

KNOWLEDGE ORGANISER YEAR 9 2024/2025

Name: _____

Student Number: _____

C3



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.

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CYCLE 3 SPELLINGS

WEEK 2	
plosive	'b', 'p' 't' and 'd' sounds for harsh, aggressive , or shocking effect.
ambiguity	More than one possible meaning and its unclear which is correct.
scale	The size or level of something.
mutiny	A rebellion against senior officer.
eucharist	Bread and wine ceremony enacting Jesus' last meal.
Trade Union	Organisation that represents workers .
respiration	The action of breathing .
dodecahedron	A 12-sided shape.
tectonic	To do with the movement of the earth's surface.
volta	A turning point in a poem.

WEEK 4	
anaphora	A repetition of words, phrases or clauses.
enjambment	When a sentence runs over one line with no punctuation.
sculpture	The art of making 2 or 3 dimensional representative forms.
socialism	Belief workers should own parts of companies .
persecution	Hostility or ill treatment of someone/groups.
photosynthesis	An endothermic reaction when plants take in energy.
demographic	To do with population .
parody	A comic imitation of another writer's work.
evolution	The gradual development of something.
erosion	Wearing away and removal of rock .

WEEK 3	
assonance	A repetition of vowel sounds.
stanza	A group of lines separated from others in a poem.
texture	The feel , appearance or consistency of a surface/substance.
republicanism	Belief in a country with no monarchy .
reconciliation	Repair relationships together.
reparations	Compensation money .
ascending	In order from smallest to largest .
descending	In order from largest to smallest .
atmospheric	To do with the air surrounding the Earth.
persona	The speaker of the poem who is different from the writer.

WEEK 5	
juxtaposition	Two things being placed closed together for contrasting effect.
caesura	A stop or pause in a line of poetry.
architecture	The art or practice of designing and constructing buildings .
evangelism	Preaching to convert others.
chlorophyll	Green pigment in chloroplasts that absorb energy from sunlight.
temperature	The degree or intensity of heat .
sanitation	Water and cleanliness .
variable	Liable to change with conditions .
accelerate	To move faster ; to gain speed.
urbanisation	The growth in population living in towns and cities .

WEEK 6	
1. protagonist	The main character in a play
2. emigration	When someone leaves a country or location.
3. climate	Average weather conditions over a period of time .
4. architecture	The design and construction of buildings .
5. covenant	A serious promise .
6. oviducts	Carry egg cells away from the ovary.
7. accent	The way of pronouncing words associated with an area or place .
8. melodrama	Exaggerated emotional plays.
9. dialogue	The spoken script on stage.
10. source	Evidence made at the time of an historical event.

WEEK 8	
1. Tragedy	A play where main characters experience reversal of fortune
2. conquer	To overcome and take control of a place or people by force .
3. legacy	The long-lasting impact of particular events, actions or people.
4. tableux	A frozen picture that tells a story.
5. polytheist	Believing in many Gods.
6. colloquial	Informal language used in conversation.
7. factors	The numbers that can be divided into that number.
8. gesture	An expression or movement of the body.
9. interpretation	A way someone has understood and explained the past .
10. fetus	Name given to an unborn baby .

WEEK 7	
1. motif	An idea or theme that is frequently repeated
2. refugee	A person who has been forced to migrate .
3. stakeholder	A person or organisation with an interest in something.
4. composition	The way elements of artwork are arranged or combined .
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 9	
1. soliloquy	When a character speaks directly to the audience .
2. Kingdom	An area ruled by a monarch (King or Queen).
3. tribe	Group of people who live and work together in a shared area .
4. uterus	Where a baby grows for 9 months.
5. systemic	Implies problems are rooted in the way systems are set up.
6. evaluation	Making a judgement about something.
7. migration	Moving from one place to another to live
8. monologue	One person delivering a speech or their thoughts to the audience.
9. intonation	Variation of spoken pitch.
10. texture	The feel, appearance, or consistency of a surface.

WEEK 10	
oxymoron	Combines contradictory words with opposite meanings.
elegy	Form of poetry about the death of its subject.
refugee	A person forced to leave their country to escape war or disaster.
communism	Ideology that believes in no private property.
sacraments	Outward signs of faith.
denominator	The number below the line in a fraction; a divisor.
couplet	A pair of rhyming lines which follow on from one another.
perpendicular	A straight line at an angle of 90 degrees to a given line/surface.
organism	An individual animal, plant or single celled life form.
source	The start of a river .

WEEK 12	
plosive	'b', 'p' 't' and 'd' sounds for harsh, aggressive , or shocking effect.
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dodecahedron	A 12-sided shape.
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volta	A turning point in a poem.

WEEK 11	
antithesis	Placing contrasting ideas together.
quatrain	4-line stanza.
abdication	Monarch leaving the throne .
constitution	Rules governing a country.
baptism	Ceremony to wash away sins .
acute	An angle that is less than 90 degrees.
irony	Something happens that is the opposite from what's expected .
parallel	Side by side with the same difference continuously between them.
opaque	Not transparent .
hypothesis	A proposed explanation .

WEEK 13	
assonance	A repetition of vowel sounds.
stanza	A group of lines separated from others in a poem.
texture	The feel , appearance or consistency of a surface/substance.
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persona	The speaker of the poem who is different from the writer.

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.			

Section 1 Ozymandias by Percy Shelley

Written about the statue of the Egyptian Pharaoh Ramesses II and how it wasn't preserved as intended.

A criticism of leaders' egos from Shelley – often seen as veiled criticism of the British King George III

The sonnet form is typical of a love poem and could mock the fact the leader was not as loved as he wanted.

The lack of rhyme scheme could reflect the brokenness of the statue/his reputation.

'sneer of cold command' portrays how disliked he was by his people

Hyperbole - **'King of Kings'** emphasises arrogance and ego

'Nothing beside remains.' - short sentence reflects how abandoned the statue/legacy of the leader now is

Section 2 London by William Blake

William Blake was a social reformer, angry at the fact the Church and government didn't do enough to support the needy and poor. This is written in first person and present tense to walk the reader through London as he saw it.

The **'blackning Church'** refers to the way Blake felt the Church itself was sinful for not being charitable enough.

The blood running down palace walls is a link to the French revolution, and could be Blake's way of suggesting we needed a revolution in England.

'Chartered' refers to things being owned privately for profit; the repetition emphasises how so many wealthy people own things in London that should belong to the public e.g. the river Thames

'mind-forged manacles' is a metaphor for the mental entrapment Londoners felt and the way they believed they were trapped (or chained line with manacles) in a cycle of poverty

'marriage hearse' - this oxymoron shows how even positive events feel doomed

Section 3 Extract from The Prelude by William Wordsworth

Wordsworth experienced a lot of grief in his life, including the loss of children. This poem is about the shift from childhood to adulthood and the realisation that there is negativity and danger in the world, even in things which seem exciting.

Beautiful imagery of nature at the start reflects innocent/youthful joy - **'Small circles glittering idly in the moon'**

Volta/turning point - **'a huge peak, black and huge'** - the dark imagery and repetition of huge reflects how suddenly even the beautiful lake seems dangerous (a metaphor for life/adulthood)

The repetition of **'no'** linked to positive images e.g. **'no pleasant images of trees'** reflects how the speaker's mindset has been altered and his realisations about life and its dangers are **'a trouble'** to his **'dreams'**.

Section 4 My Last Duchess by Robert Browning

This is written as a dramatic monologue in the voice of the Duke of Ferrara, who it was believed poisoned his wife.

Browning had to elope with his own wife as her father disapproved of their marriage, and we could see the poem as a criticism of misogyny as it portrays the Duke as a arrogant, unlikeable figure.

The speaker's tone is very arrogant – he asks many rhetorical questions of the messenger sent from his new prospective wife's family but we never hear an answer e.g. **'Will't please you sit and look at her?'**

The metaphor of his name as a **'gift of nine hundred years'** also reflects his arrogance and the way he felt his wife was ungrateful.

'I gave commands; then all smiles stopped together' is an allusion to the murder of his wife – again this shows his arrogance.

'Neptune taming a seahorse' could be seen as a metaphor for how he feels a God-like importance over women and wants to **'tame'/control** them – it also suggests the cycle of violence with his old wife may continue with the new one..

Section 5 Charge of the Light Brigade by Lord Alfred Tennyson

Tennyson was the poet laureate and wrote this poem to commemorate the soldiers lost in the Battle of Balaclava during the Crimean War. As the Poet Laureate, he would have been expected to present the soldiers/war in a positive, glorified light, though he does briefly refer to the **'blunder'** of a leader which led to the immense loss.

The personification and Biblical allusions in **'Into the jaws of Death, into the mouth of Hell'** reflect the intense fear and suffering experienced by the soldiers.

The repetition of six hundred continually reinforces the huge amount of life lost.

The rhetorical question **'When can their glory fade?'** and repetition of **'honour'** in the final stanza emphasises the respect Tennyson feels we should have for these men.

Section 6 Exposure by Wilfred Owen

Owen was a soldier in WW1 and died before the end of the war. He wanted to convey the reality and tragedy of war to those at home who mostly saw positive propaganda and did not know what was truly happening.

Owen personifies the weather as an attacker e.g. **'the merciless iced east winds that knife us'**, to show how everything in war felt like it was against them, even nature itself.

The repeated use of rhetorical questions e.g. **'Is it that we are dying?'** reflects the confusion and despair of the soldiers, and the repetition of **'But nothing happens'** reinforces how futile the war felt most days for the soldiers.

The metaphors of the men as **'ghosts'** and their eyes as **'ice'** shows how dehumanised and destroyed the soldiers are.

Section 7 Kamikaze by Beatrice Garland

Garland wrote this poem about the WW2 Kamikaze pilots from Japan. It was seen as a moral duty to one's country to complete these suicide missions in planes, mostly against American targets e.g. warships. Garland portrays the devastating impact it had on soldiers and families if anybody failed to complete their mission: they would be ostracised and seen effectively as traitors.

Contrast between beautiful natural imagery which we can imagine (and the speaker does) made the pilot want to turn back and live, and sibilance (**'bellies swivelled towards the sun'**) and darkness (the tuna) as the target draws closer and he feels fear of death.

Simile **'like bunting'** reflects the childish joy of e.g. parties remembered by the pilot.

Final line – the harsh tone of this encapsulates the harsh manner in which 'failed' pilots were treated - **'he must have wondered which had been the better way to die'** - coming back alive was still a metaphorical death. The modal verb 'must' also reinforces how his daughter did not speak to him about it as their relationship was destroyed.

Section 8 Bayonet Charge by Ted Hughes

Hughes wrote this poem about WW1, in which Hughes' father fought. Even hearing of the memories second hand, Hughes has reported feeling 'fairly tortured'. He wanted to convey the damage caused by the war to those who survived.

The poem beginning in media res (in the middle of action) **'suddenly he awoke and was running'** reflects the chaos and confusion of war.

The simile 'numb as a smashed arm' to describe his rifle reflects the dehumanisation of the soldiers and also the severe violence they experience.

In the middle of the poem/action, the moment of pause and the rhetorical question emphasises how futile the war feels for the soldier - **'In what cold clockwork...was he the hand pointing at that second?'** - he is questioning why he is even there.

'His terror's touchy dynamite' in the last line reflects how the soldier is so dehumanised he himself feels like a weapon.

Section 9 Remains by Simon Armitage

Simon Armitage interviewed several soldiers, mainly from the Gulf war, and made a documentary alongside this poem and some others he wrote about war. It conveys the mental damage (e.g. the PTSD suffered by the soldier in the poem) war causes to soldiers which they are often not provided adequate support for.

The conversational, casual tone reflects how the soldiers are desensitised to the violence of war e.g. **'three of a kind, all letting fly' / 'tosses his guts'** - violence is minimised by the soldiers and not seen as severe.

'I see every round as it rips through his life' - the verb rips emphasises the extreme violence used and the way the soldiers are accustomed to it.

'I blink/and he bursts' - this enjambment and violent verb reflect the serious impact of the flashbacks the soldier has later; also the use of present tense e.g. **'he's here in my head'** shows how he cannot escape the trauma.

Section 10 Poppies by Jane Weir

Weir wrote this poem to illustrate the suffering of the families of soldiers which again is often not portrayed in the media. The contrast between the domestic imagery and the violent imagery emphasise the shocking change that has happened for the soldier and his mother – we see the deep, soft love and how it has been interrupted by violence - **'I pinned one onto your lapel, crimped petals, spasms of paper red'** - the noun spasms also emphasises pain.

'All my words flattened, rolled, turned into felt, slowly melting' - the enjambment reflects the mental breakdown of the mother as the son leaves her for war, along with the metaphor of her words as 'melting' - nothing feels solid for her anymore.

Towards the end the mother goes out in the cold without a coat, reflecting the impact of the loss of her son on her emotionally. The final line reflects her desperation for the son of childhood to return - **'I listened, hoping to hear your playground voice catching on the wind.'**

Section 11 War Photographer by Carol Ann Duffy

Duffy was inspired by a war photographer friend of hers to write this poem about the impact of war on those who witness it or are involved in it in a non-combat way. It also conveys the indifference many people not involved have towards war.

In the poem the photographer seems to have helped to end the life of a dying woman in extreme pain and is traumatised by this, along with other experiences he has had.

There is an ongoing contrast reflected between the serious attitude the photographer has and the trauma he has experienced compared with the way others view the war from afar e.g. he is shown as reverent & respectful through the simile **'as though he is a priest'** whereas **'reader's eyeballs prick with tears between the bath and pre-lunch beers'** - this juxtaposition and rhyming reflects how little thought/time people give to faraway wars.

Language from the semantic field of death and pain e.g. **'A stranger's features faintly start to twist before his eyes, a half-formed ghost'** reflects how haunted and damaged he is by his experiences.

Section 12 Checking Out Me History by John Agard

Agard was born in Guyana in the Caribbean but moved to the UK later. He wrote this poem as a criticism of the British school system and the way it focuses mostly on white history through a white lens and often erases black history in favour of less important content.

'Dem tell me' – repetition reflects his frustration and the 'otherness' he feels 'they' (teachers? Society) make him feel. Use of dialect reflects pride in his ancestry.

Italics v mocking rhyme highlights the significance and importance of the incredible black figures compared with the insignificance/childishness of some of the other things we are taught in school

Carving out reflects how challenging it is for Agard to find out more about his history/identity; it also reflects purpose and permanence - if something is carved it cannot be erased.

Sections 1 Laws of Indices (Powers)

$$x^a \times x^b = x^{a+b} \quad x^{-2} = \frac{1}{n^2}$$

$$x^a \div x^b = x^{a-b} \quad x^{\frac{1}{2}} = \sqrt{x}$$

$$(x^a)^b = x^{a \times b} \quad x^{\frac{1}{3}} = \sqrt[3]{x}$$

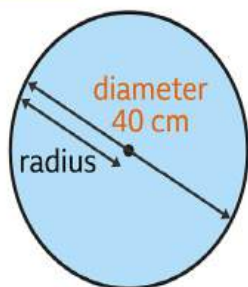
$$x^0 = 1$$

$$x^{-1} = \frac{1}{n}$$

Section 4 Area of a circle

$A = \pi r^2$ is the formula for finding the area of a circle. π is a constant and r is the radius of the circle.

$$\pi = 3.142$$



$$\begin{aligned} d &= 40 \\ r &= 40 \div 2 \\ \text{radius} &= 20 \text{ cm} \end{aligned}$$

$$A = \pi r^2$$

$$\pi \times r^2 = 3.142 \times 20^2 = 1256.8$$

$$\text{Area} = 1260 \text{ cm}^2$$

Section 2 Expanding brackets

Use the grid method:

$$4(x + 2): \quad 4(x + 2) = 4x + 8$$

x	x	+2
4	4x	+8

$$(x + a)(x + b):$$

x	x	+ a
x	x ²	+ ax
+ b	+bx	+ab

$$(x + a)(x + b) = x^2 + ax + bx + ab$$

Section 5 Factorising

Look for the HCF of all terms, re-write the expression with the HCF outside a bracket:

$$12x^2 - 18xy \rightarrow \text{HCF} = 6x \rightarrow 6x(2x - 3y)$$

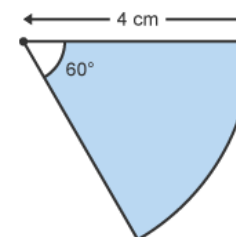
For quadratic expressions in the form $x^2 + bx + c$, find factors of c that total to make b :

For example $x^2 + 3x + 2 = (x + 1)(x + 2)$ as 1 and 2 are factors of 2 that total to make 3.

Section 3 Area of a sector

The formula to calculate the sector area is $\frac{\text{angle}}{360} \times \pi r^2$

Calculate the area of this sector which has a 60° angle to one decimal place.



60° is one sixth of a full turn (360°).

The sector is $\frac{1}{6}$ of the full area.

Remember the area of a circle = πr^2

$$\text{The sector area is: } \frac{1}{6} \times \pi \times 4^2 = 8.4 \text{ cm}^2$$

Section 6 Plotting Graphs/Functions

The function of a straight line is $y = mx + c$, where m is gradient, and c is the intercept.

To plot the function, substitute at least 3 values of x into the function, then plot the generated coordinates.

For $y = 3x - 2$:

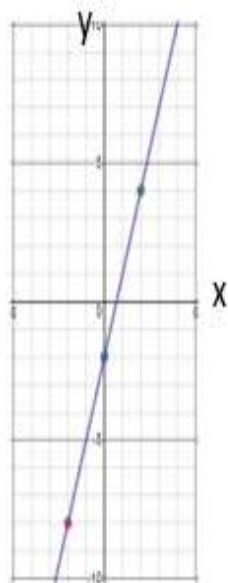
If $x = -2$, $y = 3 \times -2 - 2 = -8$ $(-2, -8)$

If $x = 0$, $y = 3 \times 0 - 2 = -2$ $(0, -2)$

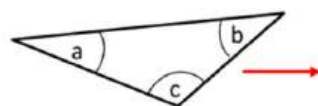
If $x = 2$, $y = 3 \times 2 - 2 = 4$ $(2, 4)$

These points are then plotted, with a straight line drawn:

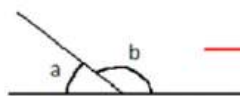
These points are then plotted, with a straight line drawn:



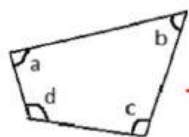
Section 7 Angle facts



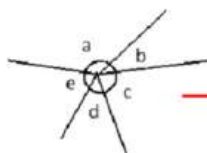
Angles in a triangle add up to 180°
So $a + b + c = 180^\circ$



Angles on a straight line add up to 180°
So $a + b = 180^\circ$

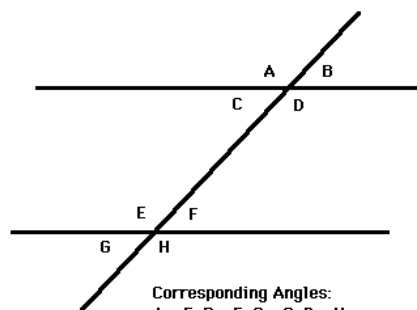


Angles in a quadrilateral add up to 360° .
So $a + b + c + d = 360^\circ$



Angles around a point add up to 360° .
So $a + b + c + d + e = 360^\circ$

Alternate and corresponding (parallel lines):



Corresponding Angles:
 $A = E$, $B = F$, $C = G$, $D = H$

Alternate Interior Angles:
 $C = F$, $D = E$

Alternate Exterior Angles:
 $A = H$, $B = G$

Section 8 Solving Inequalities

This method is used for equations and inequalities:

Solve

$$4x + 2 = 2x - 6$$

Subtract 2x:

$$4x - 2x + 2 = 2x - 6 - 2x$$

$$2x + 2 = -6$$

Subtract 2:

$$2x + 2 - 2 = -6 - 2$$

$$2x = -8$$

Divide by 2:

$$\frac{2x}{2} = \frac{-8}{2}$$

$$x = -4$$

Solve

$$3p - 5 > 13$$

Add 5:

$$3p - 5 + 5 > 13 + 5$$

$$3p > 18$$

Divide by 3:

$$\frac{3p}{3} > \frac{18}{3}$$

$$p > 6$$

Section 9 Angles in polygons

Polygon – ‘many angles’ 2D shape, straight sides.

