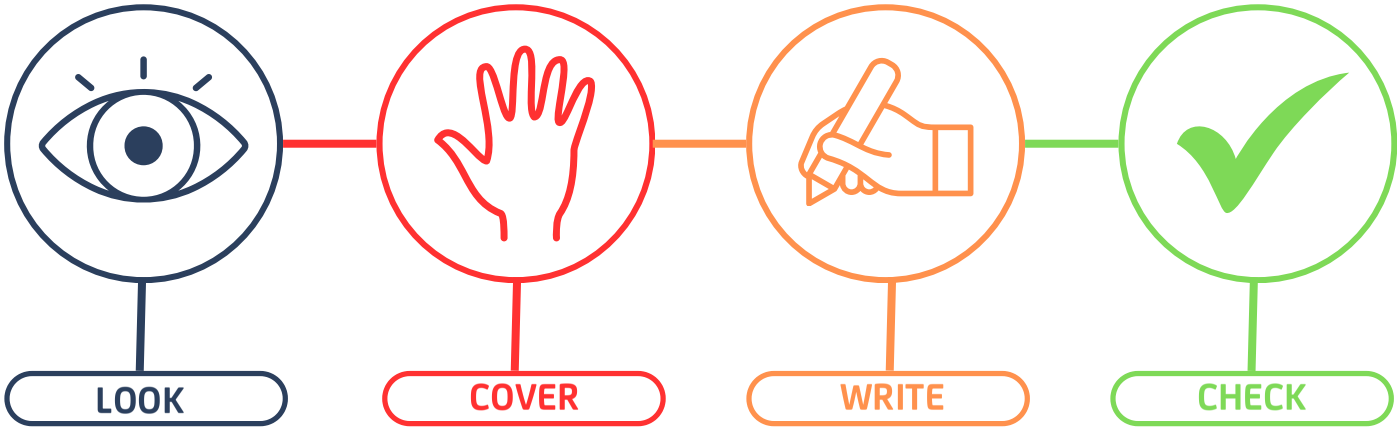
Knowledge Organiser



Name Form

Consideration	Considerate about ourselves, others, and our community.
Aspiration	Aspire to be the very best in all that we do.
Resilience	Work hard and never give up. Seek help and help others.
Equality	Value diversity and tackle discrimination.

Moorside High School
Enriching Lives, Inspiring Ambitions

LITERACY KNOWLEDGE ORGANISER

PUNCTUATION

Symbol	Name	Use	Example
.	Full Stop	Indicates the end of a sentence or an abbreviation.	In a hole in the ground there lived a hobbit.
,	Comma	Marks a slight break between different parts of a sentence, and to separate items in a list.	I sliced onions, and Bailey opened two or even three cans of sardines and allowed their juice of oil…to ooze down.
!	Exclamation Mark	Show command and surprise, and when an author is trying to interject hard-hitting phrases.	If only I had thought of a Kodak! I could have flashed that glimpse of the Under-world in a second.
;	Semi Colon	Links two or more simple sentences, providing the sentences are linked by a common theme.	All happy families are alike; each unhappy family is unhappy in its own way.
:	Colon	Shows that some example, explanation or list is going to follow.	We never put back into the tree what we took out of it: we had given him nothing, and it made me sad.
?	Question Mark	Show a person is asking a direct question.	I'm afraid I can't explain myself, sir. Because I am not myself, you see?
-	Hyphen	Join words to indicate they have a combined meaning or add extra information.	Turn hell-hound, turn.
…	Ellipsis	Show omission of words from that are superfluous and can be understood from contextual clues.	"Did he … peacefully?" she asked. "Oh, quite peacefully, ma'am. You couldn't tell when the breath went out of him."
'	Apostrophe	Indicate possession of something, or omission of letters from combined words.	"Jane, be still; don't struggle so like a wild, frantic bird that is rending its own plumage in its desperation."
( )	Brackets	Adds information to a sentence that will give greater detail to the information presented.	Either from awkwardness or intentionally (no one could have said which)…he kept his arm around her for a long time

TIPTOP PARAGRAPHS

Use these rules to help you paragraph your work:

Time	When time has passed or you are writing a flashback, you have to start a new paragraph.
Place	When you change the place or setting, start a new paragraph.
Topic	Has the subject of your paragraph changed? You need to start a new one!
Person	If a different person has started speaking, you need to start a new paragraph.

Commonly misspelt words:	Discourse Markers:
Definitely	Similarly,
Separate	Likewise,
Guarantee	Moreover,
Necessary	In addition,
A lot	Whereas,
Immediately	However,
Particularly	On the other hand,

WHEN TO USE CAPITAL LETTERS:

- Names of people or places
- Starts of sentences
- Starts of speech
- The main words in titles
- Acronyms e.g. USA
- Contracted words e.g. Sci-Fi

Speak like a scholar:

Probe

Start by saying:

