try from places such as Instagram and YouTube.

♦Research artists, find imagery and annotate your thoughts using content, form, process, mood method.

A02
Experiment to develop.
Using different materials, techniques and processes in the project. Choosing the most successful ones to develop further work.

♦Using Phone apps/photoshop/ other digital media to edit photographs in the style of a certain artist or technique. Gather different subjects and ways to capture photographs of. Think creatively using hands on/physical photography e.g. Hand drawn textures.

A03
Record.
Ability to draw, photograph, write down ideas and show how you think

♦Photographing a variety of subjects that link to the theme. This could include a range of portrait, building, landscape, object photography outside the classroom.
♦Photographs of your chosen subject/theme but in a variety of angles, styles, edits.

A04
Final piece.
Ability to make a final idea that shows all of the research you have done.

♦Draw ideas for how you might want your piece to look. These can be quick sketches.
♦Further worked up idea that includes annotation of thoughts/colour use/ artist style use and meaning your piece is communicating to the viewer.

Section 2 The Formal Elements

Black & White— Images that have zero colour. It consists of shades of grey tone.

Colour— Images that capture the full spectrum of colour.

Experimental— Are the use of capturing images in the non- traditional way. It's about taking your photographs beyond the norm to create unique pieces of art.

Line— A line in a photo is a point that moves, leading towards something. Some obvious, and some are implied. The viewer's eyes are naturally drawn along.

Pattern— Images that have captured a repetition of the formal elements this includes shapes, colours or textures, perfect examples of repetition exist all around us.

Perspective— The sense of depth or spatial relationship between objects in a, along with their dimensions with respect to what viewer of the image sees.

Texture—An image that shows the visual quality of the surface of an object. Texture brings life and vibrancy to images that would otherwise appear flat and uninspiring.

Tone— A photograph that captures a variety of light in an image. The 'tone' is the difference between the lightest and darkest areas on a.

Your teacher will start to guide you through the project—but then it is up to you how you respond successfully. You must be independent with your photography, capturing photographs that link with the theme. You may want to include even more experimental photography looking at inspiration from other artist's, photographers and techniques you have explored from social media, internet and ideas.

How your outcomes will be up to you with planning alongside your teacher. You will take ownership of your work and take responsibility for meeting deadlines.

Section 3 Key Vocabulary

Ambient light/Natural light Is the light that is already present in the scene you are shooting.

Camera Angle Is the specific location at which the camera is located so it can take the shot.

Contrast (noun) Is the difference between the light and dark areas within your images. High contrast means the blacks are darker and whites are brighter, vice versa.

Depth of Field (noun) is the distance between the closest and farthest subjects in a scene that look noticeably sharp in an image.

Exposure (noun) Is the amount of light entering the camera's sensor. Too much light and the image is overexposed and not enough light and it's underexposed.

Focal Point (noun) Is the main part of the image or a point of interest within the image.

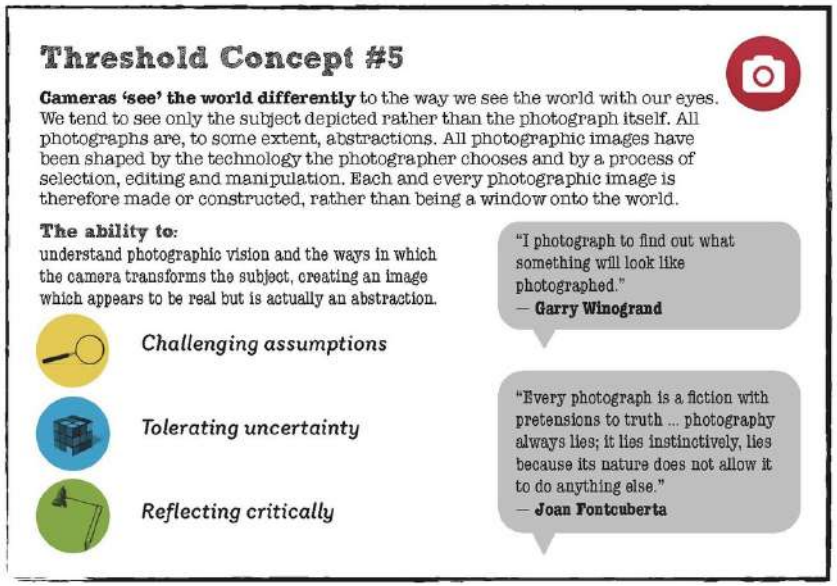
Midtone (noun) Or middle tone, describes the middle tones between two colours. For example, grey is the midtone of black and white.

Saturation (noun) Can provide a colour boost to your image by allowing you to change selective colours within the image. Monochrome images are 100% desaturated as there is no colour.

Useful Websites

https://www.pinterest.co.uk/seanr1132/formal-element-photography/
https://www.pinterest.co.uk/Dixonsaart/
http://ushphotographygcse.weebly.com/formal-elements.html

Section 4



Section 5 Top 5 tips when taking a Photograph

Lighting— Do not face the sun, your subject needs the most light. Think about Shadows too.

Angle Matters— Think about the meaning of your photograph and the impact you want.

Composition— There is more than your subject, consider the background too. Do you need to think about the rule of thirds? Get closer to your subject.

Do not Shake— Hold your breath and keep your elbows in tightly when you press the button.

Get Creative— Be adventurous when taking photographs, take multiple photographs with different angles. Use a torch, get really close and have fun.

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	DESIGN TECHNOLOGY	TOPIC(S)	CLOCK PROJECT	YEAR GROUP	9

Clock project – Design, model and make a prototype clock for a client.

Section 1 Art Deco

Art Deco is a popular design **style** of the 1920s and '30s characterized especially by sleek geometric or stylized forms and by the use of man-made materials.

Section 2 Walter Dorwin Teague

Walter Dorwin Teague's radios from the mid-1930s are among the most iconic early radio designs. Their streamlined, curving, silhouettes epitomize the Art Moderne, or Art Deco, style that began about 1925. The striking blue mirrored glass that clads this radio was a clever use of a pre-existing material to add to the radio's novelty and sense of newness.

This radio resembles an automobile grill and dashboard. his radio would have brought the machine aesthetic, first seen in factories and public spaces, into a domestic setting.

Section 3 William Van Alen

The Chrysler Building is considered a leading example ofDeco.is constructed of a steel frame in-filled with masonry, with areas of decorative metal cladding. The structure contains 3,862 exterior windows. Approximately fifty metal ornaments protrude at the building's corners on five floors reminiscent of cathedrals.The 31st-floor contains gargoyles replicas of the 1929 Chrysler caps, the 61st-floor eagles, a nod to America's bird.

Section 4 Key Vocabulary:

Identity (noun) Who a person is, or the qualities of a person or group that make them different from others.

Marking out (verb) is the process of transferring a design or pattern to a workpiece.

Metal Rule (noun) is a basic measuring tool used to create accurate measurements.

Try-square (noun) is a tool used to check and mark right angles in construction work.

Coping saw (noun) is a saw with a very narrow blade stretched across a D-shaped frame, used for cutting curves in wood.

Tenon saw (noun) is a small saw with a strong brass or steel back for precise work.

Dovetail saw (noun) is a smaller tenon saw with a small blade and fine teeth, used mainly for making joints.

Imperfection (noun) a fault, blemish, or undesirable feature.

File (noun) is a *tool* to remove fine amounts of material from a workpiece.

Sand paper (noun) with sand or another abrasive stuck to it, used for smoothing or polishing woodwork or other surfaces.

Design (noun) a plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made.

Surface (noun) the outside part or uppermost layer of something.

Decoration (noun) the process or art of decorating something.

Varnish (noun) is a resin dissolved in a liquid for applying on wood, metal, or other materials to form a hard, clear, shiny surface when dry.

Evaluation (noun) the making of a judgement about the amount, number, or value of something; assessment.

1.4.1 Food related causes of ill health

Types of contamination

Physical
Such as glass, fingernails, packaging and hair

Chemical
Such as pesticides and cleaning chemicals

Allergenic
Such as peanuts, tree nuts, eggs and shellfish

Microbiological
Such as bacterial, moulds, viruses and parasites

Chemicals

- Remnants of cleaning chemicals
- Pesticides
- Insecticides
- Paint (wall surfaces)

Moulds

- Tiny fungi which grow from spores found in the air
- Settle on food products and multiply
- When visible, food is described as 'mouldy'
- Causes food spoilage

Pesticides and Herbicides

Some of the chemicals used in farming may remain on or in the food we eat. These may cause us harm.
Farmers spray pesticides on crops to kill the insects that may reduce crop yield. They also spray herbicides to kill weeds that may compete with the crops.
Some of these chemicals may remain on the surface of, for example, fruit. Others may be absorbed by the plant and therefore be present in the crop.