Regular polygons – equal length sides, equal angles

Interior angle + exterior angle = 180°

Exterior angle = $360 \div n$ (where n is the number of sides)

Sum of interior angles = $(n - 2) \times 180$

Sides	Polygon name	Exterior Angle (regular polygon)	Interior Angle (regular polygon)	Sum of Interior Angles
3	Triangle	120	60	180
4	Square	90	90	360
5	Pentagon	72	108	540
6	Hexagon	60	120	720
7	Heptagon	51.4	128.6	900
8	Octagon	45	135	1080
9	Nonagon	40	140	1260
10	Decagon	36	144	1440
11	Hendecagon	32.7	147.3	1620
12	Dodecagon	30	150	1800

Section 10 Simultaneous Equations

To solve simultaneous equations, you need to eliminate one of the unknowns either by adding the two equations or subtracting one equation from the other. For example,

$$3a + 2b = 17$$

$$8a - 2b = 60$$

To eliminate the b's, you add the two equations giving you

$$11a = 77 \quad \text{so} \quad a = 7$$

Substitute into the first equation

$$3 \times 7 + 2b = 17$$

$$21 + 2b = 17$$

$$2b = -4$$

$$b = -2$$

$$\text{Check: } 8 \times 7 - 2 \times -2$$

$$56 + 4 = 60$$

Section 11 Similarity

If one shape is similar to another, then:

x is the linear scale factor

x^2 is the area scale factor

x^3 is the volume scale factor

The angles in similar shapes are exactly the same.

Section 13 Fractions

Multiplying fractions

Multiply the numerators. Multiply the denominators. Write the result as a fraction:

$$\frac{7}{9} \times \frac{6}{11} = \frac{42}{99} = \frac{14}{33}$$

Dividing fractions

Find the reciprocal of the divisor (flip). Now multiply the two resultant fractions.

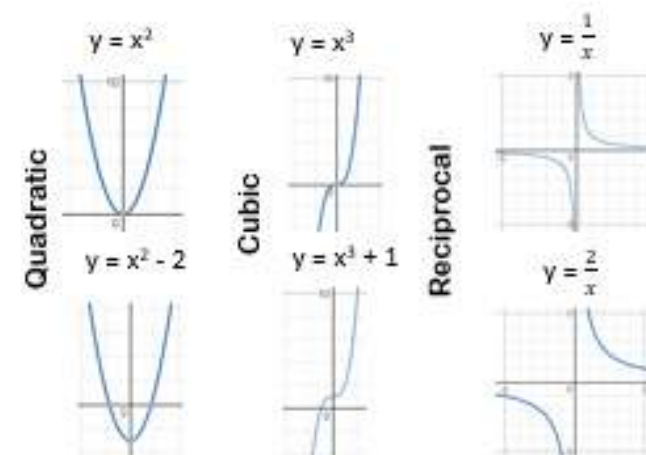
$$\frac{4}{13} \div \frac{3}{5} = \frac{4}{13} \times \frac{5}{3} = \frac{20}{39}$$

Comparing fractions

Re-write the fractions with common denominators. Compare the numerators.

$$\frac{3}{5} \text{ or } \frac{4}{7} \rightarrow \frac{3 \times 7}{5 \times 7} \text{ or } \frac{4 \times 5}{7 \times 5} \rightarrow \frac{21}{35} > \frac{20}{35} \text{ so } \frac{3}{5} > \frac{4}{7}$$

Section 12 Non - Linear graphs



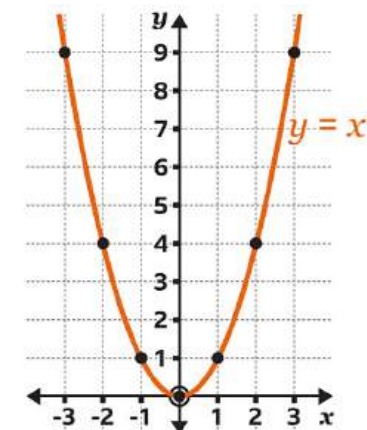
Section 14 Quadratic Graphs

Draw the graph of $y = x^2$ for $-3 \leq x \leq 3$

Draw a table of values as below

x	-3	-2	-1	0	1	2	3
y	-3×-3 9	-2×-2 4	-1×-1 1	0×0 0	1×1 1	2×2 4	3×3 9

Then plot the graph



Forming Ions BOX 1

Ions are charged & do not have equal numbers of protons and electrons

Neutral atoms lose or gain electrons to have a full outer shell

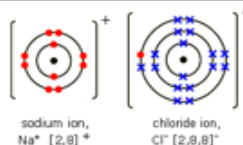
Cation (+ve)	Anion (-ve)
A positively charged ion	A negatively charged ion
Metal atoms lose electrons	Non-metal atoms gain electrons
Group 1 metals lose 1 electron to form ions with +1 charge	Group 6 elements gain 2 electrons to form ions with a -2 charge
Na ⁺ , K ⁺ , H ⁺ , Ca ²⁺ , Mg ²⁺ , NH ₄ ⁺	F ⁻ , Cl ⁻ , O ²⁻ , OH ⁻ , CO ₃ ²⁻ , NO ₃ ²⁻

Ionic compounds BOX 2When two or more ions form a ionic bond

Form between a metal and a non-metal

Ionic bond	Oppositely charged ions attract
	Electrostatic attraction
	e.g. [Na] ⁺ and [Cl] ⁻ attract to form sodium chloride [NaCl]

Naming compounds	Metal + non-metal (non-metal ending changes to -ide)
	Magnesium + oxygen → magnesium oxide , MgO
	Metal + non-metal + oxygen (non-metal ending changes to -ate)
	Calcium + carbon + oxygen → calcium carbonate , CaCO₃

**Properties of ionic compounds BOX 3**

High melting and boiling points	Due to strong electrostatic forces
Conduct electricity	When molten or in aqueous solution as ions are free to move

Metallic bonding BOX 4

Strong attraction between positive metal ions and a "sea" of delocalised electrons

Delocalised electrons	Electrons in the outer shell of metal atoms are free to move through the whole structure
Metal alloy	A <u>mixture</u> of metals

Covalent bonds BOX 5

Form between non-metals

Atoms **share** pairs of electrons to get a full outer shell

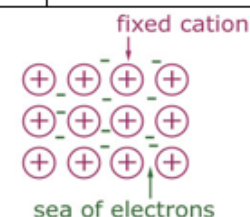
Example	Formula	Structure	Dot and cross diagram
Hydrogen	H ₂	H-H	
Oxygen	O ₂	O=O	
Water	H ₂ O		
Methane	CH ₄		

Giant covalent structures BOX 6

Diamond	Each carbon atom forms 4 covalent bonds
	Does not conduct electricity → no free electrons
	High melting and boiling point → many strong covalent bonds require a huge amount of energy to break
Graphite	Each carbon atoms forms 3 covalent bonds
	Used as a lubricant → layers of hexagonal rings can slide
	Conducts electricity → free electrons can move
	High melting and boiling point → many strong covalent bonds require a huge amount of energy to break

Properties of metallic bonding BOX 7

High melting and boiling points	Due to strong electrostatic forces → require a lot of energy to break
Conduct electricity	Delocalised electrons are free to move



Health and disease

Diseases	Responsible for causing ill health
Communicable disease	Can spread from person to person or between animals and people e.g. Measles, malaria
Non-communicable disease	Can not spread between people or between animals and people e.g. asthma, cancer and coronary heart disease
Pathogens	Microorganisms that cause infectious diseases
Microorganisms	Viruses, bacteria, protists or fungi
How they spread	Direct contact, water or air

Bacterial diseases

Bacterial cells	Very small 1/100th of normal body cells		
	Reproduce inside the body, produce toxins that damage cells and tissues		
Salmonella	Fever, cramp, vomiting, diarrhoea.	Food prepared in unhygienic conditions or not cooked properly.	Improve food hygiene, wash hands, cook food thoroughly.

Viral disease

3

Virus	Not cells, very small 1/100th of a bacterial cell		
	Reproduce rapidly in the body, live inside cells and make many copies. Cells burst releasing viruses, cell damage makes you feel ill		
Tobacco mosaic virus	Mosaic pattern on leaves.	Enters via wounds in epidermis caused by pests.	Remove infected leaves and control pests that damage the

Fungal disease

Fungi	Some are single celled. Other have a body made up of hyphae (thread structures)		
	Hyphae can grow and penetrate human skin and surface of plants		
Rose black spot	Purple black spots on leaves.	Spores carried via wind or water.	Remove infected leaves. Spray with fungicide.

Protist disease

Protist	Most are single celled. Some are parasites which live on or inside other organisms.		
Malaria	Recurrent fever.	By a vector carries the protist (mosquitoes).	Prevent breeding of mosquitoes. Use of nets to prevent bites.

Human defence systems

Nose	Nasal hairs sticky mucus cilia prevent pathogens entering through the nostrils.
Trachea	Lined with mucus to trap dust and pathogens. Cilia move mucus upwards to be swallowed.
Stomach	Stomach acid (pH1) kills most ingested pathogens.
Skin	Hard to penetrate, glands secrete oil which kill microbes
White blood cells	Help defend against pathogens by: phagocytosis, producing antitoxins and antibodies

Vaccination - dead or weakened version of a disease

1st infection	White blood cells detect pathogens in vaccine. Antibodies released into blood.
Re-infection	White blood cells detect pathogens. Antibodies produced faster and in larger amounts.

Antibiotics and painkillers

Antibiotics	e.g. penicillin	Kill infective bacteria inside the body. Specific bacterial infections require specific antibiotics.
Painkillers	e.g. aspirin, paracetamol	Drugs that are used to treat the symptoms of a disease. They do not kill pathogens
Problems	Greater use of antibiotics has led to the emergence of strains of some bacteria that are resistant to antibiotics (superbugs)	

History of drugs

Digitalis	Extracted from foxglove plants and used as a heart drug
Aspirin	A painkiller and anti-inflammatory that was first found in willow bark
Penicillin	Discovered by Alexander Fleming from the <i>Penicillium</i> mould and used as an antibiotic

Drugs have to be tested and trialled before to check they are safe and effective. Drugs are tested for Efficacy (making sure the drug works), Toxicity (checking its not poisonous) and dose.

B3 Infection & response

1. Early Atmosphere

Early atmosphere	How it changed
Formed by volcanoes	Water vapour condensed as Earth cooled
Large volumes of carbon dioxide and water vapour	Carbon dioxide dissolved in oceans Carbon dioxide locked up in sedimentary rocks
Very little oxygen	Algae and plants photosynthesise increasing oxygen volumes
Small volumes ammonia and methane	Nitrogen released as ammonia reacts with oxygen

2. Atmosphere today

The same for 200 million years

Gas	Percentage (%)
Nitrogen	78
Oxygen	21
Argon	0.9
Carbon dioxide and others	0.04

3. Carbon Footprint

A measure of the amount of carbon dioxide released over the lifetime of the product

Reduce carbon emissions by using renewable energy or taxing those who produce carbon dioxide

4. Greenhouse Effect

Greenhouse gases are **carbon dioxide, methane, and water vapour**.

Greenhouse gases trap heat so the temperature on Earth is high enough to live on.

1. Sun emits short wave radiation that passes through the atmosphere.
2. Radiation reflected as long wave from the Earth's surface.
3. Long wave radiation absorbed by greenhouse gases and radiated in all directions.
4. Long wave radiation is thermal radiation, so results in warming of the Earth's surface. This is the **greenhouse effect**.

5. Climate Change

Increasing the volumes of greenhouse gases affects the Earth's climate.

Average **temperatures are increasing** as human activity releases greenhouse gases.

Burning fossil fuels	Release carbon dioxide and sulphur dioxide Carbon dioxide is a greenhouse gas
Deforestation	Cutting down trees means less carbon dioxide is removed due to photosynthesis
Agriculture	Farm animals and rice fields produce methane

6. Effects of pollution

Polar ice caps melt	Increased sea levels, loss of habitat and coastal erosion
Rainfall levels change	Causes floods and droughts which impact food production Storms are more severe
Temperature change	Affect wild species of animals and plants
Other gases are released when fossil fuels are burnt:	
Sulphur dioxide	Causes acid rain, damages plants, buildings, and turns lakes acidic
Carbon monoxide	Toxic odourless gas, binds to haemoglobin
Carbon particulates (soot)	Causes global dimming
Nitrogen oxides	Causes respiratory problems and acid rain

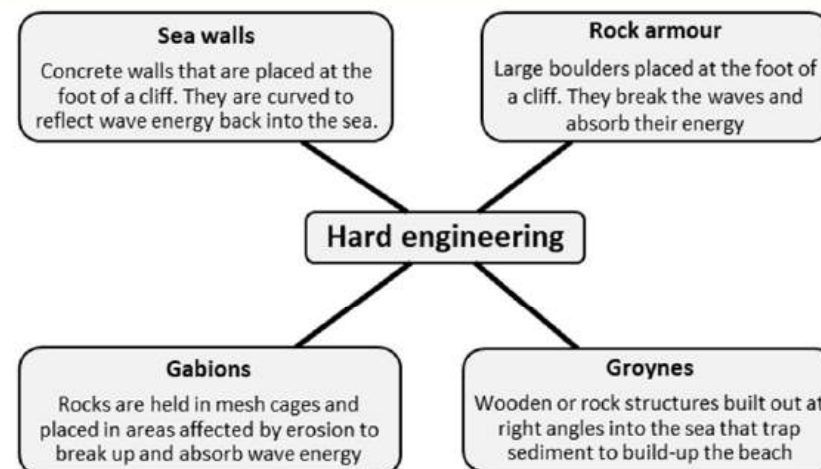
1. Key terms

Abrasion (or corrosion)	The wearing away of cliffs by sediment flung by breaking waves.
Attrition	Erosion caused when rocks and boulders transported by waves bump into each other and break up into smaller pieces.
Deposition	Occurs when material being transported by the sea is dropped due to the sea losing energy.
Erosion	The wearing away and removal of material by a moving force, such as a breaking wave.
Hard engineering	The use of concrete and large artificial structures by civil engineers to defend land against natural erosion processes.
Hydraulic power	The process by which breaking waves compress pockets of air in cracks in a cliff. The pressure may cause the crack to widen, breaking off rock.
Longshore drift	The zigzag movement of sediment along a shore caused by waves going up the beach at an oblique angle(wash) and returning at right angles(backwash). This results in the gradual movement of beach materials along the coast.
Mass movement	The downhill movement of weathered material under the force of gravity.
Mechanical weathering	Weathering processes that cause physical disintegration or break up of exposed rock without any change in the chemical composition of the rock, for instance freeze thaw.
Soft engineering	Managing erosion by working with natural processes to help restore beaches and coastal ecosystems.

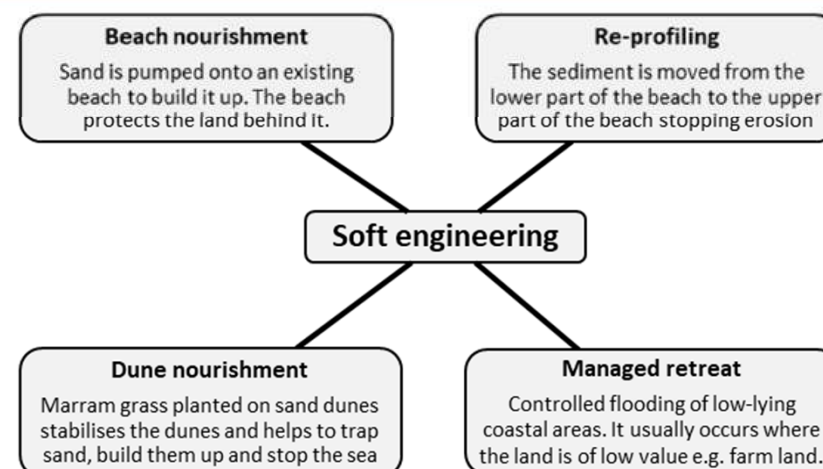
2. Landforms

Erosional	Depositional
Headlands & bays- Coastlines are made of different rocks which erode at different rates. Headlands have more resistant rock	Beaches- Made in sheltered areas by constructive waves that deposit eroded material that has been moved by waves
Cliff- Shaped through erosion and weathering. Soft rock erodes quickly forming sloping cliffs, hard rock is more resistant creating steep cliffs	Spits- A spit is an extended stretch of sand or shingle jutting out into the sea from the land. Spits occur when there is a change in the shape of the landscape or there is a river mouth.
Caves, arches, stacks and stumps- Found on headlands when lines of weakness are eroded and weathered	Bars- Sometimes a spit can grow across a bay and joins two headlands together. This landform is known as a bar. They can trap shallow lakes behind known as lagoons

3. Coastal management



4. Coastal management



1. Fieldwork investigation sequence



2. Key terms

Primary data	Information that you collect yourself, e.g. tallies, measurements and photographs
Secondary data	Information that someone else has previously collected and made available e.g. on the internet
Quantitative data	Actual information that can be counted and used in fieldwork.
Qualitative data	Opinion-based information e.g. questionnaire.
Random sampling	Selecting a person or thing at random to measure or question. at random.
Systematic sampling	Collecting data in an ordered or regular way, e.g. every 5 metres or every fifth person.
Stratified sampling	Dividing sampling into groups, e.g. three sites from each section of coastline, or five people from each age range.
Mean	The total of all values that have been collected and then divide by the number of values.
Median	Achieved by writing out all of the numbers that have been collected in numerical order and find the middle number.
Mode	the most commonly appearing value within the data.
Risk assessment	Process of working out the likelihood of harm or damage being caused by identified hazards when conducting fieldwork

3. Methods of data collection

Method	What is it	Positive	Negative
Taking photographs	Using a phone or camera to take a picture of a place	Quick and easy way to remember what a place looks like	Links to location sometimes hard, does not measure anything
Field sketches	Drawing key parts of a place and annotating them	Ideas and thoughts captured in the field. Links images with words	Can't easily go back and repeat so needs to be done there an then
Environmental surveys	Looking at an area using a set of criteria and applying a scale to them	Quick and easy to complete and gives lots of data to be graphed	Relies on opinion which vary from person to person
Questionnaires	Asking people in the area their thoughts on a series of related questions	Gets lots of opinions of other people in the area	Not everyone want to answer and you might get biased opinions
Measuring height & distance	Using tape measures/ rulers to gather numerical data on a feature	Give quantitative data that can be analysed later	Measurements are only as accurate as the people taking them