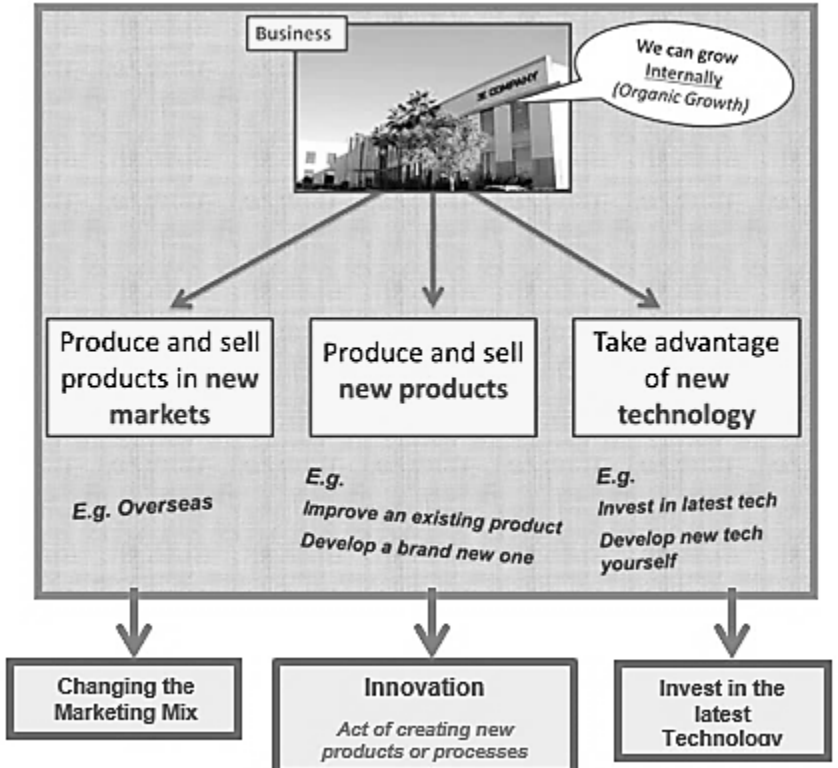
- Despite… it is clear that…
- The evidence supports my view that…
- For example…

Summarise

Identify and recap main ideas:

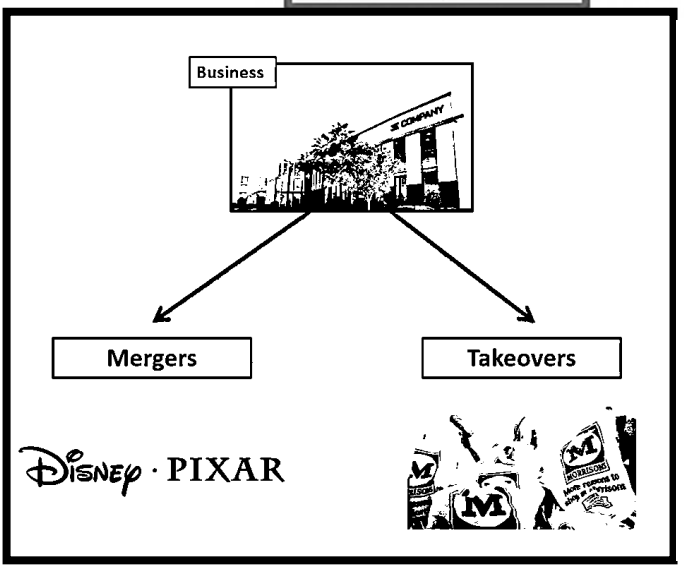
- So far we have discussed…
- The main points raised were…
- Ultimately, the most important point was…

2.1 – Growing The Business



- A Public Limited Company sells shares to the **public** on **the stock exchange**.
- This is an easy way for the company to **raise money** because each person who buys shares pays for those shares and the company can raise money **(Share Capital)**
- The company is therefor **owned by shareholders** (even if you have 1% of the company you are still an owner because you have 1% share)
- Public Limited Company has **PLC** after its name
- Public Limited Company pays shareholders a **dividend** (percentage of the profits). So if you have 1% share you get 1% of the businesses profits each year known as a **dividend payment**.
- There is little risk for shareholders because they have **limited liability**, which means if the business fails they only lose the money they put in **AND NOTHING MORE**. The business is responsible for the debts. The business is seen as being separate to its owners unlike a Sole Trader and Partnership.
- Public Limited Company is usually bigger than a **Ltd** (Private Limited Company) because they can sell shares to more people but they are more at risk of a takeover because is someone buys 51% of shares on the stock exchange then they now have majority shares and ownership.

Feature	Limited Company	PLC	Both
Able to sell shares on the stock Exchange to raise capital		✓	
Owned by shareholders			✓
Managing Director runs the business			✓
Has Limited Liability			✓
Sells shares to Friends and Family	✓		
Pays shareholders a Dividend			✓
Must have Ltd after its name	✓		
Must have Plc after its name		✓	
Can be easier to raise finance			✓
Financial information must be published			✓
Risk of Hostile Takeover		✓	



Multinational Corporation

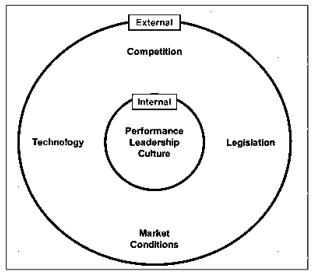
A business with operations in more than one country

(also known as a Multinational Corporation or MNC)

Advantage	Disadvantage
Wider target market	Loss of focus on key markets
Reputation as market leader	Damage to reputation if found to be operating unethically
Can take advantage of cheaper labour and utilities abroad	Cultural and language differences between countries