Physical

Physical Contaminants Include:

- Hair
- Finger nails
- Broken utensils
- Pests

Bacteria

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

A small number of bacteria are known as SPOILAGE BACTERIA.
They cause food to spoil or become unfit to eat!
Food will smell or be slimy!

Signs of Food Spoilage

Odour – break down of proteins (rotten egg smell)

Sliminess – tissue breakdown

Discolouration – green/blue moulds on foods like bread, fruits and vegetables.

Sourness – production of acid, sour milk

Gas Formation –swollen packaging

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	HOSPITALITY AND CATERING	TOPIC(S)	FOOD RELATED ILLNESS	YEAR GROUP	9

Pathogens

As well as bacteria that cause food spoilage, there are bacteria that have no effect on food and therefore cannot be detected easily.

These are known as PATHOGENS.

MICROBIOLOGICAL PATHOGENS

FOOD POISONING

INFECTIVE POISONING
Result of eating contaminated food with bacteria itself;
Examples: Salmonella, Listeria

TOXIC POISONING
Some bacteria produce toxins, which cannot be destroyed with cooking.
Examples: Staphylococcus Aureus, Clostridium Perfringens

Salmonella

Found in:
Raw meat, poultry and unwashed vegetables

Caused by:
Large numbers

Symptoms:
Can take 48hrs for symptoms to show:
- ❑ Fever
- ❑ Vomiting
- ❑ Abdominal pain
- ❑ Diarrhoea
- ❑ Can be fatal!

2nd most common form of food poisoning!

E.coli

Found in:
The gut of animals and humans.
E Coli 0157 found in raw and undercooked meats and raw vegetables.

Symptoms:
Can take 5 days for symptoms to show:
- ❑ Sever stomach cramps
- ❑ Diarrhoea
- ❑ Vomiting
- ❑ Can be fatal!

Illness caused by small numbers.

Can survive refrigeration and freezing!

Clostridium Perfringens

Found in:
Animal poo, soil, manure, sewage, raw meat, and poultry

Symptoms:
Can take 8-18hrs for symptoms to show:
- ❑ Nausea
- ❑ Abdominal pain
- ❑ Diarrhoea
- ❑ Can be fatal!

Symptoms can last 3 weeks!

Produces spores which may not be killed by cooking!

Listeria

Found in:
Soil, vegetation, meat, poultry, soft cheese and salad vegetables.

Symptoms:
Can last 3 weeks!
- ❑ Flu like symptoms
- ❑ Meningitis

At greater risk:
- ❑ Pregnant women
- ❑ Elderly
- ❑ Very Young

Campylobacter

Found in:
Raw meat and poultry

Caused by:
Small numbers

Symptoms:
Can last for 10 days
- ❑ Fever
- ❑ Headache
- ❑ Abdominal pain
- ❑ Diarrhoea

Most common form of food poisoning!

Bacillus Cereus

Found in:
Soil and dust as well as rice dishes.

Symptoms:
Usually last less than 24hrs:
- ❑ **After 1-5hrs** Vomiting
- ❑ **After 8-18hrs** Diarrhoea and Abdominal pain

Illness can be caused by a small number of bacteria.

Forms spores that are resistant to heat!

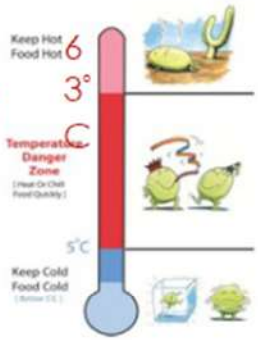
Can multiply at low temperatures!

Conditions for Growth of bacteria

Temperature:

The best temperature for bacteria to multiply is 37°C (body temperature). Bacteria can also multiply quickly between 20°C and 50°C.

To prevent bacteria multiplying, food should be kept out of the danger zone (5°C- 63°C).



Food:

Bacteria need food to grow, just like us.

They also prefer a pH of around 6.5-7, not too acidic or alkaline.

High Risk Foods

These foods support the multiplication of harmful bacteria.

These foods are usually high in protein and moist.

They must be protected from contamination and require refrigeration storage to prevent bacteria multiplying.

Time:

Bacteria can divide into two every ten minutes by a process called **binary fission.**

For example, in 2 hours 1,000 bacteria can become millions, more than enough to cause food poisoning.

Therefore, food should not be left in the danger zone, especially between 20°C and 50°C.

Moisture:

Bacteria prefer foods that contain a lot of moisture, such as raw or cooked meat, poultry and dairy foods.

Dried foods, such as milk powder and cereal, do not provide the moisture necessary for bacteria to grow.

Indirect Contact or Cross-Contamination

Contamination is the presence or introduction of a hazard.

The transfer of bacteria from contaminated food (usually raw) to ready to eat foods using objects (vehicles) such as:

- Cutlery
- Hands
- Cloths
- Work surfaces
- Chopping boards

Physical Contamination

These include foreign bodies which may be brought into the food premises with the raw materials or introduced during storage, preparation, service or display.

Examples:

Glass
Metal
Screws
Nails
Jewellery
Cigarettes
Money
Packaging
Cleaning materials
Pests

Food Safety Act and the Environmental health officer (EHO)

Under the act, EHOs can:

- Can close dirty premises
- Can impose fines of £20,000 or prison
- Can take legal action

All premises must be registered with the local authority and can be inspected at any time!

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

The rating is assessed by looking at compliance in three areas:

1. Food hygiene and safety procedures – how hygienically food is handled?
2. The condition of the structure of the premises.
3. How food safety is managed and documented, including food hygiene training and awareness?

0 - Urgent improvement necessary
1 - Major improvement necessary
2 - Improvement necessary
3 - Generally satisfactory
4 - Good
5 - Very good

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

At the end of their visit, in England, Wales, and Northern Ireland, the EHO will present the establishment with a score from the Food Hygiene Rating scheme of 0 – 5.

Allergic Reactions

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

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

In more severe cases, a food allergy can cause anaphylaxis which can quickly become fatal!

Common Allergens

COW'S MILK

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

SHELLFISH

Shrimp, Prawns, Crayfish, Lobster, Squid, Scallops

Define what is a food intolerance

A food intolerance is.....a long-term condition where certain foods cause someone to feel unwell and have a range of symptoms. It is not usually life threatening but can be very hard for doctors to detect. It can cause people to feel unwell most of the time.

Lactose intolerance

Lactose is the natural **SUGAR** found in milk. People with lactose intolerance cannot **DIGEST** it properly leaving the **BACTERIA** in the large intestine to break it down instead. This bacteria produces a lot of **GAS** this causes bloating, flatulence, stomach pain, diarrhoea and nausea. If you have lactose intolerance you will feel unwell **MOST** of the time.

To control the condition they must avoid drinking **MILK** and eating milk products such as: **CHEESE, YOGHURT, BUTTER AND CREAM.** They also must look on food **LABELS** to see if any milk has been used to make the product.

There are many dairy free 'milks' on the market made from **RICE, OATS** and **SOYA** beans than can be used instead of cows milk.

Coeliac disease

Coeliac disease is caused by their immune system reacting to **GLUTEN**, which is found in **WHEAT**, barley, **OATS** and rye and food products that contain them. The immune system 'thinks' that the gluten will **ATTACK** the body so it sends out **ANTIBODIES** to destroy it. But these then damage the **VILLI** lining the small intestine. This means they are unable to **ABSORB** as many nutrients. This can lead to malnutrition and symptoms can include: **ANEAMIA, WEIGHT LOSS, TIREDNESS, LACK OF ENERGY.** Children with coeliac disease will not **GROW** properly.

There are many gluten-free food products available. Coeliacs can also eat: **POLENTA, ALMONDS, CHESTNUTS, CORN, PEAS, BEANS, RICE.**

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	HOSPITALITY AND CATERING - ROTATION	TOPIC(S)	MULTICULTURAL FOODS - MEXICO	YEAR GROUP	9

During year 9 you will use a wide range of foods and skills to design and make a variety of sweet and savoury products with a Mexican theme.