4. Data presentation techniques

Line graph	Used when data is linked together or continuous, often by time or distance e.g. showing how the speed of a river changes with distance downstream
Bar chart	When data collected is independent of each other, not continuous and therefore discrete e.g. the height of the beach at selected groynes
Pie chart	All pie charts represent a whole amount that equals 100% e.g. the proportion of people in the whole of Bradford in certain age brackets
Linking data to maps	Adding data onto a map locates the data to the exact point it was collected. This makes analysing the data more effective e.g. proportional circles to show the average size of a pebble on different parts of the beach

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		Date	Alliance
Key Term	Definition	1879	Dual Alliance (Germany and Austria-Hungary)	
Triple Entente	Britain, France, Russia			
Triple Alliance	Germany, Austria-Hungary, Italy	1882	Triple Alliance	
Encircled	Surrounded by other nations	1894	Franco-Russian Alliance (France and Russia)	
Alliance	Agreement between nations	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	

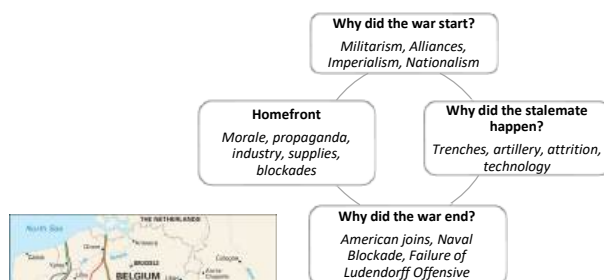
7	Stalemate				
Battle	Nations	Key Moments	Casualties	Consequence	
Marne Sept 1914	Germany France	<ul style="list-style-type: none"> France stop the German Schlieffen Plan at the Marne river & defend Paris 	<ul style="list-style-type: none"> 250,000 French 260,000 German 	<ul style="list-style-type: none"> German advance stops Paris protected Stalemate begins 	
Verdun Feb-Dec 1916	France Germany	<ul style="list-style-type: none"> German general Falkenhayn begins attritional warfare 	<ul style="list-style-type: none"> 355,000 German 400,000 French 	<ul style="list-style-type: none"> France defends Verdun Britain supports defenders 	
Somme July-Nov 1916	Britain France Germany	<ul style="list-style-type: none"> Heavy British losses in early stages First use of tank 	<ul style="list-style-type: none"> 420,000 British 440,000 German 200,000 French 	<ul style="list-style-type: none"> Minimal territorial gain Germany eventually fall back to Hindenberg line 	
Passchendaele July-Nov 1917	Britain France Germany	<ul style="list-style-type: none"> Quagmire conditions Constant heavy rain 	<ul style="list-style-type: none"> 240-400,000 British and French 200-400,000 German 	<ul style="list-style-type: none"> British victory Very heavy losses Germany badly weakened 	

Nation	Culture	8
German	<ul style="list-style-type: none"> Strong military culture "Young" nation wanting to make history Ambitious leader Desire for power on a global stage 	
British	<ul style="list-style-type: none"> Largest global empire Historically dominant at sea Wealthy and proud of prominence 	
Slavic	<ul style="list-style-type: none"> Frustrated at Austro-Hungarian imperialism Nationalist secret societies 	
France	<ul style="list-style-type: none"> Historic rivalry with Germany from 1870 Wealthy Empire Historically powerful, but outdated against Germany 	

Key Term	11	Definition
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

9	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

10	End of the War		
Event	Cause	Consequence	
Jutland May – June 1916	<ul style="list-style-type: none"> German fleet attempts to break British Naval dominance No clear victor German fleet destroyed, British fleet still dominant 	<ul style="list-style-type: none"> Germans adopt U-Boat warfare German fleet destroyed Naval blockade 	
Russian Revolution February 1917	<ul style="list-style-type: none"> Russia suffers heavy casualties on Eastern Front Russian population starving and angry Russian Tsar deeply unpopular 	<ul style="list-style-type: none"> Russia leaves the war German troops redeployed to Western Front 	
America joins the war 1917	<ul style="list-style-type: none"> Lusitania sunk May 1915 Zimmerman Telegram 1917 Submarine warfare damages US ships 	<ul style="list-style-type: none"> USA commits 2 million troops to war 90,000 tonnes of meat USA finances allies 	
Ludendorff Offensive March 1918	<ul style="list-style-type: none"> Germany has more troops on Western Front America is joining war, German chance of victory is shrinking 	<ul style="list-style-type: none"> Initial German victory Unsustainable German advance German troops cut off and captured 	
100 Days Offensive August 1918	<ul style="list-style-type: none"> Germans are weakened and on brink of defeat Unified command under General Foch American troops join allies 	<ul style="list-style-type: none"> Significant allied territory gains German army in full retreat Allied victory close 	
Kaiser Wilhelm abdicates Nov 1918	<ul style="list-style-type: none"> German civilian and military morale at breaking point Kiel mutiny shows military no longer follows Kaiser's orders German people starving from the blockade 	<ul style="list-style-type: none"> Germany cannot continue with war Armistice signed November 1918 	



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	Jesus rose up to heaven 40 days after his resurrection & teaching his final lessons.	Omnipotence	All-powerful
1 & 2		Omniscience	All-knowing
		Omnibenevolence	All-loving
Just	God is fair	Impersonal	God is beyond human understanding
Crucifixion	The killing of Jesus/suffering on cross	Grace	God's unconditional love
Stewardship	Humans are carers of the earth		
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,
	<ul style="list-style-type: none"> Christians see God as: Just, graceful, omnipotent, omnibenevolent, omniscient & merciful Christians pray to Him; ask for forgiveness 	<ul style="list-style-type: none"> Christians see God in 3 ways: The Father in heaven, the Holy Spirit that inspires us & the son incarnate – Jesus 	<ul style="list-style-type: none"> <i>'I am always with you'</i> <i>'You'll receive power with the Holy Spirit'</i> <i>'Obey God not men'</i> 	<ul style="list-style-type: none"> 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,
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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... 	<ul style="list-style-type: none"> <i>'God made the heavens & earth'</i> <i>The Prodigal Son: A father forgives & welcomes his son back after his losses</i> <i>The Story of Job: life is a test. Job loses his wealth & family but God returns it testing his faith through suffering.</i> 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> <i>'Faith without good action is dead faith'</i> <i>'Christ died for our sins'</i> 	<ul style="list-style-type: none"> Wrongs can be made right with the right intention We must be careful with our freedom

6.	Incarnation	The Bible teaches,	Some argue,
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> <i>'The Word (God) became flesh'</i> 	<ul style="list-style-type: none"> 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,
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> <i>'Jesus died for our sins'</i> <i>Jesus predicts own death</i> 	<ul style="list-style-type: none"> Crucifixion reminds Jesus' pain & sacrifice / moral evil Important for atonement – Christians work to do no sin

8.	Resurrection	The Bible teaches,	Influence
	<ul style="list-style-type: none"> Jesus rose from the dead on the 3rd day after his crucifixion Jesus' risen body was different & glowed 	<ul style="list-style-type: none"> <i>'Jesus had risen'</i> <i>'The body raised is imperishable'</i> 	<ul style="list-style-type: none"> Resurrection possible for everyone Shows God's power

9.	Salvation	The Bible teaches,	Influence
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> <i>'Your word is a lamp'</i> <i>'Obey God rather than men'</i> 	<ul style="list-style-type: none"> Christians follow Jesus Salvation & grace must be taught to others Some baptise themselves

10.	Ascension	The Bible teaches,	Influence
	<ul style="list-style-type: none"> After 40 days of resurrection, Jesus rose up to heaven Jesus told disciples to carry on spreading Christian teachings 	<ul style="list-style-type: none"> <i>'He was lifted up'</i> <i>'A cloud took him from their sight'</i> 	<ul style="list-style-type: none"> Christians will not stray from God's path; Jesus in heaven comforts others

11.	Afterlife & Judgement	The Bible teaches,	Influence
	<ul style="list-style-type: none"> Afterlife, God will judge you fairly Heaven, Hell or Purgatory (in between) The point of life is to aim for heaven 	<ul style="list-style-type: none"> <i>The Parable of Sheep & Goat (evil)</i> <i>'Do not judge for you will be judged'</i> 	<ul style="list-style-type: none"> 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,
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Sunni 6 Articles of Faith	Tawhid, Prophets, Angels, Holy Books, Judgement, Al-Qadr (Predestination)	Usul ad-Din 5 Shia Roots Transcendent	Tawhid, Prophets, Justice, Leaders & Resurrection God is beyond space & time
Akhirah	Belief in afterlife	Hadith	Written sayings of the prophet
Risalah	God communicates with us in 3 ways: Quran (Holy Books)/Prophets/Angels	Omnipotence Omniscience	All-powerful All-knowing – God is immanent (close to humans)
Just	God is fair	Impersonal	God is beyond human understanding
Barzakh	State of waiting after death	Sunnah	Written practices of the prophet
Influence – How does something affect you, inspire you, does it compel certain actions? Similar – Are there any beliefs, teachings & quotes that are similar?			1 & 2

3 Nature of God – God is ‘One’	The Quran teaches,	Influence
<ul style="list-style-type: none"> Muslims see God as: Just, omnipotent, omniscient & immanent Muslims pray to ask for guidance (God is merciful) God is the provider: food, water (rain) & more.... 	<ul style="list-style-type: none"> <i>‘God is the light of the heavens & the earth’</i> <i>‘God is closer to you than your jugular vein’</i> <i>Surah 112 – God is eternal</i> 	<ul style="list-style-type: none"> Knowing God’s different roles helps know his true powers You should not compare God to other beings this is blasphemy

4 Six Sunni Articles of Faith	The Quran teaches,	Influence
<ul style="list-style-type: none"> Tawhid- The oneness of God Angels; have different roles from God Holy Books - Qur’an, Torah, Gospel Prophets- God’s messengers Day of Judgement – life after death Al-Qadr (predestination) – nothing happens without God’s will. 	<ul style="list-style-type: none"> <i>‘Whoever disbelieves in God; His angels, Books, Messengers & the Last Day, has gone astray.’</i> 	<ul style="list-style-type: none"> Its about having good intentions as a Muslim; strengthens actions Tawhid unites all Muslims as you need this is part of your faith

5 5 Roots of Usul ad-Din	The Quran teaches,	Influence
<ul style="list-style-type: none"> Tawhid Prophets – God’s messengers Justice (Adalat); God is a fair planner Resurrection: judgement/afterlife Imamate (Leadership of Muslims after Muhammad) – 12 Imams related to the Prophet; Shias respect them as leaders that guide them. E.g. Imam Ali 	<ul style="list-style-type: none"> <i>‘We made the imams & guided them’</i> <i>‘Enjoin good & forbid evil’</i> <i>‘God will not burden you beyond that which you cannot bear’</i> 	<ul style="list-style-type: none"> Shia Muslims mainly trust in justice – God is the perfect of planners & fair Imams clarify God’s words

6 Risalah – Angels	Risalah – Prophets	Risalah – Holy Books	Some argue,
<ul style="list-style-type: none"> Have no freewill, serve God Can’t sin / made from light Jibril brings God’s messages down to prophets Mikail sends down rain / food; for sustenance Angels guided the prophets 	<ul style="list-style-type: none"> Messengers of God Muhammad/final prophet Quran revealed to him in the Cave of Hira by Jibril His Sunnah (actions) & Hadith (sayings) are followed today 	<ul style="list-style-type: none"> Torah (Musa), Gospel (Isa), Hadith, Sunnah, Zabur (Dawud) – convey God’s words Quran is the most authoritative book in Islam; its unchanged Quran guides Shariah laws; diet, marriage, wars... 	<ul style="list-style-type: none"> Humanity has evolved; Imams, tech; clarify God’s laws, times change God is ‘evolver’
<ul style="list-style-type: none"> <i>‘Angels only have intellect’ - Q</i> <i>‘He sends guardian angels’ - Q</i> 	<ul style="list-style-type: none"> <i>‘Obey God & His Messenger’ - Q</i> 	<ul style="list-style-type: none"> <i>‘There has come to you a light & clear book’ - Q</i> 	<ul style="list-style-type: none"> <i>‘You have ...evolved’ - Q</i>

7 Prophet Adam	Prophet Ibrahim	Prophet Muhammad	Some argue,
<ul style="list-style-type: none"> First man & prophet He taught mankind – is ‘khalifah’- God’s steward First to build the Kaaba Teaches anyone can wrong but God is merciful 	<ul style="list-style-type: none"> Considered as ‘hanif’ – commit to worship 1 God Passed God’s faith test on sacrificing his Son, Ismail Teaches Muslims to sacrifice things they love for God (Eid ul Adha) 	<ul style="list-style-type: none"> Received the Quran, still in its original form today Preached monotheism despite rejection Established 5 pillars of Islam 	<ul style="list-style-type: none"> There is no Islam without Muhammad Islam has been shaped by all prophets of the past.
<ul style="list-style-type: none"> <i>‘Satan misled them’ - Q</i> 	<ul style="list-style-type: none"> <i>‘You aren’t pious until you give that which you love’ - Q</i> 	<ul style="list-style-type: none"> <i>‘The messenger is an excellent model’ - Q</i> 	<ul style="list-style-type: none"> <i>‘Prophets are warmers of truth’ - Q</i>

8 & 9 Akirah	Al-Qadr	The Quran teaches,	Some argue,
<ul style="list-style-type: none"> This life is temporary & all actions will be judged After you die the state of waiting to be judged is called Barzakh Actions will be weighted on a scale for you to go heaven / hell; Akirah is eternal 	<ul style="list-style-type: none"> Everything happens on Allah’s will; life is planned Humans still need to make the right choices with their freewill & commit good Adam & Eve’s wrongdoing acts a warning to remind us 	<ul style="list-style-type: none"> <i>‘Every atom’s weight shall be rewarded or punished’</i> <i>‘Death will find you even in the highest of towers’</i> <i>‘There is not a leaf that falls without Him knowing’</i> 	<ul style="list-style-type: none"> Belief in the end of the world is also important: Imam Mahdi will come to earth & help Isa fight false prophets The living will die The Quran will be taken to paradise & no one will remember its words

10

Tip: Always unpack quotes!

Where is it from?
The Quran / Prophet teaches,

What does it mean?
This means / Some Muslims believe This influences,

Why is it important?
This signifies / highlights, This supports / challenges,

Conflict	Disagreement could cause fights	Justice	To put right injustices (be fair)
Pacifism	Belief all violence is wrong	Reconciliation	Making amends, build relations
Nuclear Deterrence	If both sides have nuclear bombs, you are put off from attacking	Weapons of Mass Destruction (WMD)	Weapons that cause widespread damage like nuclear bombs
Terrorism	Violence to create fear	Diplomacy	Manage relations peacefully
Greed	Unreasonable desire / hunger	Retaliation	Revenge through harm
Holy war	A religious war	Just War	An acceptable war

Contrasting – Different religious / non-religious beliefs that not agree with each other

Similar – Are there any beliefs, teachings & quotes that are similar?

Main religious tradition of Great Britain – Christianity must be referenced in your answer

1 & 2

3	Justice	Forgiveness	Scripture,	Some argue,
	<ul style="list-style-type: none"> Islam: Lesser Jihad is fought mainly against injustice & for fairness Christianity: wars maybe fought for the greater good 	<ul style="list-style-type: none"> Jesus taught to pray for enemies Reconciliation; during festivals 	<ul style="list-style-type: none"> 'Do not be the aggressors' – Q 'Love thy neighbor as yourself' – B 	<ul style="list-style-type: none"> War & killing is unnecessary

4	Peaceful protests	Reconciliation	Scripture,	Some argue,
	<ul style="list-style-type: none"> Islam: fight for injustice, peaceful methods first Christianity: stand united & peaceful in dark times – Civil Rights Movement used peace 	<ul style="list-style-type: none"> Its about bringing sides together to put issues right; Moses tried this 	<ul style="list-style-type: none"> 'Hold tightly to the rope of God, do not become divided' – Q 'Blessed are the peacemakers' – B 	<ul style="list-style-type: none"> Diplomacy saves lives The Prophet built relations with non-Muslims

5	Violent protests	Causes of War	Scripture,	Some argue,
	<ul style="list-style-type: none"> Islam: violence used to fight injustice of the oppressors Christianity: If diplomacy or peaceful methods fail 	<ul style="list-style-type: none"> Greed, land, rights taken, self-defense... Violence is a 'necessary evil' for peace 	<ul style="list-style-type: none"> 'Fight the oppressors' – Q 'There is a time to love and a time to hate' – B 	<ul style="list-style-type: none"> Islam: Lesser jihad is not as powerful as greater jihad taking the high peaceful path Quaker Christians always resort to peaceful ways

Unpack quotes	Where is it from? X teaches,	What does it mean? This means / Some Ms/Cs believe	Why is it important? This signifies / highlights
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6	Terrorism	Retaliation	Scripture,	Some argue,
	<ul style="list-style-type: none"> Serious bodily harm to intimidate Islam: innocents are killed, terrorists cherry-pick Quranic verses taking them out of context Christianity: Some misinterpret Jesus' stance against the government 	<ul style="list-style-type: none"> Causes: fight against governments; political regimes, faith, revenge based on wars 	<ul style="list-style-type: none"> 'To kill one is to kill all mankind' – Q 'Those who live by the sword die by the sword' – B 	<ul style="list-style-type: none"> Blame religion for inspiring terrorists others think it is part of a cocktail; power, land

7	Just & Holy war	Holy War (2)	Scripture,	Some argue,
	<ul style="list-style-type: none"> Just: Meet criteria to fight a war if: Holy: God sets rules to fight if: If a war is winnable (less loss) It is fought against injustice Last resort, if diplomacy fails 	<ul style="list-style-type: none"> Islam: during war, holy places & crops should not be destroyed Protect civilians 	<ul style="list-style-type: none"> 'Fight in the way of God' – Q 'Prepare your minds for action' – B 	<ul style="list-style-type: none"> Lesser jihad backs war to protect faith if diplomacy fails Jihad-struggle

8	Pacifism	Scripture,	Some argue,
	<ul style="list-style-type: none"> Pacifists will not engage in war; morally wrong Islam: Greater Jihad should be the priority – develop your spirituality Christianity: Quakers side with Jesus on love & forgiveness 	<ul style="list-style-type: none"> 'Learn self-restraint' – Q 'Satan misled them' – Q 'Pray for your enemies & those who persecute you' – B 	<ul style="list-style-type: none"> Lesser jihad backs war to protect faith if diplomacy fails Jihad = struggle NOT war! Pacifists may be combat medics in war; like Desmond Doss

9	WMD: Nuclear Bombs	Victims	Scripture,	Some argue,
	<ul style="list-style-type: none"> WMD can destroy large areas, burn through skin in seconds, contaminate water, life... Both religions condemn damage on this scale. 	<ul style="list-style-type: none"> Christian Aid / Islamic Relief provides food parcel, medical huts for war victims 	<ul style="list-style-type: none"> 'Whatever you spend, God will replace' – Q 'God loves a cheerful giver' – B 	<ul style="list-style-type: none"> Having nuclear weapons can be good for a deterrence