Growing Businesses	New or Struggling Businesses
Enter New Markets	Reduce Costs
Increase Workforce	Maintain Market Share
Takeover Other Businesses	Exit Markets
Open New Stores	Achieve Enough Sales To Break Even
Gain Larger Market Share	Improve Efficiency
Increase Sales	Decrease Product Range
Expand Product Range	
Increase Profits	

Factors Affecting Business Objectives



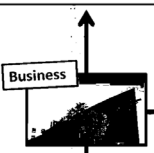
Forward Vertical Integration

A business joins with another business at a later stage of production

Halliburton *oil mining company joins BP garages*

Conglomerate

Businesses with no common interests join



Horizontal

Businesses at the same stage of production and who make the same product join

Backward Vertical Integration

A business joins with another business at a previous stage of production

Ikea Buys Romanian Logging Company that produces wood

2.1 – Growing The Business

Stakeholder	A person or group interested in the activities of another business.
Legislation	The law.
Innovation	Acts of creating new products or processes.
Shareholder	A person or company that buys a percentage of a company.
Dividend	A payment made to shareholders; their return for investing in that company.
Merger	When two companies join together to operate as one.
Takeover	When one company buys another company and incorporates that business into its own business (i.e. Morrisons buying McColls).
Conglomerate	A business that buys or runs other businesses, none of which have any common interest (i.e. Unilever).

Knowledge Organiser: Classical Civilisation / Year 10/ Autumn 1 / The Gods

God(s)	Domain	Iconography
Zeus/Jupiter	Sky/heavens, Olympus	Lightning bolt, eagle, sceptre
Hera/Juno	Marriage, childbirth, family and womanhood	Diadem, lion, cuckoo, hawk, lotus-shaped sceptre
Demeter/Ceres	Agriculture, grain, bread, fertility, the earth	Wheatsheaf, cornucopia, torch
Poseidon/Neptune	Seas	Bull, horse, dolphin, trident
Hephaestus/Vulcan	Fire	Hammer
Apollo	Music, prophecy, healing, archery	Lyre, bow and arrow, swan, raven
Artemis/Diana	Hunting, wild animals, virginity, children	Bow and arrows, deer and bear
Athena/Minerva	Wisdom, strategy and war/Wisdom only	Shield, spear, helmet, aegis with features of Medusa, the owl
Aphrodite/Venus	Love, beauty, pleasure and procreation	Associated with the sea and shells, accompanied by Eros and flowers, doves
Ares/Mars	God of war, battle-lust, courage and civil order	Shield, helmet, spear, often depicted nude and depicted with serpent
Dionysus/Bacchus	Wine, theatre, festivity, madness, pleasure and wild frenzy	Grapevine, Panther, bull, serpent. Thyrsus and ivy wreath
Hestia/Vesta	Home and hearth – the fireplace	Kettle, flowering branch, pig and always depicted wearing a veil
Hermes/Mercury	Herds, trade, thievery and trickery, athletics and messengers	Caduceus, winged slippers and winged helmet, ram, hare, hawk
Hades/Pluto	King of the Underworld and of hidden wealth, from fertile soil to precious metals and gems	Sceptre, cornucopia, screech-owl, often shown on his throne

How to Pray to a deity :

Invocation: use specific title and epithets and their favourite shrine
Argument: Remind the god of favours they've done for you/you've done for them as well as favours you are willing to do
Petition: tell them the favour you wish for them to do for yourself/others

Formal – hands up; in front of the temple; long and detailed prayer; at dawn
Informal – verbal only; wherever you are; short and specific prayer and before an action
Cthonic - arms and palms down; in front of the temple; long detailed prayer; at dusk

Sacrificial victims
Horse – Poseidon
Dog – Hecate
Donkey – Apollo
Pig – Demeter
Asclepius – Chicken
Cow – Dionysus, Heracles, Apollo, Athena and Zeus

"The business of the assembly **was to decide what portions of slain animals the gods should receive in sacrifice**. On one side Prometheus arranged the best parts of the ox covered with offal, on the other the bones covered with fat. Zeus was invited to make his choice, greedily chose the fat, but found only bones beneath."
Hesiod, on Prometheus

Key Concepts
Greeks: hiera 'holy affairs'
Romans: religio 'the correct worship of the state gods'
Anthropomorphic (anthropos – human + morphe – form)
Concepts in action: Deities in both Greek and Roman representations are anthropomorphic and their intense concentrated human emotions means worshippers work hard to appease them through daily rituals in private and public.
Key rituals:
Libations – wine/water
Sacrifices - animals
Offerings – flowers, food
Prayers
Washing/purification
Incense
Wearing of special clothes

Prescribed Source: Homeric Hymn to Demeter

Storyline

Persephone is kidnapped by Hades. Demeter's grief causes widespread famine across Greece. Zeus makes a deal with Hades so Persephone spends 2/3 of her time in the overworld and 1/3 of her time in the underworld.