In practical work you will work out your ideas with some precision, considering how food products will be made, stored and eaten and who will use them. You will use a range of equipment safely with a moderate to high degree of accuracy.

Facts about the day of the dead Section 1

- It's not the same as Halloween.
- It originated in Mexico and Central America.
- It's a celebration of life, not death.
- The ofrenda is a central component.
- Flowers, butterflies and skulls are typically used as symbols.
- Following the Aztec tradition, skulls remain a vital part of

Día de Muertos today—but thankfully for the squeamish among us, they're mostly made of sugar.

Skills completed in year 9 Section 2

Crushing

Rolling

Dry frying

Stir frying

Baking

Reducing sauce

Beating Batter

Boiling

Key Vocabulary: Section 3

Cross contamination, (noun) bacteria are spread from equipment, by air or touch from one food to another.
Aesthetically pleasing (adjective) how a product looks, smells, and tastes.
Layering (noun) he process of joining together ingredients
Vitamins (noun) Are found in food and only needed in small amounts.
Pathogenic bacteria (noun) Are bad bacteria that can cause food poisoning.
Glaze (noun) shiny layer used on pastries and breads to make them appealing.
Tolerance (noun) The correct colour, thickness and size of food
Function of ingredients. (noun) the job that the ingredient does in cooking.
Design Brief (noun) a task with detailed points to include in the solution.
Temperature probe. (noun) used for checking the temperature of high risk food eg. Meat.
Plating (noun) is the process of arranging and decorating food to enhance its presentation. Improving the presentation of a dish .
Boil (noun) to cook at full heat with the liquid rapidly bubbling.
Simmer (verb) to cook or cook in a liquid at or just below the boiling point.
Designing (adjective) creating ideas, sketches, plans and products.
Finish (noun) the final look and presentation of food.
Forming (noun) shaping an ingredient into a shape e.g. meat into a burger.

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	TEXTILES - ROTATION	TOPIC(S)	TECHNIQUE DEVELOPMENT	YEAR GROUP	9

This cycle we are going to be looking at different textiles techniques and learning different stitching methods.

Section 1

Key Equipment and it's use:

Sewing Machine: This is used to stitch fabric together faster and neater.

Screen Printing: Screen printing the process of pressing ink through a stencilled mesh screen to create a printed design.

Squeegee: A **squeegee** is used in screen printing to force the ink through the image section of the screen

Printing Ink: This is used with a squeegee to print an image.

Stencil: This is used to create a pattern to be printed.

Puff Binder: This is used with a screen to print creating a 3D textured effect.

Heat Gun: This is used with the puff binder to create a 3D textured effect,

Batik: a method (originally used in Java) of producing coloured designs on textiles by dyeing them, having first applied wax to the parts to be left undyed.

Tjanting Tool: This is used with a wax pot to create designs with wax.

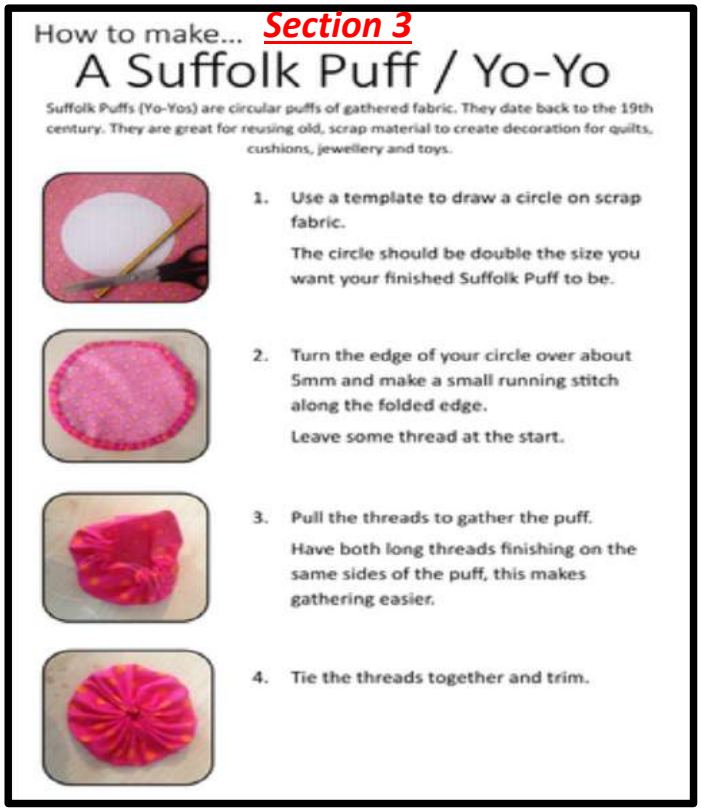
Wax Pot: This is used to melt wax for batik.

Felt: This is a fabric used to create textile products.

Cotton Thread: This is used with a sewing machine or needle to stitch.

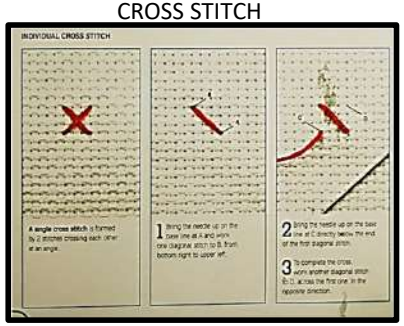
Overlocking Machine: This is used to finish the edges of fabric off so they look neat.

Section 3

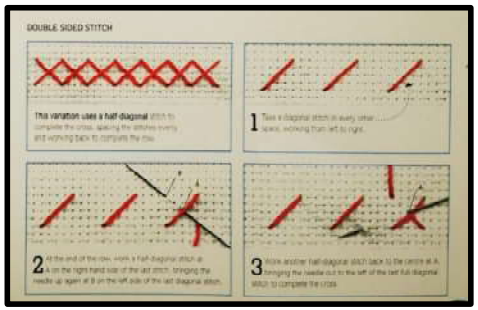


Section 2

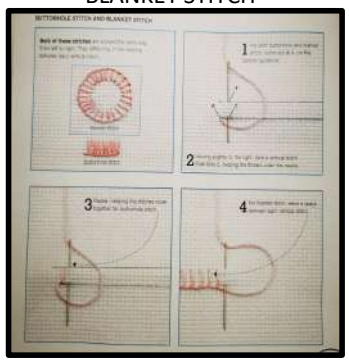
CROSS STITCH



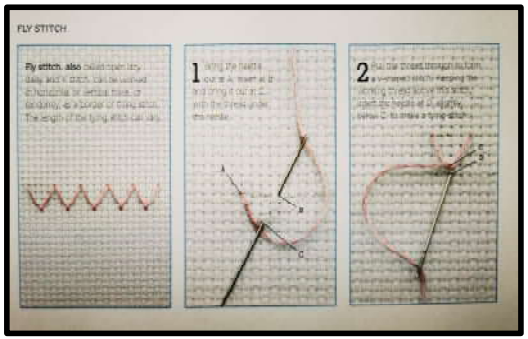
DOUBLE SIDED STITCH



BLANKET STITCH



FLY STITCH



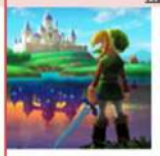
Computer and Video Game Music

1

Early Computer and Video Game Music

Early video game music consisted primarily of **SOUND EFFECTS** (an artificially created or enhanced sound used to emphasize certain actions within computer and video games), **CHIPTUNES** or **8-BIT MUSIC** (a style of electronic music which used simple melodies made for programmable sound generator (PSG) sound chips in vintage computers, consoles and arcade machines) and early sound **SYNTHESISER** technology (an electronic musical instrument that generates audio signals that may be converted to sound). **SAMPLING** (the technique of digitally encoding music or sound and reusing it as part of a composition or recording) began in the 1980's allowing sound to be played during the game, making it more realistic and less "synthetic-sounding".

How Computer and Video Game Music is used within a Game



Music within a computer or video game is often used for **CUES** (knowing when a significant event was about to occur).

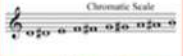
Video game music is often heard over a game's title screen (called the **GROUND THEME**), options menu and bonus content as well as during the entire gameplay. Music can be used to **INCREASE TENSION AND SUSPENSE** *e.g. during battles and chases*, when the player must make a decision within the game (a **DECISION MOTIF**) and can change, depending on a player's actions or situation *e.g. indicating missing actions or "pick-ups"*.