9.1 La familia

El padre / la madre	Father / mother
El padrastro / la madrastra	Step-father / step-mother
El hermano / la hermana	Brother / sister
El hermanastro / la hermanastra	Step-brother / step-sister
El abuelo / la abuela	Grandfather / grandmother
El bisabuelo / la bisabuela	Great grandfather / great grandmother
El tío / la tía	Uncle / aunt
El primo / la prima	Male cousin / female cousin
El sobrino / la sobrina	Nephew / niece
El marido / la mujer	Husband / wife
El hijo / la hija	Son / daughter
El nieto / la nieta	Grandson / granddaughter

9.2 Descriptions

Tiene los ojos... / tiene el pelo...	S/he has...eyes / S/he has...hair
...azules	...blue
...grises	...grey
...marrones	...brown
...brillantes	...bright
...grandes	...big
...moreno	...dark brown
...castaño	...mid-brown (chestnut)
...rubio	...blond
...largo	...long
...corto	...short
...liso	...straight
...fino	...fine
...ondulado	...wavy
...de punta	...spiky
Es...	S/he is...
...alto/a	...tall
...bajo/a	...short
...delgado/a	...thin
...gordito/a	...chubby
...gordo/a	...fat
Lleva...	S/he wears / has
...gafas	...glasses
...barba / un bigote	..a beard/...a moustache

9.3 My favourite apps

Uso...para...	I use...(in order) to...
Ver mis series favoritas	Watch my favourite series
Organizar las salidas con mis amigos	Organise going out with my friends
Controlar mi actividad física / las calorías	Monitor my physical activity / calorie intake
Contactar con mi familia	Get in touch with my family
Chatear con mis amigos	Chat with my friends
La tengo desde hace...meses	I have had it for...months
Es una aplicación buena para...	It is a good app for...
Buscar y descargar música	Looking for and downloading music
Pasar el tiempo / el rato	Passing the time
Sacar / editar / personalizar fotos	Taking / editing / personalising photos
Compartir / subir fotos	Sharing / uploading photos
Estar en contacto	Keeping in contact
Conocer a nueva gente	Meeting new people
Subir y ver vídeos	Uploading and watching videos
Chatear y mandar mensajes	Chatting and sending messages
Soy / es adicto /a a	I am / s/he is addicted to
Estoy enganchado/a	I am hooked on
Está enganchado/a	S/he is hooked on
Lo único malo es que	The only bad thing is that
Te engancha	It gets you hooked
No es / es	It isn't / It is
Una red social	A social network
Amplio/a	Expensive
Cómodo / a	Comfortable
Divertido/a	Fun
Necesario/a	Necessary
Peligroso/a	Dangerous
Fácil de usar	Easy to use
Gratis	Free
Un canal de comunicación	A channel / means of communication
Una pérdida de dinero	A waste of money

9.4 ¿Qué estás haciendo?

Estoy / Estás / está...	I am / you are / s/he is...
...actualizando mi / tu / su página de Facebook	...updating my / your / his/her Facebook page
...editando mis / tus / sus fotos	...editing my / your / his/her photos
...escuchando música	...listening to music
...esperando a...	...waiting for...
...descansando	...relaxing
...pensando en salir	...thinking of going out
...repasando para un examen	...revising for an exam
...tomando el sol	...sunbathing
...haciendo footing	...jogging
...haciendo el vago	...lazing about
...leyendo	...reading
...viendo una peli	...watching a film

9.5 Leer es un placer

Leo	I read
Los blog	Blogs
Los tebeos	Comics
Los periódicos	Newspapers
Las revistas	Magazines
Las poesías	Poems
Las novelas	Novels
La historias de vampiros	Vampire stories
Las biografías	Biographies

9.6 Leer es un placer

Leer en formato digital...	Reading in digital format...
...protege el planeta	...protects the planet
...no malgasta papel	...doesn't waste paper
...cansa la vista	...tires your eyes
...depende de la energía eléctrica	...it depends on electricity
...te permite llevar contigo miles de libros	...allows you to take thousands of books with you
...cuesta mucho menos	...costs a lot less
...fastidia porque no hay numeración de páginas	...is annoying because there are no page numbers
Los libros electrónicos / los e-books...	Electronic books / e-books...
...son fáciles de transportar	...are easy to transport
...son más baratos	...are cheaper
...no ocupan espacio	...don't take up space

9.7 Leer es un placer

Una desventaja es el de batería	One disadvantage is the battery use
Me gusta / prefiero	I like / I prefer...
...tocar las páginas	...to touch the pages
...pasar las páginas a mano	...to turn the pages by hand
...escribir anotaciones	...to write notes
...leer horas y horas	...to read for hours an hours
Un ratón de biblioteca	A bookworm
Un fan de manga	A manga fan
Un libro tradicional	A traditional book
Un libro de verdad	A real book

9.8 Relaciones

(No) me llevo bien con...porque...	I (don't) get on well with...because...
...me apoya	...s/he supports me
...me acepta como soy	...s/he accepts me as I am
...nunca me critica	...s/he never criticises me
...tenemos mucho en común	...we have a lot in common
Me divierto con	I have a good time with
Me peleo con	I argue with
Nos llevamos superbién	We get on really well
Nos llevamos como perro y gato	We fight like cat and dog
Nos divertimos siempre	We always have a good time

9.9 Relaciones

Un buen amigo es alguien que...	A good friend is someone who...
...te apoya	...supports you
...te escucha	...listens to you
...te conoce bien	...knows you well
...te acepta como eres	...accepts you as you are
...te da consejos	...gives you advice
...te hace reír	...makes you laugh
...no te critica	...doesn't criticise you
...nunca te juzga	...never judges you
Conocí a mi mejor amigo / a	I met my best friend
Nos conocimos	We met / got to know each other
Nos hicimos amigos	We became friends
Nos hicimos novios	We started going out
Convivimos	We lived together
Nos casamos	We got married
Nos gustan las mismas cosas	We like the same things

9.10 Photocard practice

En la foto hay	In the photo there is / are
Una familia	A family
Un hombre	A man
Una mujer	A women
Una mesa	A table
Unos edificios	Some building
Está en	It is in
Una ciudad	A city
Un pueblo	A town / village
Un colegio	A school
La costa	On the coast
En la sierra	In a mountain range
Un campo	In a field
Hace buen tiempo	It is good weather
Hace mal tiempo	It is bad weather

9.11 Opinions

Me encanta(n)	I love
Me gusta(n)	I like
Me mola(n)	I like
Me flipa(n)	I'm crazy about
Me chifla(n)	I'm mad about
Odio / detesto	I hate
Le encanta(n)	S/he loves
Le gusta(n)	S/he likes
Le mola(n)	S/he likes
Le flipa(n)	S/he is crazy about
Le chifla(n)	S/he is mad about
Odia / detesta	S/he hates
Me parece que	It seems to me that
Diría que	I would say that
A mi modo de ver	In my opinion
Creo que	I believe that
Pienso que	I think that
Según a mi...	According to my...
Espero que sea	I hope that it is
Espero que haya	I hope that there is / are

9.12 Writing practice (essay 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 + infinitive	I usually...
Siempre he pensado que	I have always thought that
Tengo que admitir que	I have to admit that

9.13 VERBS and TENSES

Juego	I play
Chateo	I chat
Veo	I watch
Escucho	I listen
Tengo	I have
Me gustaría + infinitive	I would like to...
Quisiera + infinitive	I would like to...
Leí	I read
Usé	I used
Fui	I went
Hablé	I spoke
Hice	I did
Monté	I rode
Jugué	I played
Vi	I watched
Salí	I went out
Nadé	I swam
Leí	I read
Escuché	I listened
Saque	I took
Mandé	I sent
Voy a leer	I am going to read
Voy a jugar	I am going to play
Voy a comprar	I am going to buy
Voy a tener	I am going to have
Voy a hacer	I am going to do / make
Va a jugar	He / she is going to play
Me gustaría hablar	I would like to talk
Me gustaría leer	I would like to read
Me gustaría jugar	I would like to play

9.1 & 9.2 Customs & Festivals		
تقریب	event	Taqreeb
مہمان نوازی	hospitality	Mehman nawaazi
جلوس	procession	jaloos
یوم آزادی	independence day	Yowm Aazaadi
عقیقہ	child birth ceremony	Aqeeqah
آتش بازی	fireworks	Aatash Baazi
رسم حنا	henna ceremony	Rasm Hena
شہنائی	wedding music	Shehnaee
بارات	wedding procession	Bharaat
ولیمہ	after wedding ceremony	Walima
دعوت نامہ	invitation	Dawat naama
تلاوت قرآن پاک	recitation of Quran	Tilaawat Quran paak
عید میلاد النبی	Eid Milad uNabi	Eid Milad un Nabi
سحری	pre-dawn meal before fasting	Sehri
افطاری	meal at the time of breaking fast	Iftaari

Year 9 Urdu: Cycle 3

9.3 Likes & Dislikes – pasand & naapasand

مجھے پسند ہے۔	mujhay __ pasand hai	I like __ .
مجھے نا پسند 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 کاشوق ہے۔	mujhay __ kaa shawq hai.	I am interested in __ .

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 be masculine. Adjectives used to describe nouns will agree with them e.g. peelee kurrsee (yellow chair) and peela darrwaaza (yellow door).

9.4 Important Verbs

میں گیا / گئی	mai gyaa/ee	I went (m/f)
ہم گئے	ham ga-ay	We went
میں جاتا / تی ہوں۔	mai jaataa/ee hoon	I go (m/f)
ہم جاتے ہیں۔	ham jaatay hain	We go
میں نے دیکھا	mai nay daykhaa	I saw
ہم نے دیکھا	ham nay daykhaa	We saw
میں دیکھتا / تی ہوں	mai daykhtaa/tee hoon	I see
ہم دیکھتے ہیں	ham daykhtay hain	We see
میں کرتا / تی ہوں	Mai kartaa/ee hoo	I do
میں نے کیا	Mai nay keeya	I did
میں کروں گا / گی	Mai karoonghaa/ee	I will do

9.5 Days of the week

دن	din	day
ہفتہ	haftaa	week
پیر / سوموار	peer / sawmwaar	Monday
منگل	mangal	Tuesday
بدھ	budh	Wednesday
جمعرات	jumeraat	Thursday
جمعہ	juma	Friday
ہفتہ / سنچر	haftaa / sneechar	Saturday
اتوار	itwaar	Sunday
ہفتے کا اختتام	haftay kaa ikhtitaam	Weekend

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*.

9.6 Numbers - <i>ghintee</i>			
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
ایکیس	۲۱	ikkeess	twenty-one/21
بائیس	۲۲	baaeess	twenty-two/22
تیس	۲۳	taeess	twenty-three/23
چوبیس	۲۴	chaubeess	twenty-four/24
پچیس	۲۵	pacheess	twenty-five/25
چھیس	۲۶	chhabbeess	twenty-six/26
ستائیس	۲۷	staeess	twenty-seven/27
اٹھائیس	۲۸	aThaeess	twenty-eight/28
انیس	۲۹	unteess	twenty-nine/29
تیس	۳۰	teess	thirty/30
اکیس	۳۱	ikatteess	thirty-one/31

Year 9 Urdu: Cycle 3		
9.7 Colours - <i>rang</i>		
یہ ایک ہے۔	yay ayk __ hai.	This is a __ .
کالا	kaalaa	black
سفید	sufaid	white
لال / سرخ	laal / surrk	red
پیلا	peela	yellow
نیلا	neela	blue
سبز / ہرا	sabz / hra	green
نارنجی	naaranjee	orange
جامنی	jaamnee	purple
گلابی	ghulaabee	pink
بھورا	bhoora	brown
سلیٹی	slayTee	grey

9.8 – Connectives		
شاید	Shayad	Probably
گویا کہ	Goya kay	As If / whether
پہلے	Pehlay	Before
جب تک	Jab tak	Until
اس کے علاوہ	Is kay ilawa	Besides / apart from

9.9 Question words		
کیا؟	kyaa?	What?
کتنے؟	kitnay?	How (many)?
کون؟	kaun?	Who?
کہاں؟	kahaan?	Where?
کب؟	kab?	When?
کس؟	kiss?	Which?
کس کا/کی؟	kiss kaa/kee?	Whose?

9.10 – Misc.		
مِٹا جاتا	Milta Julta	similar
مختلف	Mukhtalif	different
الٹا / مخالف	Ulta / Makhalf	opposite
جب تک	Jab tak	Until
اس کے علاوہ	Is kay ilawa	Besides / apart from
اس کے باوجود	Is kay ba wajood	despite this
___ کے بجائے	___ kay bajaay	instead of ...
بد قسمتی	Bud qismati	Unfortunately
اتفاقاً / اتفاق سے	Ittifaqan / ittifaq say	By chance

9.11 – 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 / گی	Mai khayloongaa Mai khayloongee	I will play
مجھے کھیلنا چاہیے تھا	mujhay khaylna chahiyya thaa	I should have played
میں کرنے والا / والی ہوں	Mai karnay walaa Mai karnay walee hoo	I am about to ____
میں کھیلتا تھا۔ میں کھیلتی تھی	Mai khaylta tha / khayltee tee	I used to play
میں کھیل چکا ہوں / میں کھیل چکی ہوں	Mai khayl chukka / chukee hoo	I have already played

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.

AO2**Experiment to develop.**

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

AO3**Record.**

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

AO4**Final piece.**

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

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

♦ Using a range of materials as you explore artist's and their techniques. Using acrylic, watercolour, 3D structures, pencil crayon, ink, printing, photoshop as well as a range of other techniques

♦ Drawing of a variety of natural objects using tone/pen mark making/ colour
♦ Tonal drawing of your chosen natural form different angles/crop/zoom/enlarge.

♦ 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 5 Key Vocabulary:

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

Still life (noun) a picture, photograph, or piece of writing that you make of an object or group of objects

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. **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.

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.

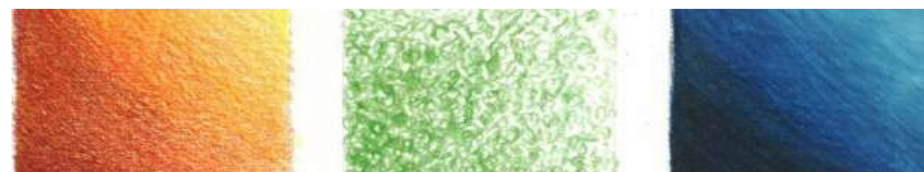
(Verb) give (a surface) a rough or raised texture. "wallcoverings which create a textured finish"

Section 6 Coloured Pencil Techniques

Hatching– The closer the lines the darker the colour.

Cross Hatching– Overlapping Linear lines in different directions.

Stippling–Clusters of dots. More spaced out dots show lighter areas.



Layering– Blending colours gradually by layering. Apply light layers and smoothly.

Scribbling– Random lines with varied pressure can create light or darker areas.

Burnishing–Adding white or a light colour over the top layers of colours.

Your teacher will start to guide you through the project—but then it is up to you to decide what natural form objects you put in your still life project. How your final piece looks will be up to you with planning alongside your teacher. You will take ownership of your work and take responsibility for meeting deadlines.

Section 7 Georgia O'Keefe



- American
- 1887-1986
- Natural form artist
- Oil paint

Georgia O'Keefe was an American painter whose career spanned seven. She gained international recognition for her meticulous paintings of natural forms, particularly flowers and desert-inspired landscapes, which were often drawn from and related to places and environments in which she lived.

"I had to create an equivalent for what I felt about what I was looking at – not copy it."

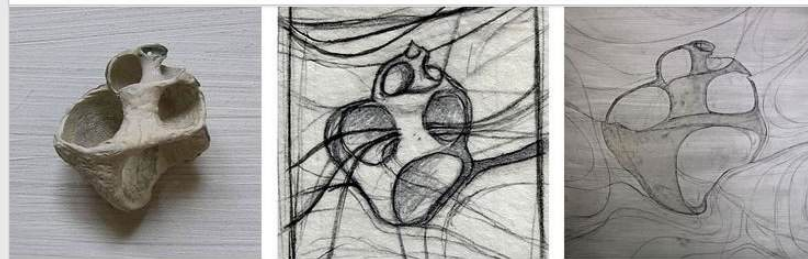
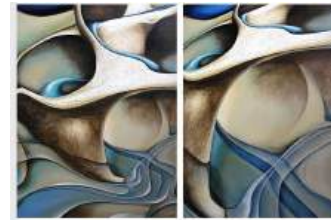
Useful Websites

<https://www.tate.org.uk/whats-on/tate-modern/georgia-okeeffe>

Section 8 Idea Development

A03 Record.

Ability to draw, photograph, write down ideas and show how you think. Below you can see the process from initial idea of a shell through to a design idea linked to the artist Amiria Gale (left)



Section 9 Final Piece Development

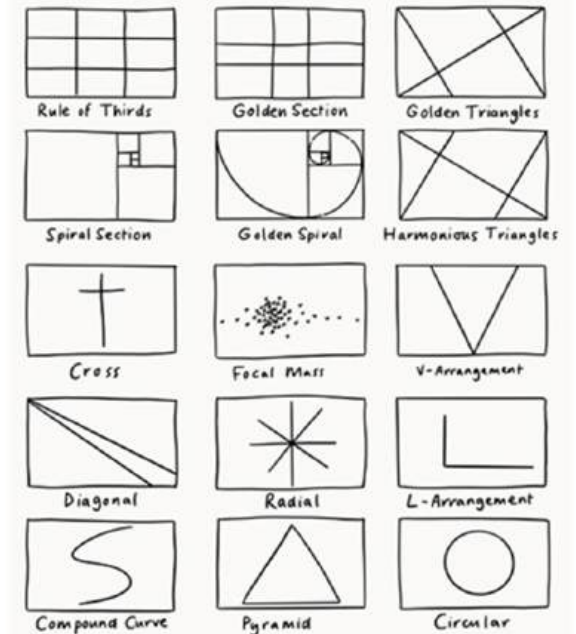
A04 is where you develop your ideas into a final outcome. You should be combining artist's techniques and styles with each other as well as your own personal ideas.

This should include your best skills and materials as well as a composition that looks visually pleasing.



Section 10

A BEGINNERS GUIDE TO COMPOSITION



A Beginners Guide to Composition

Section 11

Grades of pencil

Pencils come in different grades, the softer the pencil, the darker the tone.

H=Hard B=Black

In art the most useful pencils for shading are 2B and 4B. If your pencil has no grade, it is most likely HB(hard black) in the middle of the scale.



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.

AO2**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.

AO3**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.

AO4**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 5 Daniel Hills

Daniel Hills is a freelance graphic designer, illustrator and artist working in Norwich, London and the East of England areas.

He works with acrylic and oil painting, combined with digital photography and graphics to create contemporary art prints.

He is inspired by J M W Turner's work in his use of texture and colour to represent light. He is also interested in artists using modern printing and vector scanning techniques

His work shows how modern technologies can be used alongside and in combination with more traditional painting techniques and methods.

He has created a range of artwork that has a focus on buildings particularly skylines. He works with vivid and faded colour working with negative space just as much as the subject focus.