Significance

Changing of the seasons (Demeter is the goddess of the Harvest and Persephone is her daughter)
Power of Demeter
The nature of the gods
Patriarchal society

Root: Hyper
Meaning: Beyond

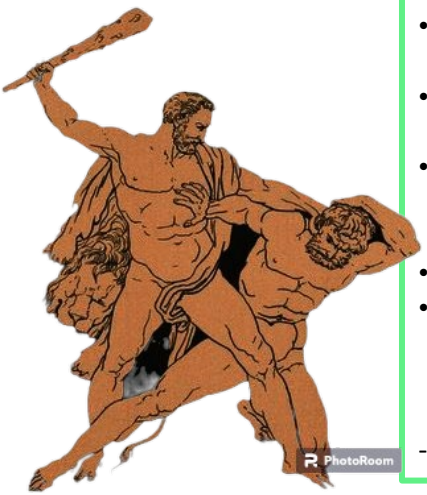
Hyper-realistic
Hyper-emotional
Hyperbolic

Keystone Vocabulary:

1. Anthropomorphic
2. Votive
3. Sanctuary
4. Elysian Mysteries
5. Etruscans
6. Hellenes
7. Pollution
8. Sarcophagus
9. Describe
10. Compare

Knowledge Organiser: Classical Civilisation / Year 10/ Autumn 1 / Universal Hero Rome

Hercules and Cacus



- During 10th labour (Geryon) he travelled through Italy to return the cattle to Eurystheus
- Cacus, a giant, terrorised Pallantium – near the Aventine Hill.
- Cacus stole Hercules' cattle and blocked the entrance to his cave with a boulder
- Determination and resilience meant he killed Cacus (body was displayed to the people of Pallantium)
- Hailed protector of Rome
- Cult of Hercules began after this – male only and eventually slaves ran worship (popular due to population of slaves).

- **Virgil, *Aeneid* – Book 8**

Hercules and Nessus

- Returning to Tiryns, Deianaria struggled to cross the river Evenus
- Nessus offered to help her and abducted her
- Hercules shot him with arrows covered in the blood of the Hydra
- Nessus gave Deianaria his blood-stained tunic, tricking her that it would revive a love
- Juno had Rumour spread lies of infidelity (Princess Iole)
- Deinaria gave a slave the cloak for Hercules, to 'revive' his love for her

Agony of Hercules

- Whilst sacrificing to the gods, the heat from the altar caused the cloak to set fire destroying his limbs
- Hercules built himself a funeral pyre and lamented on his unheroic death + killed Lichus
- Jupiter persuaded the gods that Hercules should be deified.

- **Ovid, *Metamorphoses* – Book 9**

Hercules and Achelous

Quiz yourself

- Achelous (river gold) told to Theseus whilst waiting for flooding to recede after Theseus asked why his horn was broken
- Hercules and Achelous fought for the hand in marriage of Princess Deianira
- Hercules: 'divine parentage' and 'kleos' for labours
- Achelous: 'status as god' and 'Heracles' birth is a lie and scandal'
- Achelous used divine power to turn into a snake and single-horned bull to evade Hercules
- Hercules won and broke his horn and became used as a cornucopia

- **Ovid, *Metamorphoses* – Book 9**

Characteristic	Source
Protective/egotistical	'Listen: do not steal what is mine' - **Nessus**
Fearless/Courageous	'With his usual courage, he repressed his groans while he could.' - **Agony of Hercules**
Seeking kleos	**Cacus;** Death – laments on 'Was it for this...' - **Agony of Hercules**
Brawn	'My right hand is more powerful than my tongue.' Brains are no match! Brains of Achelous' eloquence only anger Hercules – **Achelous**
Passionate	'unable to act like a man and control his blazing anger' - **Achelous;** 'with a venomous dark rage' - **Cacus**
Determined	'Three times without success Hercules tried to push my gleaming chest away from him' - **Achelous, /** 'you will not escape. With wounds, not feet, I will follow you.' - **Nessus** 'three times' **- Cacus**
Strong	'inferior to him in strength' - **Achelous;** 'throat drained of blood' - **Cacus**
Overkill	'holding the tough horn in his cruel hand, he broke it and tore it away from my mutilated brow' - **Achelous**
Honoured	'We perform them, and repeat the honours due'; 'Hercules, the greatest of avengers' - **Cacus**

Root: Hyper
Meaning: Beyond

Hyper-realistic
Hyper-emotional
Hyperbolic

Keystone Vocabulary:

1. Nessus
2. Cacus
3. Tiryns
4. Cult
5. Plebs
6. Pyre
7. Brawn
8. Honoured
9. Deification
10. Pertinent

Knowledge Organiser: Classical Civilisation / Year 10/ Autumn 1 /Universal Hero Greece