Musical Features of Computer and Video Game Music

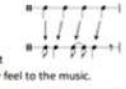
JUMPING BASS LINE
Where the bass line often moves by **LEAP (DISJUNCT MOVEMENT)** leaving 'gaps' between notes

STACCATO ARTICULATION
Performing each note sharply and detached from the others. Shown by a dot.

CHROMATIC MOVEMENT
Melodies and bass lines that ascend or descend by semitones.



SYNCOPATION
Accenting the weaker beats of the bar to give an "offbeat" jumpy feel to the music.



How Computer and Video Game Music is Produced

Fully-orchestrated **SOUNDTRACKS** (video game music scores) are now popular – technology is used in their creation but less in their performance. The composer uses **MUSIC TECHNOLOGY** to create the score, it is then played by an **ORCHESTRA** and then digitally converted and integrated into the game. Video game **SOUNDTRACKS** have become popular and are now commercially sold and performed in concert with some radio stations featuring entire shows dedicated to video game music.

Character Themes in Computer and Video Game Music

Characters within a video game can also have their own **CHARACTER THEMES** or **CHARACTER MOTIFS** – like **LEITMOTIFS** within Film Music. These can be manipulated, altered and changed – adapting the elements of music – **ORCHESTRATION** (the act of arranging a piece of music for an orchestra and assigning parts to the different musical instruments), **TIMBRE, SONORITY, TEXTURE, PITCH, TEMPO, DYNAMICS** – depending on the character's situation or different places they travel to within the game.

Famous Computer and Video Game Music Composers and their Soundtracks

Koji Kondo
Super Mario Bros. (1985)
The Legend of Zelda (1986)

Michael Giacchino
The Lost World: Jurassic Park (1997)
Medal of Honour (1999)
Call of Duty (2003)

Mieko Ishikawa
Dragon Slayer (1993)

Martin O'Donnell and Michael Salvatori
Halo (2002)

Daniel Rosenfield
Minecraft (2011)

Rom Di Prisco
Fortnite (2017)

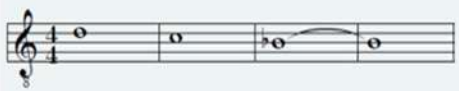
4

RIFF

Use your right hand for this part. Remember to use a metronome/click track to help you stay in time (the original is around 135bpm). A crotchet (♩) is worth 1 beat and quavers (♫) are worth 1/2 beat each.

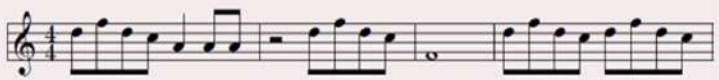
BASSLINE

Use your left hand for this part. Each note is a semibreve and is worth 4 beats.



COUNTER-MELODY

This melody fits over both parts as a different layer. It uses a combination of crotchets, quavers and semibreves as you have learned above.



2

Grime

1	**Grime music**	a genre of EDM created in London in the early 2000s. It was influenced by garage and jungle.
2	**Musicians**	Skepta, Dizzee Rascal and Stormzy

3

Note Symbol	Technical Name	Note Duration
𝅝	Semibreve	4 beats
𝅗𝅥.	Dotted Minim	3 beats
𝅗𝅥	Minim	2 beats
♩.	Dotted Crotchet	3/4 beats
♩	Crotchet	1 beat
♫	2 Quavers	1/2 + 1/2 = 1
♪³	Triplet	3 quavers in the time of 2 beats
♪	Quaver	1/2 beat

Treble Clef: Played by the right hand with higher pitches.

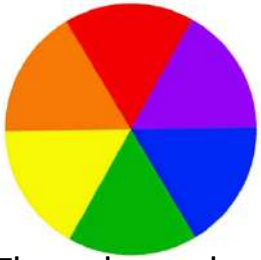
Bass Clef: Played by the left hand with lower pitches.

	Lines of the Stave	Spaces of the Stave
Right Hand (Treble Clef)	E G B D F Every Good Boy Deserves Football	F A C E FACE in the spaces
Left Hand (Bass Clef)	G B D F A Green Busses Drive Fast Always	A C E G All Cows Eat Grass

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	ART - ROTATION	TOPIC(S)	LETTERS	YEAR GROUP	9

Section 1

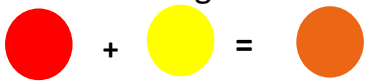
COLOUR THEORY!



The colour wheel

The colour wheel is made out of 3 primary colours and 3 secondary colours

Section 2 Mixing colours



Yellow

Blue

Section 3 Complementary Colours

These are opposite on the colour wheel and are one primary and one secondary

Section 4

Harmonious Colours

These are next to each other on the colour wheel and are similar shades

Section 6 Health & Safety & Important stuff with Clay

- No drinking or eating when working with clay
- Make sure you wash your hands well after using clay
- Always wipe any bits of clay up when you have finished
- Keep clay covered up in plastic if you need to keep working on it so it doesn't dry out
- When you've finished, you can leave it uncovered to dry
- **DO NOT THROW CLAY / TAKE CLAY = UNIT**
- **NO WANDERING AROUND THE CLASSROOM –**
- **PUT YOUR HAND UP IF YOU NEED ANYTHING OR NEED TO MOVE**

Poly Printing

1. Draw and carve a letter into a piece of poly print
2. Roll layers of even ink onto the poly print
3. Place the paper over the top and roller with a dry roller
4. Peel off the paper

Section 5

Section 7 Making a clay letter

Use guide sticks to roll the clay out evenly. It should be the same thickness all the way along!

Section 8

Clay is a naturally occurring material that is taken from the ground. Over long periods of time, rocks are broken down into tiny particles - minerals. These particles are weathered for thousands and even millions of years and can form clay

Section 1

Modern Materials are materials that have been developed recently		
Material	**Key info**	**Examples**
Corn-starch Polymers	These are plant-based polymers that are a replacement for plastics that are **biodegradable** but cannot be recycled.	Plastic bottles, tubs, food containers, etc
Flexible MDF	Made in the same way as normal MDF but with grooves cut into the surface so it is flexible. **Flexiply** is the same but for Plywood. These can easily be shaped into curves	Modern furniture, interior walls and room dividers
Titanium	High strength to weight ratio. Doesn't corrode or rust. Suitable for medical use as its hypo-allergneic	Prosthetics, medical applications, sports cars, etc
Kevlar	A woven polymer with a high strength to weight ratio.	Bullet-proof vests, tyres, helmets, etc

Section 2

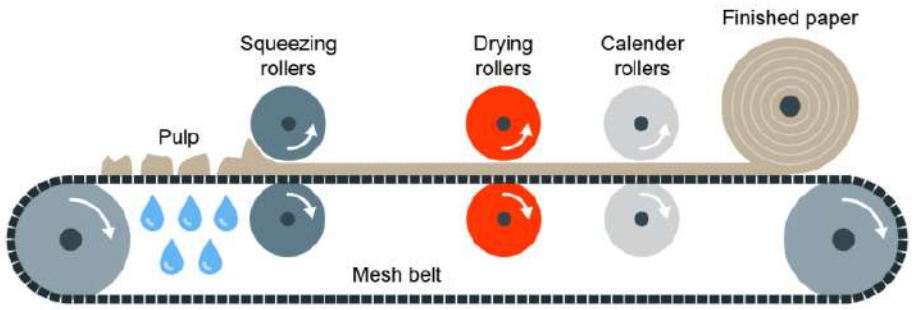
Papers and Boards come from trees. **The Stock forms** for papers are: rolls, sheets, A4, A3, etc		
Material	**Key info**	**Uses/ Examples**
Cartridge Paper	Thick white paper, completely opaque and more expensive than photocopy paper	Sketching, ink drawings
Layout Paper	Light, semi-translucent, good for blending inks and artist markers	Sketching, drawing and some tracing
Corrugated Cardboard	Strong but light. Rigid triangles of card sandwiched between a top and bottom layer.	Outer packaging, food packaging
Duplex Board	Light card with white outside layers. Waxy coating can be added	Cheap packaging. If waxy coating is applied, can be used for food
Foil-lined Board	White card coated with a thin aluminium layer. Foil is great for insulation and water resistance	Takeaway containers
Solid White Board	High-quality white card with a smooth finish. Stiff and holds colours well	Greetings cards, packaging and advertising

Section 3

Smart Materials are materials that change and react to the stimuli		
Material	**Key info**	**Examples**
Thermochromic Pigments	Change colour in reaction to heat	Kettles, baby bottles, etc
Photochromic Pigments	Change colour in reaction to light	Colour changing glasses, windows, etc
Shape Memory Alloy	Returns to its original shape, in reaction to heat	Braces and glasses
Polymorph	Granules that once exposed to hot water, become a modelling material (like a dough or clay)	Modelling and repairs

Section 4

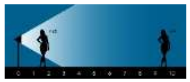
Primary Processing of Papers and Boards



Paper is made by first making pulp. Pulp is a mix of tree fibres and water. This is cooked and bleached white, and adding any other additives.
The pulp is then drained and goes through **Calendering** where the pulp is drained and goes through rollers to convert it to its stock forms

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	PHOTOGRAPHY - ROTATION	TOPIC	INTRODUCTION TO PHOTOGRAPHY	YEAR	9

Section 1 Top 5 tips when taking a Photograph



Lighting— Do not face the sun, your subject needs the most light. Think about Shadows too.