**Section 6 Sarah Gooch**

Sarah Gooch is a freelance illustrator working in the editorial, publishing and design sectors. Her distinctive style uses layers of collage, painting, line drawing and photographic digital techniques to build up striking imagery.

Inspirations include history, especially the ever changing urban landscape of London, fashion, music, cinema, art galleries and a love of books and magazines. She loves all things decorative, with pattern being a major part of her work.

Her Architectural studies often show buildings outlines with blocks of colour. They show minimal texture but simplified hand drawn detail and outlines. She uses paints, ink as well digital practices to complete her work.



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 7 Key Vocabulary

Architecture – A general term to describe buildings and other physical structures. The art and science of designing buildings

Interior - The inner part of something; the inside of a room/ house.

Exterior – forming, situated on, or relating to the outside of something.

Skyline – the line at which the earth and sky appear to meet; horizon. the outline of buildings, mountains, trees, etc, seen against the sky.

Camera Angle – The camera angle marks the specific location at which the movie camera or video camera is placed to take a shot.

Scale – The size of something.

Composition – Simply put, composing an image means arranging elements within it in a way that suits the core idea or goal of your work best.

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.

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 photo, along with their dimensions with respect to what viewer of the image sees.

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

Section 8

Top 5 tips when taking a Photograph



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



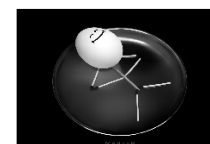
Angle Matters—Think about the meaning of your photograph and the impact you want.



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 close and have fun.

Useful Websites

<https://www.pinterest.co.uk/seanr1132/architecture-photography/>

<https://www.pinterest.co.uk/Dixonsaart/>

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

	Rule of Thirds Position subject on the crosshairs		Framing Frame subject with surrounding objects - buildings, people, trees
	Repetition Look for repeating objects - pile of fruit, row of poles etc		Leading Lines Road, rails, lines of lampposts, buildings etc leading to subject
	Negative Space Leave space for subject to move into		Colour Use complimentary or opposing colours in background
	Balancing Elements Balance background interest with foreground subject		Differential Focus Subject in sharp focus to guide the eye
	Symmetry Half of the image is a mirror of the other half		Patterns Look for naturally occurring & constructed patterns
	Depth (layers) Position subject in front of and behind objects to create 3D depth		Depth of Field Blur background &/or foreground to separate your subject
	Viewpoint Photograph from different angles - get low, get high		Triangles & Diagonals Look for diagonals in a scene, create triangles
	Fill the Frame Get in close and fill the frame with your subject		Simplicity Cut out distractions - get close, blur background, darken background
	Left to Right Rule Moving subjects should go from left of frame to right of frame		Rule of Space Leave space around your subject
	Rule of Odds Look for odd numbered design elements - 3 arches, 5 windows etc	brought to you by www.thelenslounge.com	

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.



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.

How to make... **Section 3** A Suffolk Puff / Yo-Yo

Suffolk Puffs (Yo-Yos) are circular puffs of gathered fabric. They date back to the 19th century. They are great for reusing old, scrap material to create decoration for quilts, cushions, jewellery and toys.



1. Use a template to draw a circle on scrap fabric.

The circle should be double the size you want your finished Suffolk Puff to be.



2. Turn the edge of your circle over about 5mm and make a small running stitch along the folded edge.

Leave some thread at the start.



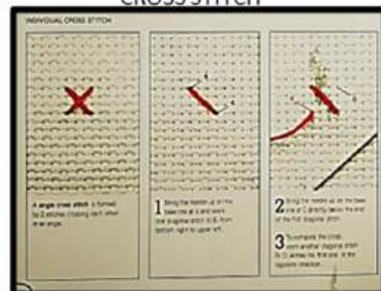
3. Pull the threads to gather the puff. Have both long threads finishing on the same sides of the puff, this makes gathering easier.



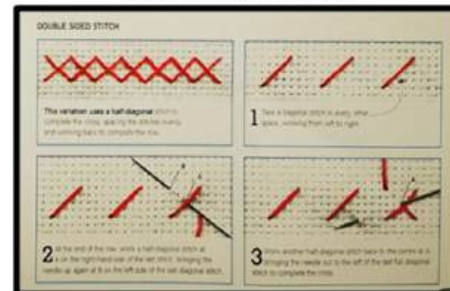
4. Tie the threads together and trim.

Section 2

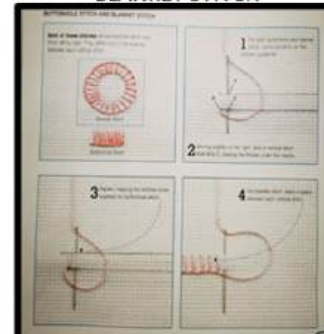
CROSS STITCH



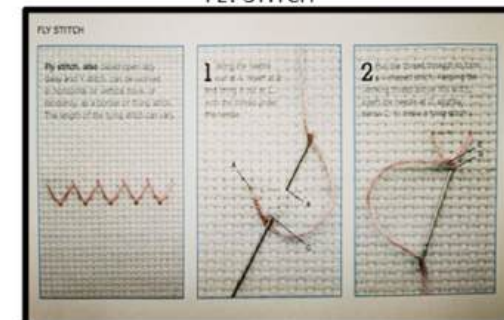
DOUBLE SIDED STITCH



BLANKET STITCH



FLY STITCH

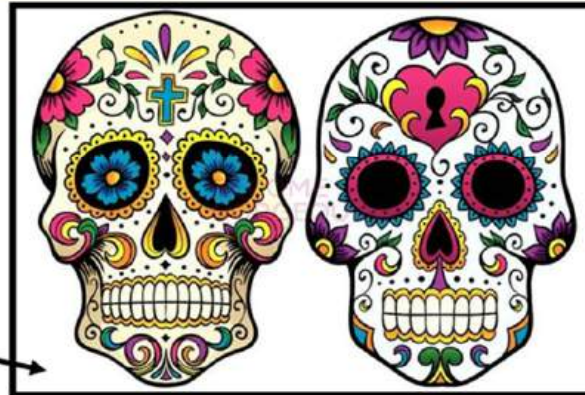


This cycle we are going to be looking at the Mexican festival of the day of the dead and the importance of sugar skulls.

Section 1

What is a sugar skull?

A sugar skull is a representation of a human skull. The term is most often applied to edible or decorative skulls made from either sugar or clay that are used in the Mexican celebration of the Day of the Dead.



Section 2

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.

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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

BATIK WAX

WHAT YOU NEED

- Material
- 2 Strips of tape
- Coloured Pencil
- A3 Paper

- 1 Draw your design in pencil, then cover your paper with the material and tape in place.
- 2 Print
Save as
Share
Read aloud
- 3 Blend and mix the dyes with each other and water to get various effects, experiment!

! DANGER
HOT WAX IS HOT, IT CAN BURN, HANDLE WITH CARE!

TJANTING
A pen-like tool used in batik for applying melted wax to fabric in order to draw pictures and patterns.

- 1 The organdie (special fabric) is stapled to a frame to create a screen.
- 2 Stick the masking tape around the underside of the screen.
- 3 Make your stencil out of paper, cutting out a simple design.
- 4 Place the stencil underneath the frame but on top of a piece of plain paper.
- 5 Pour a thick line of ink at one end of the screen.
- 6 Using the squeegee press down and draw the ink across the screen.
- 7 Carefully lift the screen off.
- 8 Repeat and evaluate.

Section 4

A01 Develop

Explore

Detailed Mind Maps

Develop Ideas **Analyse**Investigate & Research
Artists, Cultures & Issues

Artist Interpretation

Annotate

Section 1: Key Skills

- ☐ How to create effective visual mind-maps exploring a theme
- ☐ How to research relevant artists and analyse their work
- ☐ How to explore materials and produce sculptures inspired by artists
- ☐ How to interpret artists work to develop own ideas

A02 RefineExperiment with
different materialsReview **Take Risks**Explore Ideas &
Techniques

Select & Improve

Section 2 Key Skills

- ☐ Produce skilled drawings
- ☐ Make a range of mini models inspired by the artists and the theme
- ☐ Explore and build on clay construction techniques
- ☐ Explore and build on glazing and decorating techniques
- ☐ Record the process
- ☐ Review experiments and annotate how successful they have been.

A03 RecordDrawing, painting, printing,
photography, writingDesign **Annotations**
Ideas **Evidence**

Present your ideas

Primary
Photographs**Section 3: Key Skills**

- ☐ Produce a range of Primary and secondary research for your chosen theme
- ☐ Produce a range of thumbnail ideas
- ☐ Plan your final outcome
- ☐ Review and refine your final idea
- ☐ Plan how to make your refined final idea

A04 Present

Final Piece

Outcome **Conclusion****Clear connections**Develop as Planned with
Links to your Ideas

Design Ideas & Final Ideas

Section 4: Key Skills

- ☐ Produce a final piece that demonstrates a high level of technical skill
- ☐ The final piece has clear links to the project theme and artists researched.

Section 5**Key Words****Theme**

The title or subject matter of project.

Mind-map

A brainstorm of lots of words/images linked to a theme.

Analysis

Ability to talk about a piece of artwork and show your understanding of it.

Annotate

Notes made next to work in your sketchbook to explain what you are doing.

Primary Source

An image that you have taken yourself (e.g. own photograph)

Secondary Source

An image you have found from a book/pinterest/magazine

Thumbnail Sketches

A group of sketches that show rough ideas for possible final pieces.

Colour Scheme

A particular set of colours you have selected to work together in your artwork

Sculpting

Using your hands and tools to shape a material into a sculpture

Balance.

To make sure your sculpture is secure and stands up safely

Coiling

Using long clay coils to build a sculpture

Moulding

Using a plaster mould to form a shape



Section 1

CRITICAL ANALYSIS GUIDE

1. Title: ARTIST'S NAME

The type of artwork is.....
 The country they are from is.....
 They were born in the year.....
 The work is contemporary/ from the past:.....
 The theme of the work is.....

2. Describe what you see:

I can see a.....
 The main form of the sculpture is....
 The subject of the work is...
 The work looks like.....

Colour

The colour of the sculpture is.....
 I can see different.....

Texture (how does it feel?, What is the surface like?)

The surface looks/feels like.....

Size (what size is it compared to real life):

The scale of the object is....
 It measures.....

Where is the sculpture Located

The sculpture is placed on/set in/located...

3. Technical

How has it been made?
 The sculpture is made from...
 The materials the artist has used...
 The methods/techniques they've used are
 To make the sculpture they.....
 The sculpture is simple/complex....
 The amount time it took to make would be....

4. Meaning and Opinion

Why have they made it?
 They made the sculpture because...
 passion/commissioned/job/to explore
 What do you think it's about?

I like/dislike the sculpture because...
 My opinion of the sculpture is..
 I chose to study this sculpture because.....

5. Ideas for my own art in the style of the artist

To recreate this artwork, I would
 The theme I would use is...
 The materials I would use are...
 I would make it by....

Section 2

3D REVIEW and REFLECT ANNOTATIONS

- Describe your sculpture
- Technical process: how have you made your sculpture – materials, methods, structure
- Aesthetic explanation: does it look good – why? Shape, line, texture, colour, structure, mood
- What has been successful about your model/sculpture
- What artist inspired your work and why
- Were there any weaknesses?
- How could you improve it?
- What's next

Sentence starters

- The best part of this sculpture is....
- The most successful aspect of my sculpture is
- The shape isbecause
- In this model/sculpture I used.....
- The materials I used were....
- My sculpture stands/hangs....
- The balance of my sculpture is....
- The colour/texture/shape is.....because
- The theme of my sculpture is....., the mood is...
- I could improve on...../I would change
- This connects with the work of the artist.....
- I was influenced by the artist because
- The next thing I will look at it

AC2.1.2 Impact of cooking methods on nutritional value of dishes

Why do we cook food? 1

Cooking food **improves digestion** and **increases the absorption of many nutrients**. Different cooking methods alter the nutritional composition of foods and can degrade some nutrients, while enhancing the availability of others. For example, the protein in cooked eggs is **180% more digestible** than that of raw eggs. This is also true of vegetables, as cooking **breaks down the thick cell walls of many plants**, releasing the nutrients stored in them. A great example of this is cooked tomatoes, which have a higher lycopene (an amino acid) content than raw tomatoes.

We also cook foods to make them safer to eat. For example, eating raw potatoes would give you **stomach ache!** Uncooked meat could give you **food poisoning**. Cooking food **kills bacteria** and can make food look and taste **more appealing** by altering the colour and texture of it.

INTERESTING FACT!

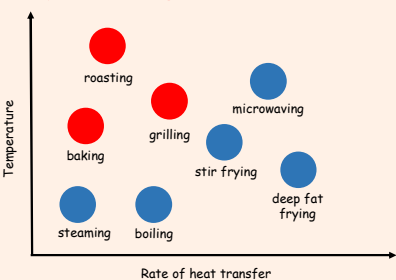
Virtually all **minerals** are unaffected by heat. Cooked or raw, food has the same amount of calcium, phosphorus, magnesium, iron, zinc, iodine, selenium, copper, manganese, chromium, and sodium.



The main foods affected by moist cooking methods are **fruit and vegetables which contain water soluble vitamins, B and C**. The **B Group** of vitamins, (B1, B2, B3, B5, B6, B7 and B8) and **vitamin C** are also sensitive to heat and can be destroyed by high cooking temperatures.

The **longer** fruit and vegetables cook, the **more nutrients are lost**.

The **longer** food is **heated**, and the **higher** the **temperature**, the **greater** the **nutrient loss**.



Fat soluble vitamins A, D, E and K are also **destroyed with heat**. Cooking methods such as frying and roasting that use fat **increase the fat content and total calories** in food cooked this way.



Chopping and slicing up fruit and vegetables causes loss of nutrients, so cut up these foods just before you need them.

Nutrient Content Comparison by Cooking Method

Type of potato	Amount of fat per 100g	Vegetable	Amount of vitamin C per 100g
Potato, baked flesh only	7g	Raw spinach	26mg
Potato, mashed with butter	4g	Boiled spinach	8mg
Potato wedges, baked	7.7g	Raw peas	24mg
Potato, roasted	4.5g	Boiled peas	16mg
Chunky chips deep fat fried	5.2g	Canned peas	1mg

When animal sources of protein are cooked slowly, any connective tissues present in the meat are likely to **dissolve**. Heat does not **destroy the protein in food**, but it may **reduce the overall content**.

Protein that is exposed to **hot temperatures**, shrinks and loses moisture. This usually occurs at temperatures between **70°C - 85°C**.



Moist Cooking Methods 2

Boiling and Simmering

Boiling reduces vitamin C content more than any other cooking method. As vitamin C is water soluble and sensitive to heat it can leach out of vegetables when they are immersed in hot water, such as in boiling. Broccoli and spinach may lose up to 50% or more of their vitamin C when boiled! B vitamins are similarly heat sensitive. Up to 60% of thiamine, niacin, and other B vitamins may be lost when meat is simmered and its juices run off.

However, when the liquid containing these juices is used to make stocks and gravies, 100% of the minerals and 70-90% of B vitamins are retained. Interestingly, boiling fish can preserve omega-3 fatty acid content significantly more than frying or microwaving.

Boiling is most suitable for cooking dry, starchy ingredients such as pastas, rice and grains. The rapidly boiling liquid is needed to keep the ingredients moving so they do not stick together. Starch (carbohydrate) is gelatinised when cooked in liquid making it easier for the body to digest and therefore use for energy.

Boiling is also used for blanching many vegetables (to kill bacteria for food safety requirements). Prolonged boiling is never recommended because it can damage the flavour and ingredients.



Poaching

Poaching is a cooking technique that involves cooking by submerging food in a liquid, such as water, milk, stock or wine. Poaching is differentiated from the other "moist heat" cooking methods, such as simmering and boiling, in that it uses a relatively low temperature.

Delicate foods such as fish and eggs are often cooked this way as they are less likely to break apart during the cooking process and retain their shape.

As this cooking method involves submerging food in water, water soluble vitamins B and C are lost in the process.

When acidic liquid such as wine is used to poach foods, such as fruit, the acidity can also destroy vitamins and minerals.



Steaming

Steaming is one of the best cooking methods for preserving nutrients, including water-soluble vitamins, which are sensitive to heat and water.



Steaming broccoli, spinach and peas reduces their vitamin C content by only 9-15%. The downside is that steamed vegetables may taste bland. However, this is easy to remedy by adding some seasoning and oil or butter after cooking.

Microwaving

Microwaving is an easy, convenient, and safe method of cooking. Short cooking times and reduced exposure to heat preserve the nutrients in microwaved food.

Microwaving is the best method for retaining the antioxidant activity of garlic and mushrooms. Meanwhile, about 20-30% of the vitamin C in green vegetables is lost during microwaving, which is less than most cooking methods.

AC2.1.2 Impact of cooking methods on nutritional value of dishes

Dry Cooking Methods 3



Grilling

Grilling is a method of cooking with dry heat. Grilling is one of the most popular cooking methods because of the great flavour it gives food. Unfortunately, up to 40% of B vitamins and minerals may be lost during grilling or broiling when the nutrient-rich juice drips from the meat. There are also concerns about polycyclic aromatic hydrocarbons (PAHs), which are potentially cancer-causing substances that form when meat is grilled and fat drips onto a hot surface.

Roasting and Baking

Roasting and baking are both dry heat methods of cooking. Roasting is typically used for meat while baking is used for bread, muffins and cakes. Most vitamin losses are minimal with this cooking method, including vitamin C. However, due to long cooking times at high temperatures, the B vitamins in roasted meat may decline by as much as 40%. The meat juices could be used to make stocks and gravy after cooking to retain B vitamins and minerals lost.



SUMMARY

- Water-based cooking methods cause the greatest losses of water-soluble vitamins, they have very little effect on omega-3 fats.
- Grilling provides great flavour but also reduce levels of B vitamins. Grilling generates potentially cancer-causing substances (PAHs).
- Microwaving is a safe cooking method that preserves most nutrients due to short cooking times.
- Roasting or baking does not have a significant effect on most vitamins and minerals, except for B vitamins.
- Sautéing and stir-frying improve the absorption of fat-soluble vitamins and some plant compounds, but they decrease the amount of vitamin C in vegetables.
- Frying can provide some benefits when healthy oils are used. It's best to avoid frying fatty fish.
- Steaming is one of the best cooking methods for preserving nutrients, including water-soluble vitamins.

Stir frying

With sautéing and stir-frying, food is cooked in a saucepan over medium to high heat in a small amount of [oil](#) or butter. Cooking for a short time without water prevents the loss of vitamins B and C, and the addition of fat improves the absorption of plant compounds and antioxidants. In fact, [beta carotene](#) was 6.5 times greater in stir-fried carrots than in raw ones. On the other hand, stir-frying significantly reduces the amount of vitamin C in broccoli and red cabbage.



Shallow frying

Frying involves cooking food in a large amount of fat — usually oil — at a high temperature. Food is often coated with batter or bread crumbs, such as fish and chips or deep fried chicken. When the skin makes contact with the very hot oil it forms a seal, which ensures that the inside remains moist and cooks evenly. However, not all foods are appropriate for frying. Fatty fish (source of omega-3 fatty acids) is very delicate and prone to damage at high temperatures. For example, frying tuna has been shown to degrade its omega-3 content by up to 70-85%, while baking causes only minimal losses. In contrast, frying preserves vitamin C and B vitamins, and it may also increase the amount of fibre in potatoes by converting their starch into resistant starch.