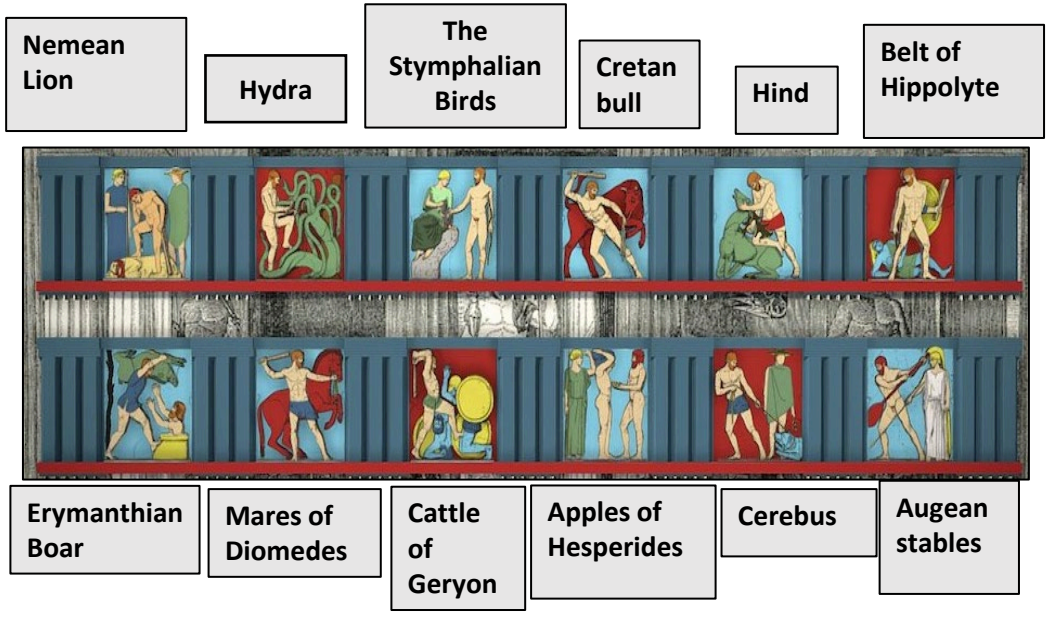
Heracles' life

- Son of Zeus and Alcmene
- Snakes sent by Hera
- Madness sent by Hera
- Visited Oracle of Delphi to do 10 labours
- 2 extra labours added after getting help
- Initiated into Eleusinian Mysteries to gain Persephone's favour during his Cerebus labour!

Quiz yourself

Metopes on Temple of Zeus, Olympia

1. Easily recognizable
2. Fills space
3. Realism



Characteristic	Source
Reckless	'many things he did that were reckless, many things he suffered' - **Homeric Hymn to Demeter**
Strong	**Metopes** (abdominals; the feats of the labours) killed his music teacher as a child accidentally due to his ego being offended – **Theban myths**
Extraordinary	'greatest and best of those on earth' - **Homeric Hymn to Heracles**
Favoured by the gods	'under the guiding hands of Hermes and bright-eyed Athena, I did succeed' - **Odyssey** regarding Cerebus; Athena/Hermes are present in other metopes
Divine	'he lives happily in the glorious home of snowy Olympus' - **Homeric Hymn to Heracles**
Violent	'himself did many deeds of violence' – **Homeric Hymn to Heracles**
Intelligent	Tricked Atlas in the Apples of Hesperides; built a damn to clean the stables; taught by Chiron
'cursed' by Hera	Kills his wife (Megara) and children and completes labours to rid him of his miasma

Heracles and Olympia

- **Took Elis**: He gathered an Arcadian army and raised foremen from Greece to march against Augeaus, killing him (revenge after being refused payment for the Augean Stables)
- He then celebrated Olympic Games founding an altar for Pelops and six altars for gods -**Pseudo-Apollodorus**
- Pelops and Hippodamia – funerary games for Oinomaos (chariot race) is another reason for the origin of the Olympic games. Both are celebrated on the Temple of Zeus.
- Competitors would worship for strength and courage

Root: Hyper
Meaning: Beyond

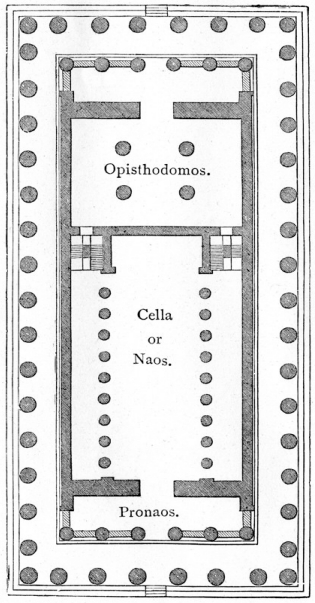
Hyper-realistic
Hyper-emotional
Hyperbolic

Key Stone Vocabulary

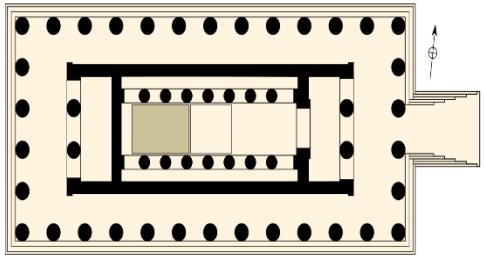
1. Sanctuary
2. Divine
3. Thebans
4. Pseudo-Apollodorus
5. Hesiod
6. Frieze
7. Metope
8. Explain
9. Describe
10. Compare

Knowledge Organiser: Classical Civilisation / Year 10/ Autumn 2 / Temples in Greece

The Parthenon	
Knowledge	Answer
When was the Parthenon erected?	447-432BC
Who was the temple commissioned by?	Pericles – dedicated to Athena
Who was the architect?	Phidias
What is the main material?	Marble
What style is the temple in?	Doric and ionic
Where is it located?	Athenian Acropolis
What were its functions?	Temple to Athena; treasury; intended to showcase the power of Athens
What decoration was on the Cult Statue?	Chryselephantine statue (Amazonomachy on shield; Medusa on Aegis; Nike; snakes representing wisdom)
What does the West Pediment display?	Contest of Athens
What does the East Pediment display?	Birth of Athena
What are on the metopes?	E =Gigantomachy; W= Amazonomachy; S= Centauromachy; N =The Sack of Troy (all represent civilisation > barbarism)
What is on the frieze?	Idealised Panathenaic Procession with all of society + Athena; or first Panathenaea in mythical time