Angle Matters— Think about the meaning of your photograph and the impact you want.

Composition— There is more than your subject, consider the background too. Do you need to think about the rule of thirds? Get closer to your subject.

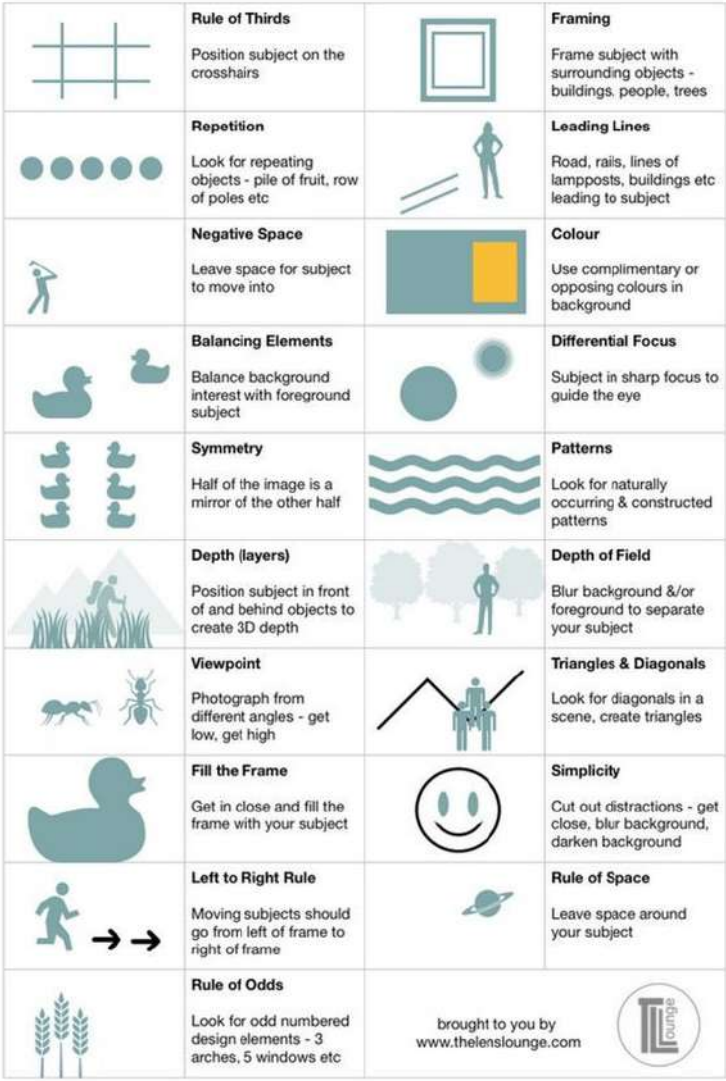
Do not Shake— Hold your breath and keep your elbows in tightly when you press the button.

Get Creative— Be adventurous when taking photographs, take multiple photographs with different angles. Use a torch, get really close and have fun.

Section 2 Digital Camera Parts

The digital camera has the capability to take photographs and store them digitally through memory cards. They have limited functions and their capture method is to 'point and shoot'.

Section 3 Photography Rules



DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	PHOTOGRAPHY - ROTATION	TOPIC	INTRODUCTION TO PHOTOGRAPHY	YEAR	9

Section 4 Slinkachu and Peter Root

Slinkachu (Devon, UK) has been "abandoning" his miniature people on the streets of cities around the world. His work embodies elements of street art, sculpture, installation art and photography and has been exhibited in galleries and museums globally.

Peter Root's work involves turning staples into Cityscapes. Thousands of staples are stacked and aligned to look like cities. These are then Photographed using strong depth of field and focus. There are many hours put into these.

Section 5 Key Vocabulary

Ambient light/Natural light Is the light that is already present in the scene you are shooting.
Camera Angle Is the specific location at which the camera is located so it can take the shot.
Contrast (noun) Is the difference between the light and dark areas within your images. High contrast means the blacks are darker and whites are brighter, vice versa.
Depth of Field (noun) is the distance between the closest and farthest subjects in a scene that look noticeably sharp in an image.
Exposure (noun) Is the amount of light entering the camera's sensor. Too much light and the image is overexposed and not enough light and it's underexposed.
Focal Point (noun) Is the main part of the image or a point of interest within the image.
Blur (noun) The loss of sharpness in a photographic image resulting from motion of the subject or the camera during exposure.

Section 6 The Formal Elements

Black & White— Images that have zero colour. It consists of shades of grey tone.

Colour— Images that capture the full spectrum of colour.

Experimental— Are the use of capturing images in the non- traditional way. It's about taking your photographs beyond the norm to create unique pieces of art.

Line— A line in a photo is a point that moves, leading towards something. Some obvious, and some are implied. The viewer's eyes are naturally drawn along.

Pattern— Images that have captured a repetition of the formal elements this includes shapes, colours or textures, perfect examples of repetition exist all around us.

Perspective— The sense of depth or spatial relationship between objects in a, along with their dimensions with respect to what viewer of the image sees.

Texture—An image that shows the visual quality of the surface of an object. Texture brings life and vibrancy to images that would otherwise appear flat and uninspiring.

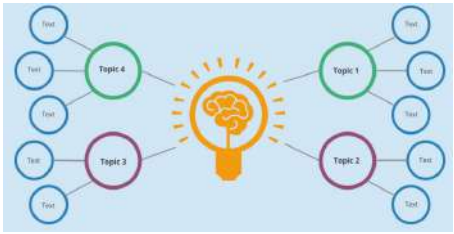
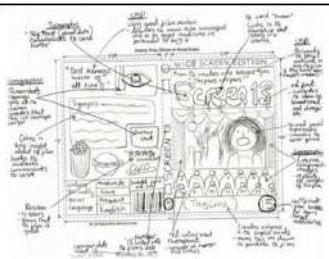
Tone— A photograph that captures a variety of light in an image. The 'tone' is the difference between the lightest and darkest areas on a.

DAA CYCLE 1 Knowledge Organiser	SUBJECT	ICT & COMPUTING	TOPIC(S)	Pre-Production Documents	YEAR GROUP	9

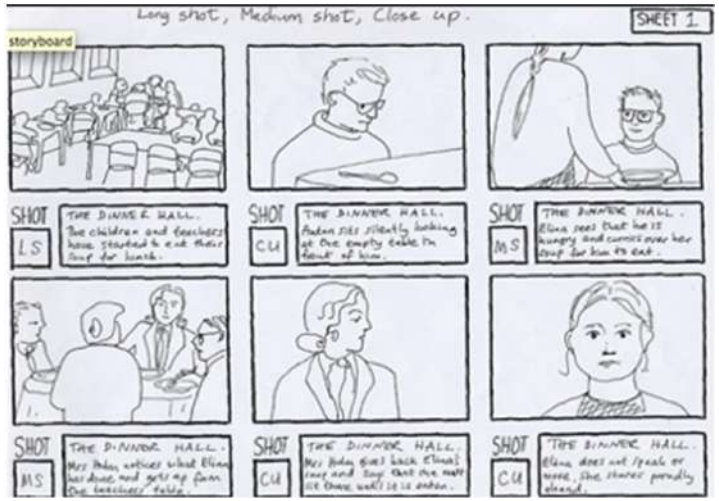
Pre Production Keywords:

Pre-Production	Documents	Client brief	Purpose	Audience
Audience requirements	Client requirements	Success criteria	House style	Mind map
Mood board	Visualisations	Storyboards	Layout	Timing
Annotation	Script	Plan	Design	Hardware
Software	Legislation	Work plan	File types	Evaluate