HOW TO RETAIN NUTRIENTS WHEN PREPARING AND COOKING FOOD

- Use as little water as possible when poaching or boiling.
- Use the liquid left in the pan after cooking vegetables.
- Add back juices from meat that drip into the pan.
- Leave skin on vegetables to increase fibre content.
- Cook vegetables in smaller amounts of water to reduce the loss of vitamin C and B vitamins.
- Eat cooked vegetables within a day or two, as their vitamin C content may continue to decline when the cooked food is exposed to air.
- Cook vegetables for only a few minutes whenever possible.
- When cooking meat, poultry, and fish, use the shortest cooking time needed for safe consumption.
- Some chefs use baking soda when cooking vegetables to help them retain their colour, however vitamin C will be lost in the alkaline environment produced by baking soda.

AC2.2.1 Factors affecting menu planning

Seasonal Foods 4

Seasonal food is fresh food that is ready to eat during its preferred season. For example, English strawberries are juicy and delicious in the summer and early autumn. They do not grow wild in England during winter as it is too cold. Some foods are not seasonal. Meat and dairy are available all year round. Cows are milked and chickens produce eggs from January all the way to December.

Tastes Better

Seasonal produce will be at its peak for both flavour and health benefits. It's harvested at exactly the right time, so the taste is ripier, sweeter, and generally more delicious. The chef/cook won't need to use seasonings such as salt or spices. Out of season food gets picked before it's ripe and then gets spoilt during transport. This compromises freshness and flavour of the food, so the chef gets lower quality at a higher cost.



Eid: Celebrated worldwide by Muslims to mark the end of **Ramadan**. Eid ul-Fitr takes place on the first day of the tenth month of the Islamic lunar calendar, and Muslims are not permitted to **fast** on that day.

Ramadan: During the month of Ramadan, Muslims won't eat or drink during the hours of daylight. This is called fasting. Children are not expected to fast until they reach puberty, usually around the age of 14.

Healthier

Foods grown out of season can't follow normal growing and ripening cycles, which our bodies are naturally in sync with. But by altering the menu to follow the seasons, dishes will have a better nutrient value. This is a great selling point for a food establishment, especially those catering to a wide variety of customers such as the young and elderly.

Produce that is flown thousands of miles also loses some of its nutritional and vitamin value. Fruit and vegetables that have been blanched, tinned or dehydrated to enhance the lifespan lose nutrients as well.



Local Economy

As well as getting food at its prime, you'll also be supporting your local economy. Money spent in local businesses is normally reinvested into other local stores; helping to generate jobs and support local producers. Buying directly from the farmer or producer also means you no longer have to wonder where your food came from.



Easter: Easter is the most important festival in the Christian calendar. It celebrates Jesus rising from the dead, three days after he was executed. An egg is a symbol of new life. For Christians, Easter eggs are used as a symbol for the resurrection of Jesus. Easter is often celebrated with the giving and receiving of chocolate eggs.



Christmas: Christmas is a Christian holy day that marks the birth of Jesus, who Christians believe to be the Son of God. Christmas dinners are an important part of the celebrations. Families and friends will share food together, eating traditional foods, such as turkey, mince pies and Christmas puddings.

Disadvantages

Some disadvantages of using seasonal foods are that you may have to change your menu according to the seasons, this might push customers away who prefer certain dishes. This is a similar challenge to the chef, who may struggle to make the dishes interesting with limited ingredients. The skills required to be able to prepare and cook seasonal food may be a disadvantage to a business as staff costs may be higher. Employing high skilled staff may create an increase in food costs.

Cheaper

Seasonal produce that is locally sourced is often cheaper than buying out of season food that's been brought in. Seasonal food is cheaper to harvest, transport and sell as it's in abundance - driving down the market price. A good tip is to look for the Red Tractor logo; this symbol shows that the food is "traceable (back to a UK farm), safe and farmed with care".

Environment

Seasonal food is often grown/reared much closer to you. Reducing the environmental damage done by carrying and shipping foods long distances and keeping them cold. This is called 'food miles'. Food grown locally will also need fewer fertilisers and pesticides, which lessens water, air, and soil pollution, supporting a healthier community.

Buying seasonal food will help to reduce your own carbon footprint and support a more sustainable food economy.

AC2.2.1 Factors affecting menu planning

Skills of Chefs 5

Catering jobs are available at various levels, ranging from trainee and apprenticeships to executive level. Here are a few examples of the different types of jobs that are available in the catering industry:

EXECUTIVE CHEF

An executive chef manages the kitchen. He or she is responsible for monitoring and maintaining the quality of all dishes that leave the kitchen, creating menus and inventing new dishes, and supervising the kitchen staff. Except in small establishments, an executive chef will generally spend more time on administrative and managerial tasks than on food preparation.

QUALIFICATIONS

- Formal culinary training
- Previous restaurant experience
- Extensive food and beverage knowledge
- Restaurant industry knowledge
- Knowledge of restaurant regulations

Because the executive chef is the most senior person in the kitchen, he or she is often required to have a minimum of 5 - 8 years of relevant experience.

+ The qualifications listed under Section Chef.

SKILLS

- Cooking skills
- Menu planning skills
- Communication skills
- Leadership skills
- Time management skills
- Attention to detail
- Organisational skills
- Problem solving skills
- Work well under pressure
- Self-motivated
- Customer service skills
- Positivity
- People management skills
- Numerical skills



SOUS CHEF

Works alongside head chef to manage daily kitchen activities, including overseeing staff, aiding with menu preparation, ensuring food quality and freshness, and monitoring ordering and stocking. Provides meal quality and consistency by following designated recipes.

QUALIFICATIONS

- Formal culinary training
- Previous restaurant experience
- Extensive food and beverage knowledge
- Restaurant industry knowledge
- Knowledge of restaurant regulations
- + The qualifications listed under Section Chef.

SKILLS

- Cooking skills
- Communication skills
- Numerical skills
- Leadership and teamwork skills
- Organisational skills
- Problem solving skills
- Work well under pressure
- Self-motivated
- Customer service skills
- Positivity
- People management skills
- Attention to detail

SECTION CHEF



The chef de partie or section chef preps, cooks and assembles dishes and makes sure that they go out on time. They are in charge of a specific section of the kitchen such as sauces, fish or pastry, so need to have a sound knowledge of cooking. The chef de partie also assists the sous chef or head chef in developing menus.

QUALIFICATIONS

- City & Guilds 706/1 | 706/2 Catering
- NVQ Level 2
- Level 1 and 2 Food Safety Awards
- Minimum 1 years relevant experience
- Awareness of manual handling techniques
- Awareness of Control of Substances Hazardous to Health Regulations (COSHH) and chemical safety

SKILLS

- Cooking skills
- Work independently
- Manage Commis Chefs
- Communication
- Team management
- Communication skills
- Attention to detail
- Numerical skills
- Adaptability
- Positivity
- Team player

COMMIS CHEF

A Commis Chef assists a section chef (Chef de Partie). The commis chef is the first rung of the ladder to becoming a great chef. In most kitchens the commis chef will do food preparation work and basic cooking under the supervision of a chef de partie or section chef, rotating through sections such as sauce, vegetables, fish and butchery roughly every six months.

QUALIFICATIONS

- Level 1 and 2 Food Safety Awards
- Minimum 6 months relevant experience
- Awareness of manual handling techniques
- Awareness of Control of Substances Hazardous to Health Regulations (COSHH) and chemical safety
- Experience of kitchen equipment
- Experience of dangerous equipment such as knives
- Competent level of English spoken and written

SKILLS

- Communication skills
- Teamwork skills
- Working quickly and efficiently
- Stamina
- Willingness to learn
- Patience
- Attention to detail
- Passion for food
- Work well under pressure

**CATERING ASSISTANT**

The purpose of this role is to provide general assistance to the catering manager. The catering assistant will be required to assist with performing administrative tasks, preparing and serving food, and communicating with guests.

QUALIFICATIONS

Formal qualifications are not required. However, a basic certificate in nutrition, catering, or food safety management will count in your favour when applying for a job. The level of experience required will differ from one job to another. An entry-level job in this field will usually require little to no experience, and will allow you to learn on the job.

SKILLS

- Communication skills
- Problem solving skills
- Ability to work in a team
- Ability to work under pressure



There are no fixed educational requirements for becoming an executive chef. While it may be possible to work your way up to this position through on-the-job training and practical experience, it is recommended that you study towards a relevant qualification, such as a restaurant management certificate, hospitality management certificate, culinary arts degree, or hospitality management qualification.

AC2.2.1 Factors affecting menu planning

Large Scale Equipment 7



Combi Oven

Simple and quick operation, all at the touch of a button. This oven allows pre-prepared settings, has a wide range of cookery options and even cleans itself. These functions support the chef in their daily duties.



Commercial Range

Many commercial ranges have boost burners which generate 25% more power. They have semi-sealed hobs and drip trays to facilitate ease of cleaning. These ovens allow the chef to prepare and cook large scale operations due to the power and size.



Deep Fat Fryer

Free standing fryers are extremely large and allow large batch cooking as well as the option to cook separately in either basket. Training must be given before they can be used as they can be extremely dangerous.



Blast Chiller

Blast chilling is a method of cooling food quickly to a low temperature that is relatively safe from bacterial growth. By reducing the temperature of cooked food from +70°C to +3°C or below within 90 minutes, the food is rendered safe for storage and later consumption.



Commercial Fridge/Freezer

Large scale fridges and freezers allow you to safely store food at the correct temperature and comply with HACCP 2006.
Fridge temperature: 1-5°C
Freezer temperature: -18°C



Four Pot Bain Marie

Perfect for safely holding sauces, gravy and pre-cooked foods for up to two hours at serving temperature above 63°C. These are very useful when wanting to serve customers quickly or store foods safely without fear of them burning. You have most likely seen this piece of equipment in your school's canteen!



Rotisserie Oven

Rotisserie grilling produces superb duck, crisping the skin and melting out the fat. Rib roast comes out dark and crusty on the outside, red and juicy inside, with a live fire flavour better than that of a roast cooked in the oven. Poultry produces good results when cooked in a rotisserie.

AC2.2.1 Factors affecting menu planning

Powered Equipment 8



Mincer

A meat mincer is a small kitchen appliance used to grind meat into a smooth, uniform soft mass without the need of any other accessory. A meat mincer machine is a clean, effective and safe way of obtaining minced meat.



Electric Whisk

Electric hand mixers - sometimes called beaters - really speed up whisking egg whites, creaming butter with sugar and whipping cream. They are less powerful than stand mixers, so are perfect for mixing small quantities, and for when you want more direct control over the mixture.



Portable Induction Hob

Portable induction hobs are much safer to use, as most will feature a boil dry detection as well as switching off automatically when a pan is removed and resume when pan is returned. They are ideal for indoor or outdoor cooking. These are extremely energy efficient and support the environment. These cookers also don't heat the surface of the cooker, so are much safer to use.

Blender

Produces smoothies, cocktails, fruit purées, velvety smooth soups and sauces in seconds.



Food Processor

A food processor is a motorised appliance that quickly performs food prep tasks traditionally carried out by hand. Some food processors can chop vegetables; some can blend ingredients into soups, pastes and sauces; and others can mix things like batter and cream.

Standing Mixer

Great for multi-tasking, a standing mixer is perfect for mixing large batches of dough or batter whilst you concentrate on other tasks. A standing mixer is also good for tougher mixing tasks such as bread kneading and pastry making.



AC2.2.1 Factors affecting menu planning

Handheld Equipment 9



Balloon Whisk

Balloon whisks have many flexible wires and are used for whipping egg, cream, hollandaise, and for mixing thinner liquids.



Zester

A small fine-toothed metal grater often mounted on a wooden or plastic handle to remove the zest or coloured portions of citrus peels in thin strips.



Conical Strainer

Is used for straining stocks, soup, sauces, and other liquids. Pointed shapes allow cooks to drain liquid through a relatively small opening.



Pastry Bag and Nozzles

A funnel-like or cone-shaped cloth or plastic bag with an open end that can be fitted with metal or plastic tubes or tips of varying sizes and designs.



Sieve

A screen-type mesh supported by a round metal frame used for sifting dry ingredients like starch and flour.



Food Mill

A device with hand-turned blade that forces food through a perforated disk that is interchangeable with different coarseness or fineness reduce a solid to small, fine pieces or powdery particles like vegetables, coffee, pepper, spices, etc.



Colander

A perforated bowl of varying sizes made of stainless steel, aluminium or plastic used to drain washed or cooked vegetables, green salad, pasta, and other foods.



Colour Coded Chopping Boards

White: bakery and dairy products
Yellow: cooked meat
Brown: root vegetables
Red: raw meat
Blue: raw fish
Green: salad, fruit and fresh vegetables



Grater

A four-sided metal box with grids of varying sizes. Used for shredding and grating vegetables, cheese, citrus rinds, and other foods.



Chip Scoop

Featuring a tubular handle, the scoop remains cool to the touch when in use, ensuring the safety and comfort of staff. Made with a perforated head, the scoop allows residue to easily drain away to ensure chips are not soggy or too oily.

**Saucepan**

- Reheating soups
- Smaller volumes of sauces
- Ideal smaller portions

**Deep Boiling Pot**

- Cooking larger stews and soups
- Making larger volumes of sauces
- Ideal for bulk cooking where multiple portions are to be served

**Stainless Steel Sauté Pan**

- Stir fries, vegetables, braising and finishing dishes

**Non-Stick Sauté Pan**

- Cooking eggs and fish
- Allows cooking at lower temp.
- Don't use metal instruments as they will scratch the Teflon surface

**Cast Iron Pan**

- Grilling meats, fish and vegetables
- Can take high heat and go in oven
- Cast iron won't tarnish and is easy to clean

**Cast Iron Griddle Pan**

- Has grooves in the bottom for searing meat
- Fat stays below in the grooves
- Make sure to season and clean between the grooves

AC2.2.1 Factors affecting menu planning

Type of Provision 11

Different occasions suit different types of menu. For example, if you go to a wedding you would expect a sit down meal, often silver service. If you go to a party you would probably expect a buffet. Most importantly, the style of service, menu and event needs to suit what the **customer expects and wants**.

When planning your menu you should consider:

Time of year, weather, types of customer, time available, price, portion control, ability of the cook, ability of the waiting staff, equipment available (for preparation, serving, cooking), balance (colour, flavour, texture, shape, variety of ingredients), presentation.



Children's Menus

Should be fun and include healthy alternatives to children's favourites, e.g. potato wedges instead of chips. Children could have more choice by offering smaller portions of main meal dishes from the adult menu. Children's menus should not be excessively high in fat, salt and sugar and demonstrate smaller portion sizes.



Breakfast

Breakfasts usually offer a choice of hot (bacon, egg, sausage, tomato etc.) and cold continental (rolls, croissants, cheese, cold meats, fruits and yoghurts). Hot and cold drinks and a tasty selection of preserves are also often offered.



customers' needs



Specials

Many restaurants have 'specials boards', which is a good way of adding seasonal dishes to the menu.



Lunch

Often needs to be served quickly for customers who have limited time. Sandwiches, wraps and baguettes are ideal. An ideal menu will offer a variety of breads with a selection of hot and cold fillings, together with snack items such as jacket potatoes, salads, pastries, cakes and muffins.



Evening meal

Vegetarian and healthy choices should be offered as well as dishes using a variety of cooking methods. In the UK, the most popular menus offer hot and cold starters, a variety of main courses and a selection of desserts that include chocolate and fruit.

Menu Type	Description	Advantages	Disadvantages
Table d'hôte or set-price menu	A fixed or set-price menu with a limited selection of dishes for every course.	Faster service and less wastage as less items on the menu for the chef team to prepare.	Limited choice
A la Carte menu	All dishes are individually priced. Menu comprises of starters, mains, desserts and side dishes. A type of menu often used in restaurants.	Wide variety and choice. Food items and dishes listed and priced individually so the customer can make their own meal from a selection of dishes.	Creates longer wait times for customers as dishes are cooked to order, slowing down the chef team. Can generate a lot of waste for the establishment if a dish is not popular.
Rotating menu cycle	Often used in schools and hospitals. A fixed pattern of menus is used to cover a fixed number of days. The minimum number of days is eight, so that menus are never repeated on the same day each week.	Chef/catering team will be familiar with the menus and therefore able to cook to a high standard consistently.	Food is often made with cheaper ingredients, resulting in poorer quality as focus is not on awards or reviews.
Ethnic or Specialty menu	Can be fixed price or A La Carte. Some offer dishes from particular countries, e.g. China, Italy. Others offer specialised food, e.g. fish or vegetarian dishes.	Chefs who are familiar with the type of cuisine are often employed, therefore dishes cooked to a high standard. Very popular in modern dining.	Limited choice other than the theme of menu on offer. Menu may not suit a wide variety of customers.
Fast-Food menu	This is similar to a specialty menu. Food tends to have 'themes' such as burgers, chicken or baked potatoes. Items are priced individually.	Low skilled staff can be employed to cook food as it is often prepared and delivered from a larger manufacturer. Makes staff wages lower, saves money.	Food is seen as 'cheap' and therefore prices must reflect this. Restaurant would have to sell in high volumes to make a profit.
Party or Function menu	Usually a fixed-price menu offered for parties or functions such as wedding receptions. Some party's menus offer a limited choice. Price is set per head (per person) rather than by dish.	Costing the menu per person helps the chef to budget for ingredients and staff. Food can be prepared and chilled ahead of time as menu items are already decided.	Limited choice, especially for customers with allergens and intolerances.

When an planning your menu you must consider the following factors:

- Type of function/event
- Date and time
- Type of venue
- Number of guests
- Risk Assessment (allergens and intolerances)

Venues

Once you have chosen your brief, you can begin to think about the style of menu that will suit the occasion. For example, children's parties may take place at a soft play area where a small buffet style meal would be suitable. You could even create a dinosaur or superhero themed menu with set items. The menu would have to consider the equipment available at a soft play area, which is unlikely to have a fully functioning commercial kitchen onsite. An adult's party may take place at a restaurant where a wider variety and choice is expected. You may even be asked to design a menu for a holiday park bistro, where all ages must be catered for!

Type of function: The most important factor to consider is what type of event are you planning? Common functions/events in the hospitality industry are: weddings, charity fundraisers, school proms, awards nights (the Oscars), business networking, opening of a new business, staff Christmas party, christenings, birthdays, confirmations, bar mitzvah, sporting events e.g. football hospitality (private boxes), horse racing (The Grand National). The menu may have to suit the theme, sports club, company or brand. If the event is a special occasion/luxury a silver service may be expected, however work parties and discos may only require a buffet service. The type and purpose of the event will determine every other factor and decision.

Date: Time of year, e.g. Christmas, Easter, Summer, Spring. The time of year might have an impact on the theme you choose or ingredients that are in season. The date may be specific to the client, e.g. a wedding day, date of the school prom, that cannot be changed.

Time: Morning = Breakfast Dishes such as cooked breakfast (Full English), light snacks, fruit, pastries, Danishes, yoghurt.