Temple of Zeus at Olympia	
Knowledge	Answer
When was the temple erected?	472-456BC
Who was the architect?	Libon – dedicated to Zeus
What was the main material?	Local limestone (marble for statues)
What style is the temple in?	Doric
Where is it located?	Olympia
What is the function?	Temple and treasury; Symbolised the importance of Zeus, Heracles, Pelops and the Greeks
What is significant about the altar?	Made of ccumulated organic matter; only men were able to ascend the altar and was present before the temple – sacrifice > temples
What is significant about the cult statue?	Phidias took 12 years to build it – celebrates Zeus' power (on a throne) holding Victory
What is on the West Pediment?	Centauromachy – importance of xenia and civilisation > barbarism
What is on the East Pediment?	Oenomaus and Pelops Olympic games (chosen for Zeus' fairness; the site and looked out on the tomb of Pelops' wife)
What is on the metopes?	Heracles' labours



Knowledge	Answer
What is the Naos/cellar?	Contains the cult statue
What is the pronaos?	Porch
What is the opisthodomos?	Houses the cities treasures/offerings to the gods – only in Greece
What is a colonnade?	Open-air walkway surrounded by columns
What is a plinth used for?	A raised temple for closer proximity to the gods
What is an Ionic frieze?	Continuous story (naming of Athens)
What is a Doric frieze?	A frieze divided into metopes (Heracles – Temple of Zeus)

Root: -machy
Meaning:
battle/fight of

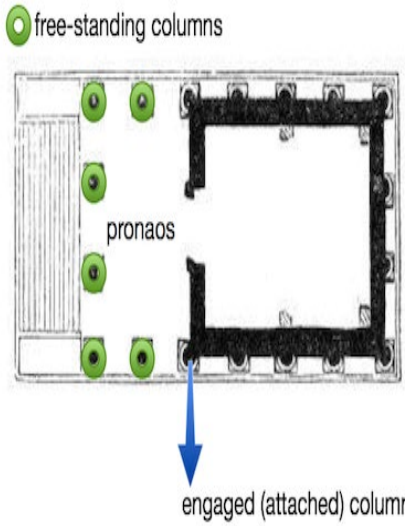
Centauromachy
Amazonomachy
Logomachy

Key Stone Vocabulary

1. Ionic
2. Doric
3. Opisthodomos
4. Pseudo-Apollodorus
5. Hesiod

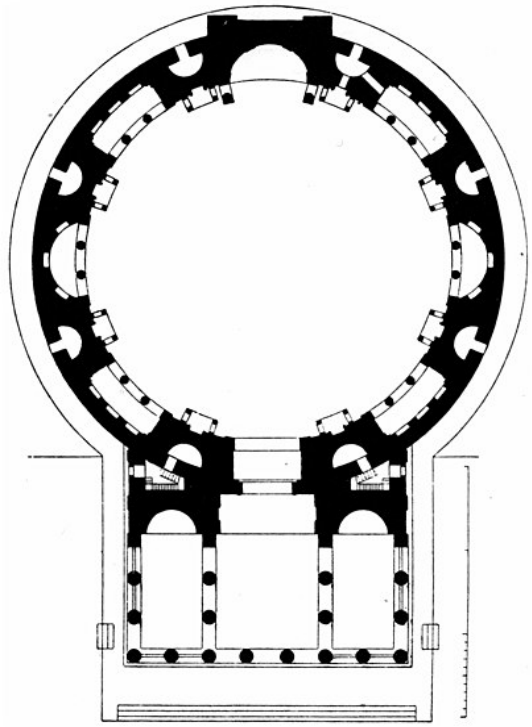
Knowledge Organiser: Classical Civilisation / Year 10/ Autumn 2 / Temples in Rome

The Temple of Portunus (Fortuna Virillis)	
Knowledge	Answer
What date was the temple built?	120-80 BC
What is the main material?	Tufta, stucco and limestone to create the effect of marble
Location	Next to the River Tiber which was used as a harbour in the Forum Boarium (a cattle market) between Palatine and Aventine Hills.
Significance	Best preserved temple in Rome after the Pantheon Wrongly attributed to Fortuna Virilis (Manly Fortune) and is now associated with Portunus (god of harbours)
What influenced the design?	Greek and Etruscan Greek = porch and free standing columns Etruscan = semi-engaged columns attached to the cella
What is significant about the altar?	At the foot of the steps where worship would have taken place



Roman temples did not have an opisthodomos to store offerings to the gods
Unlike Greece, the sanctuary was not dedicated to one god. Priests were not allocated to a specific temple.

The Pantheon	
Knowledge	Answer
What date was the Pantheon rebuilt?	125 AD
Who was the temple commissioned by?	Hadrian (the original building was Augustus and built by Marcus Agrippa 27—25 BC)
What is the main material?	Marble, brick and concentre; columns brought from Egypt; the marble from different areas with colours to show the wealth and influence of Empire
Location	Rome, near the Campus Martius (used for elections)
Significance	One of the best preserved ancient Roman buildings. It has a rotunda and oculus and is considered a feat of engineering. The historian Cassius Dio stated that it resembled the heavens
What cult statues were housed?	The circular plan allowed for multiple marble sculptures of the gods in the cella
What is unique about the Pantheon?	It has a rotunda and an oculus – capped with a dome on the top
What is significant about the plinth?	Typical of Roman temples
what are the columns like?	Freestanding in the entrance semi-engaged at the porch
What was the original inscription?	Marcus Agrippa, son of Lucius, built this consult for the third time.