Section 1

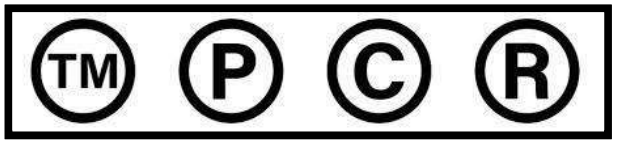
Mood board	A mood board is a collection of sample materials and products. Generate ideas by collecting a range of material. To show creativity. **Projects:** Website, Multimedia product	Mood boards can be digital or physical. Images, colours, typography (text) **Digital: S**ound and video **Physical: F**abrics, materials, objects	
Mind Map	A way of organising thoughts and ideas. To develop and show links between different parts of the project. **Projects:** All new media projects.	Central node Sub nodes Connectors Text Images	
Visualisation	This is rough drawing or sketch of what the final product is intended to look like. **Projects:** Poster, brochure	Image (description, size, type) Text (style, size, colour) Background colour Dimensions Annotations	

DAA CYCLE 1 Knowledge Organiser	SUBJECT	ICT & COMPUTING	TOPIC(S)	Pre-Production Documents	YEAR GROUP	9

Section 2			
Storyboard	A storyboard is used to illustrate a sequence of moving images and has a flow of scenes that follow a timeline. **Projects:** Video, film, animation	Storyboards may include: Number of scenes Camera Shots Camera Movement Timings Lighting Sounds SFX Locations **Camera Shots** **LS:** Long Shot **MS:** Medium Shot **CU:** Close Up **Camera movements** Zoom, pan, tilt, dolly, truck **Camera angles** High, low, wide	
Scripts	A script is a piece of written work that can be for a movie, audio, audio- visual or screenplay. It includes information about the media product. **Projects:** Radio adverts, voice overs, TV/film	Dialogue Set or location Scene direction Camera shot Camera movement Character names	**EXT. IN THE FOREST** SHREK Face it, Donkey! We're lost. DONKEY We can't be lost. We followed the King's instructions exactly. "Head to the darkest part of the woods...""Past the sinister trees with scary-looking branches." The bush shaped like Shirley Bassey!

DAA CYCLE 1 Knowledge Organiser	SUBJECT	ICT & COMPUTING	TOPIC(S)	Pre-Production Documents	YEAR GROUP	9

Legislation Keywords

Section 3			
Intellectual Property		A way of protecting a creation e.g. copyright, creative commons, fair use, patent etc	
Legislation	Intellectual Property: Refers to creations of the mind. A way of protecting your creation so you benefit from your own work. A form of protection.	Copyright Creative Commons Fair Use Patent Trademark	
Copyright	Introduced to protect people who have created original pieces of work.	**Trade Secret**	A secret device or technique used by a company in manufacturing its products.
Patent	A government authority or licence conferring a right or title for a set period, especially the sole right to exclude others from making, using, or selling an invention.	**Creative Commons**	They allow the copyright owner to say exactly what other people can and can't do with or to their work. Must give credit to the owner.
Trademark	A symbol, word, or words legally registered or established by use as representing a company or product.	**Fair Use**	The legal right to use copyrighted images as long as the images are used for educational, research purposes
Section 4			
Copyright, Designs and Patent Act 1988	Copyright protects your work and stops others from using it without your permission.	**Impact** • Stealing someone's creation • Loss of income	**Consequences** No limit to fine Maximum of ten years in prison
Trademark Act 1999	The current law that covers: the registration of trademarks and. the protection of registered trademarks in the UK.	**Impact** Causes harm to reputation	**Consequences** £5,000 fine Between 6 months to 10 years in prison
 			**R =** A registered trademark is a trademark registered under the Trademarks Act, 1999. **TM =** Unregistered trademarks are trademarks not registered under the Trademarks Act of 1999. These are protected in a limited or specific area where they have gained a reputation.

DAA CYCLE 1 Knowledge Organiser	SUBJECT	ICT & COMPUTING	TOPIC(S)	Pre-Production Documents	YEAR GROUP	9

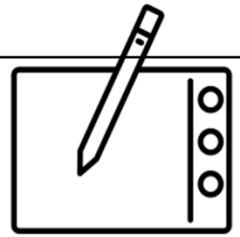
Media Products and Sectors Keywords

Section 5	Media Products	Purpose	Types of Media Products	Examples of Products
	A media product is a **platform used to communicate information** to a specific audience. There are different formats that can be used for this purpose.	Inform Persuade Advertise Promote Educate Warn Guide Entertain	Digital imaging and graphics Video Audio/Music Animation Digital Games Visual Effects VFX Sound Effects SFX	Websites Apps Social media platforms Multimedia eBooks VR Virtual Reality AR Augmented Reality Comics







Section 6			
	Traditional Media	Traditional media refers to non-digital methods of communication. These methods have been long used to create awareness of a product and existed before the internet.	**Sectors:** • TV (Television) • Radio • Film • Print publishing
	New Media	On-demand content accessed via the internet through digital devices, such as personal computers and smartphones. New media can involve interactive elements such as audience engagement and feedback.	**Sectors:** • Interactive Media • Video games • Internet • Digital publishing

DAA CYCLE 1 KNOWLEDGE ORGANISER	SUBJECT	BUSINESS STUDIES	TOPIC(S)	MONEY MATTERS C1	YEAR GROUP	9

Key outcomes	Topics covered
Savings	Saving or savings Delayed gratification Ways to save Types of account Current accounts
Savings	Interest Compound interest Why do banks pay interest? Comparing interest Features of a savings account
Saving	Impact of inflation Premium bonds Money and mental health
Making the most of your money	Spending Needs and wants Influences on spending Digital marketing Ways to pay – cash – card - digital
Making the most of your money	Budgeting Committed spending Discretionary expenditure
Making the most of your money	Multiple money pots Manage a cash book Budgeting apps
Making the most of your money	Value for money Shopping around Price comparison sites Online perusal
Making the most of your money	Information and review sites Comparing prices in supermarkets Know your rights

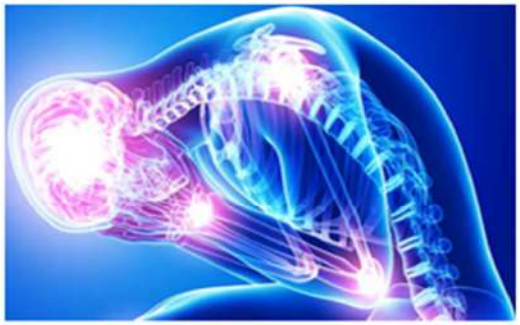
Key outcomes	Topics covered
Borrowing	Good debt Bad debt Repayment interest Compound interest
Borrowing	APR How banks make decisions Credit history
Borrowing	Personal loans Credit card Store card
Borrowing	Overdraft Hire purchase Student loan Mortgage
Borrowing	Payday lenders Loan sharks Manageable and unmanageable debt
Borrowing	Debt advice Debt solutions Payment plans IVA's Bankruptcy

Impacts on service users due to a lack of safeguarding

•If safeguarding procedures are not followed, the impacts on service users can be known as PIES (Physical, Intellectual, Emotional, Social)

Physical impacts

- Anxiety.
- Broken bones.
- Bruises.
- Depression.
- Illness.
- Injury.
- Lack of sleep.
- Pain.
- Poor health/deterioration.
- Self-harm injuries.



These relate to a service users body and can quite often be visible

Intellectual impacts

- Confusion.
- Can't think straight.
- Denial.
- Lack of skills development.
- Lack of interest.
- Lack of motivation.
- Lack of understanding.
- Loss of concentration.
- Not asking questions.

These relate to the service users thought processes such as thinking skills, understanding, learning, reasoning, comprehension and knowledge

Emotional impacts

- Feeling betrayed.
- Feeling disempowered.
- Feeling excluded.
- Feeling unsafe.
- Feeling afraid.
- Feeling upset.
- Feeling unhappy.
- Loss of self-confidence.
- Loss of self-esteem.
- Poor mental health.
- Self-harm.
- Being withdrawn.

These relate to a service users feelings

Social impacts

- Becoming anti-social.
- Aggression.
- Behavioural problems.
- Being isolated.
- Lack of trust in others.
- Refusal to use the service.
- Un co-operative.
- Withdrawal from other people.