Daytime = Lunch/Snacks such as sandwiches, baked potatoes, wraps, salads, pasta dishes.

Evening = 2 or 3 course dinner, starters, mains, desserts, vegetarian options.

The time may dictate the type of food you serve or style of service, e.g. in the evening guests would not expect a breakfast course, in the morning, guests probably don't expect a 3-course meal. When planning a menu always think about the time of **day or year!**



Number of Guests

The number of guests is **VERY important!** The catering manager/chef needs to make sure that if 60 guests are expected, 60 guests are catered for, plus some extra in case people turn up unexpectedly. A wedding is a great example of where the number of guests must be correct, as the cost per person is often expensive (around £70 per guest)! If an event expected lots of guests (over 200) the chef may suggest serving a buffet as a 3-course meal for over 200 people may be time consuming (unless there are many chefs and wait staff employed for the event). All these things must be considered so the event runs smoothly, and everyone is catered for.



Portion Control



Portion control is extremely important. Customers need to feel they are getting '**value for money**' and having the same size portion as everyone else.

It helps the caterer when planning to know how many portions the ingredients will make? The caterer can then determine a selling price (how much should be charged to cover costs and make a profit?) and avoids waste.

Using standard recipes can help a caterer by determining how many ingredients will make 10, 20, 30 or more portions. **Equipment can also be used to control portions:**



When planning your menu, you must consider the impact your choice of dishes and preparation methods will have on the environment.

Environmental issues you must consider also include:

- Conserving energy and water when preparing food
- 3 Rs Reduce, Reuse, Recycle
- Food sustainability and provenance

Buying ingredients - what to consider?

- Have the ingredients travelled from far away by environmentally damaging transport?
- Have the ingredients been processed and purified using a lot of energy carbon footprint
- Ingredients locally produced - saving food miles and environmental damage
- Organic ingredients not using excess fertiliser, pesticide or artificial hormones for animals
- Animal welfare e.g. free range or barn eggs, free range meats, organic meats
- Fruits and vegetables and meat produced locally or sustainably
- Ingredients such as cocoa, coffee, syrup produced by fair trade farmers.



Choose **sustainable food**. By this we mean buy local, seasonal and environmentally friendly food. For example, try local farmer's markets, choose products with a Fairtrade stamp, select fish that has been sustainably farmed. By buying locally your ingredients will travel less miles to reach the kitchen, reducing carbon footprint.

Using **organic foods** is also extremely environmentally friendly as these products don't use any pesticides and fertilisers. However, many supermarkets reject these due to their shape and size being 'non-uniform'. These are often wasted or used as animal feed.

To conserve energy, it's best to keep your pans covered while cooking. Covering your pans will require less cooking time. This is also a good way to prevent grease splatters that will require you to use additional water or cleaning products to remove. While cooking, you can lift the covers briefly to stir or flip over food so that it doesn't burn. **This style of cooking speeds the foods cooking time by 25%.**

As induction hobs are more energy efficient than gas hobs, a chef could consider switching to induction hobs, however gas hobs allows better control over cooking temperatures. You could plan your menu around faster cooking methods such as sautéing and stir frying to minimise the amount of energy used.

Cutting your food into smaller pieces has long been an effective green cooking method. Smaller meat and vegetable pieces can be heated faster so that **less energy** will have to be used. This will also make it easier for you to see how well your food is cooking so that you can manage your cooking time more effectively without burning anything.

Cutting meat into smaller portions can also **reduce the chances of food borne illness** from raw or undercooked meat dishes. Additionally, if you use this method on meat, you should also be able to avoid overcooking and **therefore prevent food wastage**.



Food miles/Carbon footprint

The distance the food or ingredients travel from production/growing to where it is consumed or sold. Transporting food long distances is harmful to the environment. Some foods can't be grown in this country due to the climate and therefore must be transported overseas to reach us.

Visit foodmiles.com to calculate the food miles of your chosen ingredients:



Key Words

Reduce	lowering the amount of waste produced
Reuse	using materials repeatedly
Recycle	using materials to make new products
Sustainable	able to be maintained or continue



Each time that you cook, you should prepare a larger food portion so that you can use it again. Since reheating will require less energy use, preparing a larger portion will save you from having to use more heating power to prepare new meals. This can also help you reduce your clean up times and cut down on your water use. A great example of this is to make 20 portions of lasagne and once cooled, you can portion, freeze and reheat when required.



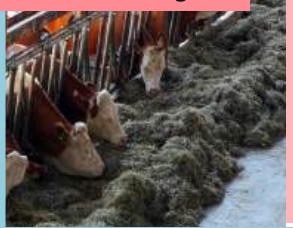
When using water to boil anything in a pan, make sure that you only use as much water as is needed to cover the amount of food you're cooking - one of the most common forms of energy wastage is the energy it takes to boil water you don't need. Use the kettle to boil water quickly and transfer to a pan on the hob for steaming and boiling vegetables or pasta. Always use a pan which is the right size for the amount of food you are cooking to ensure that you use less energy in heating a bigger surface area when you don't necessarily need to. Use a double steamer to cook vegetables so you can layer vegetables on top of each other and still use one ring. Turn down the level of the ring or burner once the cooking temperature or state is reached; most dishes need to simmer, not boil.



Check your fridge regularly to see what food you have, what's going off soon, what can be frozen, what vegetables are on the turn that can be made into a quick side dish? Or even cook to destroy spoilage bacteria and preserve the foods shelf life. By also checking that food has been stored correctly you can prevent food wastage by preventing food spoilage.

Avoid over purchasing ingredients, buy ingredients with your menu in mind and the number of customers you are likely to serve. Avoid serving large portions to prevent food wastage by customers. Don't forget, food waste can be composted and used to grow more crops. You could even serve some fruits and vegetables with the skin on to prevent waste and increase the fibre content of the dish!

Cattle Farming



Reduce how much meat and dairy you use! By using less beef and dairy products you can reduce health risks and greenhouse gases. Beef's environmental impact exceeds that of other meat including chicken and pork, experts believe that eating less red meat would be a better way for people to cut carbon emissions than giving up their cars. The heavy impact on the environment of meat production, research shows a new scale and scope of damage, particularly for beef. **The popular red meat requires 28 times more land to produce than pork or chicken, 11 times more water and results in five times more climate-warming emissions.** When compared to staples like potatoes, wheat, and rice, the impact of beef per calorie is even more extreme, requiring 160 times more land and producing 11 times more greenhouse gases, in particular 'methane'.

Over Fishing



Occurs when humans take fish from the marine and freshwater sources at a rate faster than fish can repopulate. It's the reason seafood is expected to be depleted from the oceans by 2048.

Overfishing is a result of modern advancements in the fishing techniques such as trawling and dredging, which disrupt the physical habitat and biologic structure of ecosystems in the ocean. Fish such as cod, salmon and tuna are in danger as these make up the vast majority of species fished for.

Energy Efficient Equipment

Energy efficiency simply means using less energy to perform the same task - that is, eliminating energy waste. Energy efficiency brings a variety of benefits:

- reducing greenhouse gas emissions,
- reducing demand for energy imports
- lowering our cost



ENERGY SAVING TIPS FOR CHEFS

• STAFF INVOLVEMENT

Raise energy awareness among kitchen and waiting staff and appoint "Energy Champions", staff members responsible for turning off lights, ovens and equipment when not in use and making sure that heating and hot water are set at the right temperature.

• REFRIGERATION

Fridges and freezers should be located away from the hot kitchen. Ensure refrigeration temperatures are set correctly and review the condition of the door seals. Keep fridge doors closed as much as possible - install door closers or alarms to prevent staff members accidentally leaving the fridge/freezer doors open.

• REVIEW EQUIPMENT

A new machine could save money and energy. A combi oven, for example, which offers convection, steam and combination cooking, can save energy, while induction hobs are more energy efficient than a traditional electric hob.

• REVIEW YOUR DISHWASHER

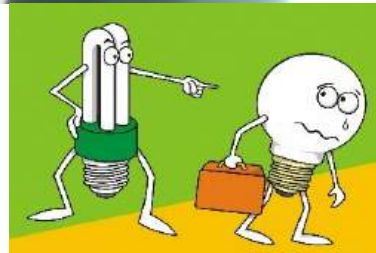
Don't set the dishwasher away half full, wait until a full load is ready to save water and energy.

Conserving energy by:

- Keep equipment clean and maintained so it uses less energy including filters on ventilation and refrigeration
- Descale equipment used for boiling
- Keep lids on saucepans
- Energy efficient lighting, auto switch off
- Turn off equipment and lights when not in use
- Don't put hot food in fridges, uses more energy to cool down
- Energy efficient boilers etc for hot water, don't have water too hot (above 55°C for legionella)
- Replace old equipment with more energy efficient models
- Gas heats up and cools down more rapidly but needs ventilation

**REDUCE**

- Only **buy** what is needed for preparation
- **Storage** - check temperatures, use airtight containers label food with dates, use first in first out for ingredients
- **Preparation** - do not over trim, use carcasses and trimmings to make soups, stocks and sauces
- **Portion sizes** - do not offer excessive portion sizes people will leave lots of food, wastes energy in preparing food that is not going to be eaten
- **Write menus** that consider using offcuts such as chicken trimmings used to make a pie
- **Turn dry fruit and veg** into powders and seasonings
- **Turn excess fruit and veg** into chutneys, sauces, jams, pickles
- **Freeze** leftover food for later use in dishes.

**REUSE**

- Keep food in **reusable** containers
- **Serve** water in glass bottles or carafes
- Use **refillable containers** for condiments, salt and pepper, sauces etc instead of single serve
- **Use food not served to make new meals** e.g., bubble and squeak with left over potato and green veg, stir fries with small pieces of veg, trifle with left over cake, meringue with left over egg white, soup with veg and meat leftovers, Bread and butter pudding or croutons with bread.

Conserving water by:

- Taps that disperse only short bursts of water
- Motion sensor taps
- Only use minimum water to cook food
- Use a steamer instead of boiling in water
- Reduce flow of taps, use a spray head for washing
- Have taps which turn themselves off
- Use a bowl, keep the plug in when washing up
- Full loads for washing machines and dishwashers
- Serve water on tables at customer's request
- Reduce flow rate to equipment such as potato peelers
- Water metering

**RECYCLE**

- **Recycle sturdy containers** for food storage
- Send food waste to be used for compost or animal feed instead of throwing it away
- **Recycle used cooking oil.** Some companies collect it for free and then turn it into bio diesel
- **Recycle paper, cardboard, cans, glass bottles and jars.** Councils will collect for recycling.
- **Buy recycled** glass, food grade plastic containers, recycled paper
- Use the correct recycling bins - **train staff**

Section 1 COLOUR THEORY!



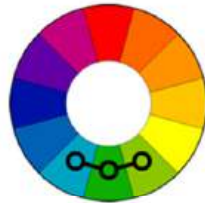
The colour wheel

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

Section 4

Harmonious Colours

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



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 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



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) the 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.

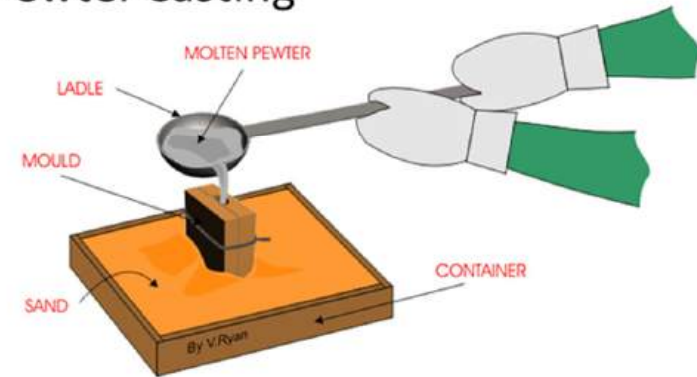
Forming (noun) shaping an ingredient into a shape e.g. meat into a burger.

This cycle we will be conducting a full design and make project focusing on creating jewellery inspired by a chosen period of art and design.

Design Page Examples



Pewter Casting



Key Vocabulary:

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.

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

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

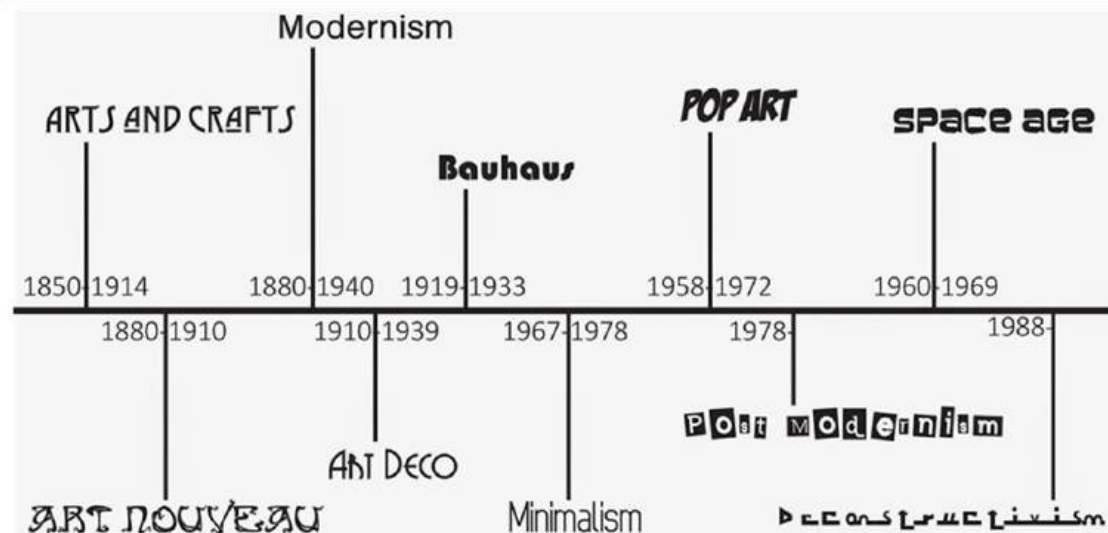
Sand paper (noun) with sand or another abrasive stuck to it, used for smoothing or polishing woodwork or other surfaces.

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.

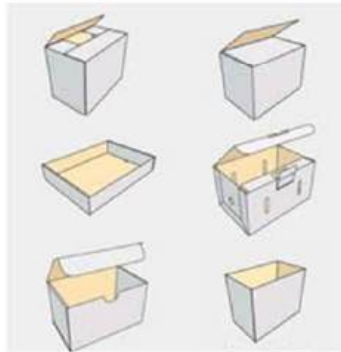
Decoration (noun) the process or art of decorating something.

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



This cycle we will be conducting a full design and make project focusing on creating jewellery inspired by a chosen period of art and design.

1 - Draw the 3-Dimensional Cardboard Boxes below



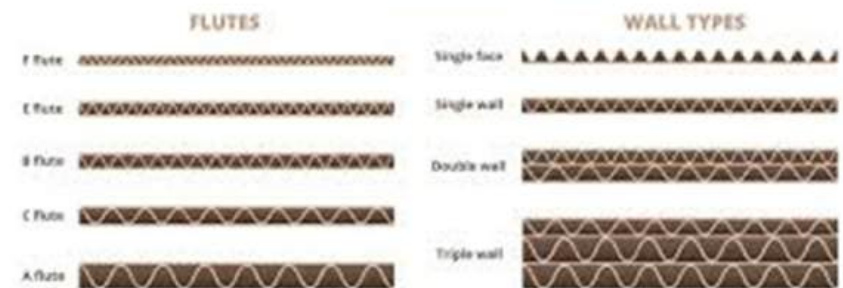
What is 3D (three dimensions or three-dimensional Design)?

3D, or three dimensional, refers to the three spatial dimensions of width, height and depth.

The physical world and everything that is observed in it are three dimensional.

2 – Draw and laBel

TYPE OF CORRUGATED BOARD



Package Protection Symbols 3 - Draw and label



1.This Side Up



2.Fragile



3.Handle with Care



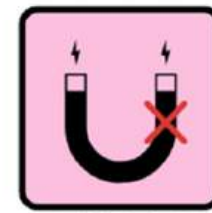
4.Don't Open with Knife



5.Avoid Direct Sunlight



6.Temperature Sensitive



7.Avoid Placing Near Magnets



8.Keep Dry

4 - Key Vocabulary:

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.

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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 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.

How Computer and Video Game Music is used within a Game



e.g. indicating missing actions or "pick-ups".

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

Musical Features of Computer and Video Game Music

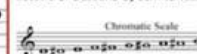
JUMPING BASS LINE
Where the bass line often moves by **LEAP (DISJUNCT MOVEMENT)** leaving 'gaps' between notes



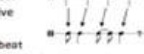
STACCATO ARTICULATION
Performing each note sharply and detached from the others. Shown by a dot.



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



SYNCOPIATION
Accenting the weaker beats of the bar to give an "offbeat" "jumpy feel to the 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)



Rem Di Prisco
Fortnite (2017)

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	Skeptak, Dizze 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
		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

Digital Graphics Keywords:

Purpose	Audience	Layout	Graphics	House Style
Text	Images	Design	Create	Client
Vector	Bitmap	Contingency	DPI	Pre-Production
Copyright	Assets	Compression	Lossy	Lossless

A graphic is a visual representation, they are visual images or designs. Graphics can be captured or created. They can be displayed digitally or physically (electronic or paper based).

Section 1

Different graphics	Purpose	Examples
Logos Advertisements Magazine covers Cartoons Billboards Website images DVD and book covers Signs Posters You see graphics everywhere!	Inform Persuade Advertise Promote Educate Warn Guide Entertain	  

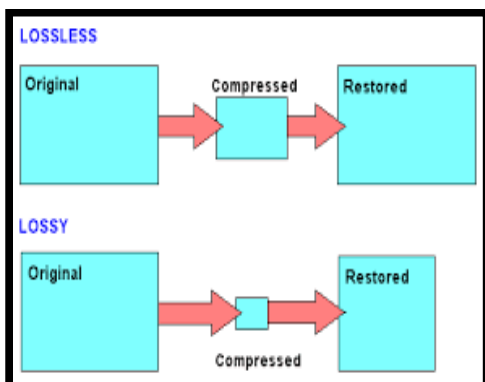
Section 2	Vector	An image made up of lines and shapes e.g., a plan of a room in a house, a company logo.	Advantages: Does not take up much memory; lines and shapes can be grouped and placed in front or behind each other; the quality remains the same as image is made bigger. Disadvantages: Only the colour of whole lines or shapes can be changed.	Software Adobe Illustrator	File Types: SVG Software: AI
	Bitmap	Created from rows of different coloured pixels that together form an image e.g. image taken from a camera.	Advantages: The colour of each individual square can be changed. Disadvantages: The quality suffers as the image is made bigger; nothing can be added behind or in front of the image; can take up a lot of computer memory.	Software Adobe Photoshop Serif Draw Plus	File Types: JPEG, TIFF, PNG, GIF, BMP Software: PSD DPP

Section 3

Pre-Production Documents: created to plan and design before you create your media product. Allows communication with the client and saves time and money.	
Client Brief	A written report show that outlines your client and audience requirements for the media product. Content: purpose, audience, audience requirements, client requirements, success criteria, initial ideas.
Mind Map	Shows your ideas for the media product. Content: central node, sub nodes, connectors, text, images.
Mood board	Shows your creative ideas and overall theme. Content: colour scheme, images, typography Digital: sound, video and animation Physical: objects, materials, fabrics.
Script	A written document to show dialogue. Content: scene description and direction, characters, location, shot types.
Storyboard	A storyboard is used to illustrate a sequence of moving images and has a flow of scenes that follow a timeline. Content: timing, location, scene number, scene description, lighting, shot types, camera movements.
Visualisation	To plan the layout of a static or still image in a visual manner. To show what the finished item might look like. Content: size, dimensions, house style, colour, annotation.