12. ROM: PANTHEON.

Root: -machy
Meaning:
battle/fight of

Centauromachy
Amazonomachy
Logomachy

Key Stone Vocabulary

1. Semi-engaged columns
2. Etruscan
3. Rotunda
4. Oculus
5. Marcus Agrippa

Knowledge Organiser: Classical Civilisation/ Year 10/ Autumn 1 / Gods and Goddesses in Greece and Rome

God(s)	Domain	Iconography
Zeus/Jupiter	Sky/heavens, Olympus	Lightning bolt, eagle, sceptre
Hera/Juno	Marriage, childbirth, family and womanhood	Diadem, lion, cuckoo, hawk, lotus-shaped sceptre
Demeter/Ceres	Agriculture, grain, bread, fertility, the earth	Wheatsheaf, cornucopia, torch
Poseidon/Neptune	Seas	Bull, horse, dolphin, trident
Hephaestus/Vulcan	Fire	Hammer
Apollo	Music, prophecy, healing, archery	Lyre, bow and arrow, swan, raven
Artemis/Diana	Hunting, wild animals, virginity, children	Bow and arrows, deer and bear
Athena/Minerva	Wisdom, strategy and war/Wisdom only	Shield, spear, helmet, aegis with features of Medusa, the owl
Aphrodite/Venus	Love, beauty, pleasure and procreation	Associated with the sea and shells, accompanied by Eros and flowers, doves
Ares/Mars	God of war, battle-lust, courage and civil order	Shield, helmet, spear, often depicted nude and depicted with serpent
Dionysus/Bacchus	Wine, theatre, festivity, madness, pleasure and wild frenzy	Grapevine, Panther, bull, serpent. Thyrsus and ivy wreath
Hestia/Vesta	Home and hearth – the fireplace	Kettle, flowering branch, pig and always depicted wearing a veil
Hermes/Mercury	Herds, trade, thievery and trickery, athletics and messengers	Caduceus, winged slippers and winged helmet, ram, hare, hawk
Hades/Pluto	King of the Underworld and of hidden wealth, from fertile soil to precious metals and gems	Sceptre, cornucopia, screech-owl, often shown on his throne

How to Pray to a deity :

Invocation: use specific title and epithets and their favourite shrine
Argument: Remind the god of favours they've done for you/you've done for them as well as favours you are willing to do
Petition: tell them the favour you wish for them to do for yourself/others

Formal – hands up; in front of the temple; long and detailed prayer; at dawn

Informal – verbal only; wherever you are; short and specific prayer and before an action

Cthonic - arms and palms down; in front of the temple; long detailed prayer; at dusk

Sacrificial victims
Horse – Poseidon
Dog – Hecate
Donkey – Apollo
Pig – Demeter
Asclepius – Chicken
Cow – Dionysus, Heracles, Apollo, Athena and Zeus

" The business of the assembly **was to decide what portions of slain animals the gods should receive in sacrifice**. On one side Prometheus arranged the best parts of the ox covered with offal, on the other the bones covered with fat. Zeus was invited to make his choice, greedily chose the fat, but found only bones beneath."
Hesiod, on Prometheus

Key Concepts
Greeks: hiera 'holy affairs'
Romans: religio 'the correct worship of the state gods'
Anthropomorphic (anthropos – human + morphe – form)

Concepts in action: Deities in both Greek and Roman representations are anthropomorphic and their intense concentrated human emotions means worshippers work hard to appease them through daily rituals in private and public.

Key rituals:
Libations – wine/water
Sacrifices - animals
Offerings – flowers, food
Prayers
Washing/purification
Incense
Wearing of special clothes

Prescribed Source: Homeric Hymn to Demeter

Storyline

Persephone is kidnapped by Hades. Demeter's grief causes widespread famine across Greece. Zeus makes a deal with Hades so Persephone spends 2/3 of her time in the overworld and 1/3 of her time in the underworld.

Significance

Changing of the seasons (Demeter is the goddess of the Harvest and Persephone is her daughter)
Power of Demeter
The nature of the gods
Patriarchal society

Root: Mort
Meaning: Death

Im**mor**tal
Mortality
Im**mort**ality

Vocabulary List:

1. Anthropomorphic
2. Votive
3. Sanctuary
4. Elysian Mysteries
5. Etruscans
6. Hellenes
7. Pollution
8. Sarcophagus
9. Describe
10. Compare

Data Representation & Binary

1.2

Binary Numbers

Binary is a "Base 2 Number system" – this means it only uses two numbers. 1 and 0.

Place value

Base 2 means the number doubles each time, with the smallest place value on the right.

128	64	32	16	8	4	2	1

← Doubles each time

Decimal/Denary

Decimal is a "Base 10 Number system" – this means it only uses ten numbers. 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Place value

Base 10 means the number multiply by 10 each time, with the smallest place value on the right.