These relate to the service users relationship with others

Safeguarding procedures in care settings

Safeguarding policy

•All organisations must have a safeguarding policy that states their ways of working and procedures to follow any safeguarding related incidents.
•All staff must be trained so that they are aware of the policy.

Designated safeguarding lead (DSL)

•The person in an organisation/service that has responsibility for safeguarding.

Common safeguarding issues in adult care environments

•Maladministration of medication - incorrect, late or inappropriate.
•Pressure sores - service users who are frail and have restricted mobility can develop bed sores/blisters on parts of their body which receive the most pressure. If untreated, these can become infected and deep.
•Falls - residents not being assessed on their risk of falls and walking aids not being provided.
•Rough treatment - being rushed, shouted at, ignored.
•Poor nutritional care - appropriate food not provided which is suitable for chewing/swallowing, religious/dietary needs.
•Lack of social inclusion - no stimulation, activity, opportunities for social interaction
•Physical abuse - between residents or residents and staff.
•Financial abuse - theft of money or possessions, staff accepting inappropriate gifts.
•Institutional abuse - providing poor/inadequate standards of care such as ignoring the dignity, privacy, choice and independence of service users.

The 'Five Rs'

•Recognise (all staff) - Recognising signs and symptoms of abuse or harm. Sometimes it may be a direct disclosure made by the service user.
•Respond (all staff) - Any issue must be reported such as a disclosure or just a suspicion (do not ask questions, reassure them that they have done the right thing, inform them that the information must be passed on).
•Report (all staff) - Any concerns must be reported to the DSL immediately so that they can take further action.
•Record (DSL) - The concern will be recorded about the disclosure/suspicion raised with them.
•Refer (DSL) - An investigation will be carried out into any complaints, allegations or suspicions and will contact the police if a crime is suspected.

Disclosure and Barring Service (DBS)

•Closely linked with the police and helps prevent unsuitable people from working with vulnerable service users.
•DBS checks are required for anyone aged over 16 years old for roles that involve either working/volunteering with children or vulnerable adults or wanting to foster or adopt a child.

Three types of DBS checks:

•Standard - checks from criminal convictions, cautions, reprimands and final warnings.
•Enhanced - an additional check of any information held by police that is relevant to the role being applied for.
•Enhanced with barred list checks - additionally checks the barred list (list of individuals who are on record as being unsuitable for working with children or vulnerable adults). Therefore, would not be allowed to work in a health or social care setting.

•Different care settings have different equipment and types of furniture which will all need to be cleaned regularly.
•Methods of maintaining general cleanliness will vary depending on the setting. However, there are standard ways to maintain a clean and hygienic environment.

General cleanliness

Germs grow easily in most environments that are warm and light. In order to prevent the spread of infection, general cleaning should take place regularly, such as:

•Using anti-bacterial sprays on surfaces.
•Clean toys and play equipment regularly.
•Mop floors and vacuum carpets daily.
•Clean and disinfect toilets regularly.
•Dispose of hazardous waste (colour coded disposal methods).

Personal hygiene measures

•Hair tied back/covered.
•Regular brushing of teeth.
•Appropriate protective clothing.
•Open wounds covered.
•Regular showering and hair washing.
•Appropriate use and disposal of tissues and antiseptic wipes.
•No jewellery/nail polish.
•Correct hand-washing routines.

Personal Protective Equipment

•Wearing Personal Protective Equipment (PPE) is a barrier method of preventing the spread of infection.

Examples of Personal Protective Equipment:

•Disposable aprons, disposable gloves, rubber gloves - after each procedure these should be removed and replaced with a new one.
•Face masks - retains droplets released when talking, sneezing and coughing.
•Hair nets and hygiene hats - when serving food, changing dressings to open wounds.
•Overalls, over shoes - reduces the likelihood of transferring germs.
•Surgical garments/scrubs - protect the service provider and patient from infection when having surgical procedures carried out.

How personal hygiene measures protect service users

Personal hygiene measures can protect service users in the following ways:

•Correct hand washing routines can destroy germs and stop them from being transferred.
•The service user carries fewer germs, which reduces opportunity for spreading infection.
•Barrier methods reduce and prevent the transfer of germs and spread of infection. E.g. disposable gloves
•Not wearing jewellery removed places for germs to be trapped.
•Not wearing nail polish removes the risk of it flaking off and contaminating food or a wound.
•If hair is tied back or covered, it can't drop into food and contaminate it with any germs that may be present.

DAA KNOWLEDGE ORGANISER	SUBJECT	BTEC SPORT	TOPIC(S)	C1: FITNESS TESTING – FITNESS TESTS - REQUIREMENTS AND IMPORTANCE.	YEAR GROUP	9

Fitness Test methods for components of fitness

Box No 1: Fitness testing – Flexibility – Sit and reach

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Flexibility – Sit and reach test (Usually measures in cm or inches). Purpose: To test/measure flexibility in the lower back and hamstrings. Equipment: Sit and reach box.	Advantages: • It is Quick and easy to conduct. Disadvantages: • Only tests flexibility in the hamstrings • Trunk and arm length can make comparisons hard.	**Validity** – Only a valid test of flexibility in the hamstrings and lower back not the rest of the body. **Reliability** - You need to make sure that you have the same length and type of warm up each time you do the test as warming up may increase flexibility. **Practicality** – Practical test – only takes a short amount of time to conduct. However, you do need the sit and reach box.

Box No 2: Fitness testing – Muscular Strength – Hand grip dynamometer

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Muscular strength – Hand grip dynamometer test (measured in KgW) Purpose: To measure muscular strength by squeezing muscles in the hand. Equipment: A grip dynamometer.	Advantages: • It is Quick and easy to conduct. • Can be conducted anywhere • Little equipment needed. Disadvantages: • Equipment is specialised • Can only test one person at a time.	**Validity** – The hang grip test would not be a suitable test to measure leg strength so be careful when answering questions! **Reliability** – Make sure you complete the test three times each hand and take an average to get more reliable results. **Practicality** – Easy to conduct – but need specialised equipment.

Box No 3: Fitness Testing – Aerobic Endurance – Multi stage fitness test.

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Aerobic Endurance – Multi Stage Fitness Test (MSFT) Purpose: To measure your predicted maximum oxygen uptake (Aerobic Endurance) **Definition of VO2 max** (ml/kg/min): the maximum amount of oxygen uptake, usually measured in ml of oxygen per kg of body mass per minute. It is a measure of cardiorespiratory endurance. Equipment needed: A flat non slip surface, a 30m tape measure, cones, MSFT CD, CD player, someone to record the results.	Advantages: • The test is very easy to conduct. • Can be conducted indoors or out. • You can test large amounts of people at once. Disadvantages: • Must have a copy of MSFT audio. • The spacing of the cones must be precise in order for reliable results.	**Validity** - The test is more valid for a long-distance runner than a long-distance swimmer as it more closely reflects their activity. **Reliability** - The reliability of this test relies on the distance being accurately measured every time and the environment the test is conducted in remaining constant. **Practicality** – Very practical test to conduct can test many people at once.

Box No 4: Fitness Testing – Aerobic Endurance – Forestry Step Test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Aerobic Endurance – Forestry Step Test Purpose: To measure your aerobic endurance/V02 Max. **Definition of VO2 max** (ml/kg/min): the maximum amount of oxygen uptake, usually measured in ml of oxygen per kg of body mass per minute. It is a measure of cardiorespiratory endurance. Equipment needed: A step bench **40cm high for males 33cm high for females,** a metronome set a 90BPM (22.5 steps per minute) a stopwatch.	Advantages: • The test is very easy to conduct and needs little equipment. • It can be self-administered – so completed at any time. Disadvantages: • Some people may not have the fitness or coordination to keep stepping for 5 minutes.	**Validity** – More valid for some performers than others, depends on the situation. **Reliability** - Help ensure reliability by measuring the height of the step and making sure the pulse is taken at the correct time. **Practicality** – A practical test to conduct as can be self-administered.

Box No 5: Fitness Testing – Speed – 30m Sprint test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Speed – 30m sprint test Purpose: To measure your speed (s) Equipment needed: Two cones, a tape measure, stopwatch and a flat surface.	Advantages: • The test is very easy to set up and conduct • Requires minimal equipment • Can be conducted in or outside. Disadvantages: • Human error when timing scores • You may need another person to help you with the test.	**Validity** – More valid for a sprinter than a swimmer/cyclist measuring speed. **Reliability** - The test must be conducted the same way each time to ensure reliability. The 35m distance must be measured carefully each time, and the test should be completed in the same weather conditions and terrain. Also, same warm up must be complete each time. **Practicality** – A practical test to conduct very easy to set up and minimal equipment/space needed.