Section 4

Client	The client is the person who has asked you to create something, for example a local magazine.
Audience	The audience are the people who will use your product and who you must think of when designing and creating.
Software	Software is a set of instructions, data or programs used to operate computers and execute specific tasks. Adobe Photoshop is a program we use to edit and manipulate graphics.
Composition	The arrangement of text and images within a graphic.
Compression	Making a file smaller in some way, i.e., reduce its size for many reasons, such as transporting (e-mail, disk, usb etc.), or displaying on the web. The average person only waits 10 seconds for an image to load online. Images must be small enough in file size (KB) to load quickly.
Lossy Compression	Permanently removes parts of an image that the human eye cannot normally see. Depending upon the level of compression, the viewer may not notice what has been removed. Lossy can have different ranges of compression (e.g., low, medium, high), which affects the quality and file size of an image. Examples of file format is JPEG.
Lossless Compression	Doesn't remove any parts of the image when compressing. Removes 'redundant' data that is not needed in the image. The compressed version is the same as the original. Just a smaller file size. Used when the compressed image cannot have anything removed. Example file formats include GIF and PNG.



Section 5

White Space	Alternatively referred to as spacing or whitespace, white space is any section of a document that is unused or space around an object.
DPI	Resolution determines the image quality. The higher the resolution, the better the quality of the image. DPI Determines the print/display quality of an image. The more 'dots' (pixels) that an image is made up of, the better the quality (resolution). In a <u>low-resolution image</u> , the pixels are larger and therefore, fewer are needed to fill the space. This results in images that look blocky or pixelated. An image with a <u>high resolution</u> has more pixels . 72 DPI lower resolution, takes up less space, suitable for the web. 300 DPI higher resolution, takes up more space, suitable for printing.
Resolution	= DPI
File Size	= Width X Height



Section 6

Image File Types	Image File Types used, some are better for web display, some for printing or both.
JPEG	Joint Photographic Experts Group WEB: Millions of colours. Good for compressing photos. Small files, but "lossy." Commonly used for photographs and web images.
TIFF	Tagged Image File Format: High colour quality and large file size, used for printing.

Web Images	Print Images
JPEG – compressed PNG – transparency GIF – animated BMP – bitmap SVG – vector	TIFF PDF

Software	Images	Sound	Video
PSD	JPEG	MP3	MP4
PPT	TIFF	WAV	MOV
DOC	PNG		WMV
XLS	GIF		
PUB			

Section 7

Brand	A type of product manufactured by a particular company under a particular name.
Brand Identity	Is what other people think about you, your company, your product or service. Communicates values and core principles to the user or customer.
Examples of Brands	Nike, Adidas, Starbucks, IKEA.
Purpose	The reasons a product exists e.g. to entertain, promote, inform, educate, persuade, guide, warn.
Logo	Tc 
Examples of logos	
Visual Identity	What the brand looks like, a preview of your brand e.g. text, slogan, colour scheme, logo etc
Visual Identity Example	

Section 8

Components of Visual Identity	<ol style="list-style-type: none"> 1. Name 2. Logo 3. Strapline 4. Typography 5. Colour scheme (colour palette) 6. Layout 7. Graphics (shapes and symbols)
There are 4 main areas linked to the purpose of visual identity.	<ol style="list-style-type: none"> 1. Recognition/Familiarity- People need to be able to recognise the brand 2. Establish a Brand- Make the brand or business a familiar name 3. Develop brand loyalty- Buy the new products when they are released 4. Visual communication with audience/consumer- Have a clear message to the audience.



Logo and Brand

Name	McDonalds
Slogan	I'm Loving it!
Colours	Red and yellow
Character	Ronald



Go on, grab one.

Would You Like Fries with that?

Double Quarter Pounder with Cheese

Big Mac

Angus Deluxe Third Pounder

i'm lovin' it



McDONALD'S BRAND IDENTIFICATION

COLOUR PALETTE

TEXTURES & BACKGROUNDS

DAA CYCLE 3 Knowledge Organiser		SUBJECT	BUSINESS STUDIES	TOPIC(S)	MONEY MATTERS C3	YEAR GROUP	9
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Key outcomes	Topics covered
Next steps after school	Start and apprenticeship Employment Go to university Student loans Student finance
World of work	Earnings Payslips Tax codes National Insurance Gross pay Net pay
World of work	Self employed Methods of payment Why we pay income tax Government spending
Pensions	State pension Workplace pension Automatic enrolment for work place pensions Advantages of automatic enrolment for young people
Help for people on low incomes	National minimum wage National living wage Welfare system
Risk and Reward	Risks associated with income Risks associated with spending and borrowing Risk that you might lose assets (mortgage repayments)
Investment	Shares Collective investments Property and other commodities Investments – art, antiques, wine and classic cars
Gambling and taking financial risks	Cryptocurrency Other rewards -Improved lifestyle -personal and moral satisfaction

Key outcomes	Topics covered
Potential negative consequences of taking financial risk	Health and mental wellbeing Credit history Bankruptcy Lifestyles
How to protect yourself against financial risk	Understanding your attitude to risk Budgeting and planning How insurance works Preparation and research Spread the risk Insurance
Types of insurance	Home Contents Motor Life Health Travel
Other forms of protection against financial risk	Industry regulators Statutory rights
Security and fraud	What is fraud? What is identity theft
Methods used to carry out identity theft (Physical)	Bank card skimming Bank card scanning Theft Bin raiding Changing your address
Digital identity theft	Hacking/malware
Social identity theft	Phishing Vishing Smishing

Box No 1 : Methods of training: Flexibility

Static Stretching

Static – Active: Active stretching, which is performed independently where the performer applies internal force to stretch and lengthen the muscle.

Static – Passive: Passive stretching, also known as assisted stretching, which requires the help of another person or an object such as a wall. The other person/object applies external force causing the muscle to stretch.

Advantages

- Safest method to use – less chance of injury
- Doesn't need other to support

Disadvantages

- Doesn't replicate movements from the sport
- Can lead to injury if not done correctly.

Ballistic

Ballistic – This is where the performer makes fast, jerky movements through the complete range of motion, usually in the form of bobbing or bouncing.

Advantages

- Replicates movements from the sport –
- Specificity.
- Can do on your own without others.

Disadvantages

- Can lead to injury if not done properly
- Can cause muscles to tighten

PNF - Proprioceptive neuromuscular facilitation

PNF - This is used to develop mobility, strength and flexibility. The technique may be performed with the help of a partner or alternatively by using an immovable object. PNF stretches can be used in rehabilitation programmes.

Advantages

- Flexibility training can be made sport specific.
- Little cost involved
- Can be part of rehabilitation and reduce injuries.

Disadvantages

- Needs to be an experienced person to perform PNF stretching safely.
- May require two individuals working together to perform the technique.

Box No 2 : Methods of training: Aerobic endurance

Continuous Training

Continuous – This is training at a steady pace and moderate intensity for a minimum period of 30 minutes.

Advantages

- Running is cheap/free
- Can really improve aerobic endurance
- Can be done with no equipment.

Disadvantages

- Individuals can have problems with motivation as it can be repetitive and boring.

Interval Training

This is where the individual performs a work period followed by a rest or recovery period. Typical work time can vary from training for 30 seconds to five minutes; recovery periods can be complete rest, walking or light jogging.

Advantages

- Can be used to develop a number of fitness components such as aerobic endurance and speed.
- Low cost and little equipment

Disadvantages

- Fatigue can occur quite quickly so hard to continue intensity.
- Risk of injury
- Overtraining could happen.

Fartlek Training

This is where the intensity of training is varied by running at different speeds or over different terrain. The training is continuous with no rest period. It is important to know about other ways in which intensity of training can be increased, including the use of equipment (harness, running with weights or weighted backpack).

Advantages

- Suitable for games players e.g. footballer
- Can be made sport specific.

Disadvantages

- Motivation levels
- Having access to different terrains.

Box No 3 : Methods of training: Aerobic endurance

Free weight training:

Use of barbells or dumb-bells to perform different types of dynamic exercises. - concepts to use when training for strength (low reps and high loads) - when training for endurance (high reps and low loads).

Advantages	Disadvantages
<ul style="list-style-type: none"> • Training can be sporting specific targeting specific muscles and muscle groups. • Effective method for strength and endurance gains. 	<ul style="list-style-type: none"> • Session needs careful organisation, ensuring correct, safe technique. • May need access to a gym/sports centre for equipment. • Can be expensive equipment • May need a spotter.

Plyometric Training

This type of training develops sport- specific explosive power and strength. It is used by sports performers such as sprinters, hurdlers, and netball, volleyball and basketball players. Plyometric exercises need maximal force as the muscle lengthens (eccentric action) before an immediate maximal force as the muscle shortens (concentric action). Types of exercises include lunging, bounding, incline press-ups, barrier hopping and jumping.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Can be adapted to suit a variety of sports. 	<ul style="list-style-type: none"> • Not suitable for young athletes • Need to be careful with technique to avoid injury.

Free weight training:

This is where different stations/exercises are used to develop strength, muscular endurance and power.
The stations/exercises use different muscle groups to avoid fatigue.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Can be adapted to suit a variety of sports. 	<ul style="list-style-type: none"> • Often requires lots of space and specialist equipment.

Box No 4 : Methods of training: Speed

Hollow Sprints

Hollow Sprints – A series of sprints separated by a ‘hollow’ period of jogging or walking.

Advantages

Low cost
Can improve speed

Disadvantages

- Motivation levels
- Need to be careful not to overtrain.

Acceleration Sprints

This type of training develops sport- specific explosive power and strength. It is used by sports performers such as sprinters, hurdlers, and netball, volleyball and basketball. This is where the pace is gradually increased from a standing or rolling start to jogging, then to striding, and then to a maximum sprint. Different drills can be used, such as resistance drills and hill sprints. Rest intervals of jogging or walking are used in between each repetition.

Advantages

Low cost
Easy to conduct training
No/Minimal equipment.

Disadvantages

- Beginner needs to know how
- Be careful not to over train.

Interval Training

The individual performs a work period followed by a rest or recovery period. For speed training, the work intervals will be shorter and more intense – performed at a high intensity, close to maximum. Increase the number of rest periods and increase work intensity to develop speed.

Advantages

Sports specific to games players
Can improve speed
Low cost

Disadvantages

- Careful not to over train

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Key Terms

Topic area 1—The rights of service users in health and social care settings

Law – These are passed by Parliament and state the rights and entitlements of service users. If someone breaks the law, they can be prosecuted by being taken to court.

Equality Act 2010 – a law intended to prevent discriminatory practice, to ensure service users are treated fairly.

Confidentiality – Limits access or places restrictions on sharing certain types of sensitive information such as medical records, so that is private.

Need to know basis – Information is only shared with those directly involved with the care and support of the service users.

Safeguarding – Actions taken to protect service users by ensuring a safe and healthy environment where the risks of danger, harm or abuse are reduced.

Manual handling – Using the correct procedures when physically moving any load by lifting, putting down, pushing or pulling; for example transferring a client from a chair to a bed.

Consultation – The process of discussing an issue with another person in order to receive their thoughts, advice or opinion, so that a decision can be made that is acceptable and appropriate for all involved.

Empowerment – Giving someone the authority or control to do something. The way a health or social care service provider encourages a service user to make decisions and to take control of their own life.

Self-esteem – How much a person values themselves and the life they live. High self-esteem is associated with people who are happy and confident. A service user with low self-esteem experiences feelings of unhappiness and worthlessness.

Topic area 2—Person-centred values

Equality – This means treating people fairly and valuing them for who they are. Everyone should be provided with the same rights and opportunities, this should not be affected by their age, ability, gender, culture or religion.

Valuing diversity – Accepting and respecting individual differences such as faith, diet, sexuality, ethnicity and customs.

Topic area 3—Effective communication in health and social care settings

Jargon—specialist or technical language, or terms and abbreviations, that are difficult for non-specialists to understand.

Sonographer – A health professional who is specially trained to carry out ultrasound scans.

Obstetrician – A doctor specialising in the care and births of pregnant women if there are any complications.

Anaesthetist – A doctor who specialises in pain relief and anaesthetics during surgery.

Podiatrists – A practitioner who provides foot care such as removing ingrowing toe nails.

Dementia—A group of symptoms that affect how a person thinks, remembers, solves problems, uses language, communicates and carries out tasks and activities.

Topic area 4—Protecting service users and service providers in health and social care

Disclosure—This is when a service user tells you directly/indirectly through their behaviour, that they have been/are being abused.

Vulnerable—A word to describe someone who is less able to protect themselves from harm or exploitation due to things such as mental health problems, learning/physical disabilities such as mobility, hearing or sight problems.

Hygiene—Practices that keep yourself and your surroundings clean in order to prevent illness or the spread of disease.

Infection—What happens when germs invade the body and cause disease or illness.

Sharps—Needles that are inserted into veins to administer medication which can cause accidental injuries if not used properly.

Safety procedure/measure—A set process that is followed, such as a fire drill or risk assessments/A particular action such as putting up a wet floor sign

First aid—The immediate treatment provided for a service user who has an accident or is suddenly taken ill.

Anaphylactic shock—An extreme allergic reaction commonly caused by nuts, seafood and insect stings. An Adrenaline auto-injector (EpiPen) is used to administer a dose of adrenaline.

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1.1 Types of care settings

Health care settings		Social care settings	
Examples:	Description	Examples:	Description:
<ol style="list-style-type: none"> Hospitals Pharmacy Nursing home Optician GP Surgery Dentist Clinic Drop in centre 	<ul style="list-style-type: none"> Health care is when efforts are made to maintain or restore physical, mental, or emotional well-being especially by trained and licensed professionals. A health care setting represents a broad array of services and places where people can visit to receive help and advice of how to deal with medical conditions that they may be suffering from. Some health care services are provided in private offices or homes. 	<ol style="list-style-type: none"> Retirement home Day centre Residential home Community centre Support groups Social services department Lunch club Medical centre 	<ul style="list-style-type: none"> Social care services provide support to people with learning disabilities, physical disabilities/illnesses and mental illnesses. This support can cover practical activities, personal care and social work, intended to help the people receiving social care to live comfortably. It includes all forms of personal care and other practical assistance for children, young people and adults who need extra support.

1.2 The rights of service users - Triple C, P, E

Rights are what everyone is legally entitled to. Rights are set out and supported by government legislations.

Choice	Confidentiality	Consultation	Equal and fair treatment	Protection from abuse and harm
Allowing the service user to make decisions about the care they receive, where it is received and what it includes.	The right of service users to have private information about themselves restricted to people who have an accepted 'need to know'	Clearly setting out to the service user the options available to them. Asking the service user their permission before carrying out treatment.	Treating an individual fairly based on their needs, this may involve giving some individuals more care than others e.g. disabled.	Care workers protecting vulnerable people from: physical, emotional, sexual and verbal abuse, and neglect.
Examples:	Examples:	Examples:	Examples:	Examples:
<ol style="list-style-type: none"> Residential care home, residents should be given a choice of food options that takes into account dietary requirements or religious requirements. In a GP practice, patients should be given a choice of who their GP is and where and how they receive treatment. 	<ol style="list-style-type: none"> Meetings about service users should take place in private where information cannot be overheard by people who do not need to know about that individual. A service users personal details should not be shared as it could put them at risk. 	<ol style="list-style-type: none"> Before any medical treatment is given, a service user should be informed about different options and given the opportunity to share their own opinion about what type of car they would like. A wheel chair should be asked if they would like assistance with something before it is given 	<ol style="list-style-type: none"> Care plans should be personalised to reflect the likes, dislikes, personal history and beliefs of each individual. Providing entertainment within a care home setting where there are residents with hearing and visual impairments who are not catered for. 	<ol style="list-style-type: none"> Unexplained injuries, to a service user are reported to the nearest safeguarding lead to ensure that it is documented and can be investigated. Ensuring that there are adequate supports and handle bars for a older adult tot move safely around their care house.

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1.3 The benefits to service users' health and wellbeing when rights are maintained

Empowerment	High Self-esteem	Service users needs are met	Trust
<p><u>Meaning:</u></p> <p>The process of becoming stronger and more confident, especially in controlling one's life and claiming one's rights.</p>	<p><u>Meaning:</u></p> <p>Self-esteem is an individual's subjective evaluation of their own worth. Self-esteem encompasses beliefs about oneself as well as emotional states, such as triumph, despair, pride, and shame.</p>	<p><u>Meaning:</u></p> <p>If a service users needs are met, any physical, social or mental issues which they may have will have been considered and plans will be made and actioned to support them.</p>	<p><u>Meaning:</u></p> <p>Having a firm belief in the reliability, truth, or ability of someone or something.</p>
<p><u>Encourages independence and being self reliant</u></p> <ul style="list-style-type: none"> Often allowing service users the opportunity to complete tasks such as getting dressed on their own <p><u>Feeling in control of their own lives</u></p> <ul style="list-style-type: none"> Allowing service users to make decisions for themselves such as activities they want to get involved in, food choices and choice of clothing. <p><u>Gives service users choice, control and independence</u></p> <ul style="list-style-type: none"> Enabling the service user to input on all aspects of their own care such as choosing their medication based on the symptoms and side effects explained by the doctor. 	<p><u>Feeling valued and confident</u></p> <ul style="list-style-type: none"> A child will feel valued if their opinion or contribution is listened to during group activities, making them feel more confident around others. <p><u>Feeling respected</u></p> <ul style="list-style-type: none"> If a person's needs are catered for such as having alternative food options such as halal, vegetarian/vegan options will make their views feel respected and more included. <p><u>Having positive mental health</u></p> <ul style="list-style-type: none"> Making a person feel included in activities or discussions will improve their self-esteem, thus improving their mental health which will therefore improve their quality of life. 	<p><u>Appropriate care or treatment</u></p> <ul style="list-style-type: none"> Dietary requirements met Support given when needed to allow inclusion for service users during activities such as mobility aids Adaptations make to treatment plans and activities to promote inclusion of all needs and abilities <p><u>Results in good/improving physical and mental health</u></p> <ul style="list-style-type: none"> A plan for treatment for the service user will lead to an improvement in injury/illness. Improvement in physical and mental health will encourage a healthier lifestyle and quality of care for each individual/group 	<p><u>Reassured that service users will not harm them</u></p> <ul style="list-style-type: none"> Build good relationships with service users <p><u>Confident that service providers have service users best interests in mind</u></p> <ul style="list-style-type: none"> All treatment/care and activities are carefully planned and adapted to cater for the individuals needs and abilities <p><u>Confident in the care that they receive.</u></p> <ul style="list-style-type: none"> Service providers and practitioners will provide a safe environment and will explain the treatment/care to the individual so that they understand why this is being provided for them.



Stay safe,

tell someone...

All the staff are here to help and support you



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 friend 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.



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

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