Box No 6: Fitness Testing – Speed and agility – Illinois Agility Test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Agility – Illinois agility test Purpose: To measure your speed and **Agility (s)** Equipment needed: 8 cones, a tape measure, stopwatch.	Advantages: • The test is very easy to set up and conduct on any non-slip surface. • Requires minimal equipment • Can be conducted in or outside. Disadvantages: • Human error when timing scores • You may need another person to help you with the test.	**Validity** – Not an accurate representation of sporting situations. **Reliability** - It is really important that the distance between the cones is accurately measured every time the test is conducted to ensure that the course remains the same. **Practicality** – Practical test to conduct.

Box No 7: Fitness Testing – Anaerobic Power– Vertical Jump Test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Power – Vertical Jump Test Purpose: To measure Anaerobic power in the legs. Equipment needed: Jump test board, large ruler, marker pen.	**Advantages:** • The test is very easy to set up • Requires minimal equipment • Can be conducted in any setting. **Disadvantages:** • Human error when taking measurements • You need another person to help you with the test. • Technique plays a part in maximising score.	**Validity** – This test is a valid measure of anaerobic power in the legs; it would not be a valid measure of anaerobic power in any other body part. **Reliability** - To ensure reliability each time the test is completed it should be: - Conducted at the same time of the day - Conducted after the same warm up - Conducted in the same conditions - Measurements should be taken by the same person using a metre ruler or a vertical **Practicality** – Practical test to conduct.

Box No 8: Fitness Testing – Muscular Endurance – One minute press up test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Muscular Endurance – One-minute press up Test Purpose: To measure muscular endurance in the upper body. Equipment needed: Exercise mat and stopwatch.	**Advantages:** • The test is very easy to set up • Requires minimal equipment • Can be conducted in any setting. **Disadvantages:** • Easier with a partner to help. • Difference in technique can make results unreliable.	**Validity** – To ensure the results are valid make sure you make not of what type of press up you completed. Validity can vary as people can do easier or harder press-ups – is this a fair comparison? Only valid for upper body. **Reliability** - Ensure the test conditions remain the same. Difference in press up technique can make results unreliable. **Practicality** – Practical test to conduct.

Box No 9: Fitness Testing – Muscular Endurance – One minute sit up test

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Muscular Endurance – One-minute Sit up Test Purpose: To measure muscular endurance in the abdominal muscles Equipment needed: Exercise mat and stopwatch.	Advantages: • The test is very easy to set up • Requires minimal equipment • Can be conducted in any setting. Disadvantages: • Easier with a partner to help. • Not suitable for someone with back injuries.	**Validity** – Only valid for abdominal muscles. **Reliability** - To ensure the test is reliable it is important that the same warm up is completed each time the test is conducted. **Practicality** – Practical test to conduct.

Box No 10: Fitness Testing –Body composition – Skinfold test.

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Body composition – Skinfold Test Purpose: To predict percentage of body fat. Equipment needed: Skinfold calipers, tape measure, pen to mark the sites. Male sites: Chest, abdominal, thigh Female sites: Thigh, Triceps, suprailiac	Advantages: • An accurate test of body fat. Disadvantages: • Can be uncomfortable • The participant may feel uncomfortable when removing clothing which may be embarrassing.	**Validity** – A valid test of body fat percentages. **Reliability** - To ensure the test is reliable it is important that the same person conduct the test and that each site is measures 3 times to take an average result. Results can be hindered if people don't remove clothing fully. **Practicality** – Practicality can be affected as people may feel uncomfortable.

Box No 11: Fitness Testing –Body composition – BIA

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Body composition – BIA Purpose: To predict percentage of body fat. Equipment needed: Bioelectrical impedance analysis machine	Advantages: • Most accurate way to distinguish between muscle and fat in the body. • You only have to uncover your right hand and right foot so it is less embarrassing than the skinfold test. Disadvantages: • Equipment is specialised and expensive • The test relies on the participant being well hydrated and to have not done any vigorous exercise	**Validity** – The most valid test of body fat percentages. **Reliability** – You must be well hydrated and have not exercised before the test. **Practicality** – Practical to conduct but equipment is expensive and specialised can only conducted with the equipment and someone who can read the data correctly.

Box No 12: Fitness Testing –Body composition – BMI

Test and purpose	Advantages + Disadvantages	Validity – Reliability - Practicality
Body composition – BMI Purpose: To predict percentage of body fat. Equipment needed: Scales, Long ruler, calculator.	Advantages: • Simple and easy to conduct – no specialist equipment. • The test is non invasive Disadvantages: • Not always accurate for muscular individuals. • Test is not always valid.	**Validity** – The test is not always valid – it does not take into consideration muscle mass. **Reliability** – Ensure calibration of scales is correct each time and accurate reading of height is taken – do not wear shoes. **Practicality** – Practical and non-invasive test to conduct.

Stay safe,

tell someone…

All the staff are here to help and support you

DIXONS ALLERTON ACADEMY

Safeguarding Team:

Mr Bibby (Designated Safeguarding Lead)

Mr Douro (Vice Principal)

Safety and well-being…

If you are worried about your welfare or safety, or that of a friends you could access the NSPCC services. www.childline.org.uk

Free anonymous NHS online counselling for young people can be accessed via a platform called Kooth. www.Kooth.com

For support with mental health and staying happy and healthy visit the Mental Health Foundation. www.mentalhealth.org.uk

For non-emergency advice you can email scholarsupport@dixonsaa.com. Give your full name and Year group.

kooth

ChildLine
0800 1111

Physical activity...

It is recommended that young people should be physically active for at least 1 hour a day. This can be anything from organised sport to going on a bike ride with your friends. For more ideas visit; www.nhs.uk/change4life/activities

change 4 life

Online safety…

Thinkuknow is the education programme from NCA-CEOP, a UK organisation which protects children both online and offline.

Explore one of the six ThinkuKnow websites for advice about staying safe when you are using a phone, tablet or computer.

www.thinkuknow.co.uk

Happiness Industry Responsibility

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Check the label on packaged foods

Each serving (150g) contains

Energy	Fat	Saturates	Sugars	Salt
1046kJ 250kcal	3.0g	1.3g	34g	0.9g
	LOW	LOW	HIGH	MED
13%	4%	7%	38%	15%

of an adult's reference intake

Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower in fat, salt and sugars

Eat less often and in small amounts

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Choose unsaturated oils and use in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

BRITISH Nutrition FOUNDATION

HEALTHY HYDRATION

for adults and teenagers

We should drink about 6-8 glasses of fluid each day. This can be from a variety of drinks

Water

Water is a good choice throughout the day because it hydrates you without providing extra calories or harming teeth.

Drink plenty

Tea, coffee and other hot drinks

Provide some nutrients (if milk or fortified plant-based alternatives are added) and some contain caffeine*. To limit calories, drink without sugar or sugary syrups and with lower fat milks.

Drink to suit (can contain caffeine; limit if pregnant*)

Milk

Is a useful source of nutrients including calcium, iodine, B vitamins and protein. Adults and older children should choose lower-fat varieties.

Have regularly, but choose lower fat

Sugar-free drinks

Provide fluid without extra calories. Drinks like squashes and fizzy drinks are acidic, which can harm teeth.

Drink in moderation

Fruit and vegetable juices and smoothies

Provide some vitamins and minerals. One small glass (150ml) counts as a maximum of one portion of your 5 A DAY. However, they also contain sugars and can be acidic, which can harm teeth so it's best to drink them with a meal.

Can have once a day

Sugary drinks

Provide fluid but contain calories from sugars, usually without other nutrients, and can be acidic. Sugars and acidity can both be harmful to teeth. Some of these drinks also contain caffeine*.

Limit

Sports drinks

Are generally only needed if training at high intensity for over an hour. Can be high in sugars.

Only if needed

Energy drinks

Can be high in sugars and may contain high levels of caffeine* and other stimulants. These drinks are not good choices for those under 18 years.

Limit

*If pregnant, limit caffeine to no more than 200mg per day. Visit NHS Choices page on caffeine in pregnancy for more information.

Note: alcoholic drinks don't count towards your fluid intake.

November 2018. Next review due November 2021. For more information on the sources used in this text please contact postbox@nutrition.org.uk

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