10,000	1000	100	10	1

← x10 each time

Conversions

Binary to decimal

Step 1 – Write out the place value numbers
Step 2 – Enter the Binary number, starting on the right
Step 3 – If there is a one in the column add the number

Example

128	64	32	16	8	4	2	1
0	0	0	0	1	1	0	1

This means we have 8 & 4 * 1
We can ignore all the 0s. Therefore, the solution is, 8 + 4 + 1 = 13

Additional Information

A single **B**inary Digi**t** = a Bit
4 bits' = Nibble
8 bits = Byte
1024 Bytes = Kilobyte
2^8 = 256 (the number of values you can make with a byte 0-255)

Decimal to binary

If the place value at the current position is less than the number you have left to convert then:

- Write a 0 under the place value
- move right one position.

If the place value at the current position is greater than or equal to the number you have left to convert then:

- write a 1 under the place value
- subtract the place value from the number you have left to convert
- move right one position.

Repeat the above until you have written values in under every place value.

Example - 181

128	64	32	16	8	4	2	1
1	0	1	1	0	1	0	1

Is 181 bigger than 128? Yes, put a 1 in this column and take 128 from 181. This leaves 53.
Is 53 bigger or equal to 64? No, put a 0.
Is 53 bigger or equal to 32? Yes, put 1 and take 32 from 53. This leaves 21.
Is 21 bigger than or equal to 16? Yes, put 1 and take 16 from 21. Leaving 5
Is 5 bigger than 8? No, put a 0 in this column.
Is 5 bigger than 4? Yes, put a 1 in this column and subtract 4 from 5. Leaving 1.
Final number is 1. Put a 1 in the final column.

Binary Addition

You can add two binary numbers together following some simple steps and rules.

1 + 0 = 1 = 01 (in binary)
1 + 1 = 2 = 10 (in binary)
1 + 1 + 1 = 3 = 11 (in binary)

Example
Lets add these two binary numbers

0111 + 0011

	8	4	2	1	=
	0	0	1	1	
	0	1	1	1	
Answer					
Carried					

Start at the right with the 1 column
1 + 1
This = 10 or 0 carry the 1

	8	4	2	1	=
	0	0	1	1	
	0	1	1	1	
Answer				0	
Carried			1		

In the two column we now have 1 + 1 + 1 = 11 or 1 carry 1

	8	4	2	1	=
	0	0	1	1	
	0	1	1	1	
Answer			1	0	
Carried		1	1		

This leaves us with 1 + 1 + 0 = 10 aka 0 carry 1

	8	4	2	1	=
	0	0	1	1	3
	0	1	1	1	7
Answer	1	0	1	0	10

The final number would = 1010 aka 10.

Hexadecimal

Hexadecimal is another number system, which is **base 16.**

Which of the following is easier to read?
1111 1111 1111 1111 or FFFF

Hexadecimal is designed to be easier to read for humans, the computer cannot understand hexadecimal.

Converting to Hexadecimal
Take you binary number split it into Nibbles

10101110 -> 1010 1110
Convert both sides to Decimal

8	4	2	1		8	4	2	1
1	0	1	0		1	1	1	0

= 10 **=14**

In Hexadecimal we cannot use double digits, so instead we use letters.
1 – 9 stay the same however, from 10 to 15 we use letters.

Number	Binary	Hex
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

Therefore, our example above = AE

Bonus facts
Hexadecimal is used to in Web design for colours!
Google Hexadecimal colours to see more
These colours are a mix of Red, Green and Blue aka RGB, and are 24 bit (3 bytes).
Each colour can have a value from 0 to 255, because each colour has a single Byte of data.

KEY KNOWLEDGE

Testing

There are two types of testing in Computer Science, iterative and final testing.

A programmer can check their program works by testing while they are creating the program, and at the end once this the program has finished (also known as terminal testing).

Maintainability

Programmers can ensure their programs are easily maintained by adding comments or using indentation when coding. Comments allow another coder to see what has been created in key parts of the code. This means it is easier to update or edit the program. In industry a single program might have hundreds of different programmers working on it.

Robust Code

A programmer can make their code more robust by using a variety of tools such as: input sanitisation, validation and authentication. This makes the code harder to hack.

Types of Errors

There are 3 types of errors that can occur when creating a program.

The first is a logical error. This is an error with the programmers logic, and will still run as it has not broken the rules of coding. This is the hardest type of error to spot.

The second is a syntax error. This type of error will stop the program from running as it has broken the rules of the syntax (i.e. a programmer might have spelt print as "pirnt" – this would be flagged up by the program.

The third type of error is a runtime error. This is where the program cannot run as the memory might not have enough space, or the computer is trying to complete code that it cannot complete (i.e. an infinite loop).

Test Data Types

When testing a piece of code a programmer can use 3 different types of data. Normal, boundary and erroneous data will allow the programmer to see if the code accepts or rejects a range of data. Normal data is data that you would expect to work. Boundary data is data that is on the very edge of acceptable data. Erroneous data is data that is the wrong type of data for the program.

SYSTEMS

SELF QUIZ

Question	Answer
1. State what is meant by terminal testing.	Testing the program once it is complete.
2. State 2 ways a programmer can code to aid maintainability.	Using indentation and comments.
3. A program accepts the weight of suitcases in kilograms. State 1 type of erroneous data that could be used to test the program.	String (i.e. writing forty five instead of 45).
4. A program accepts integers between 0 and 25. State two boundary data tests you could carry out to test the program.	Using the numbers 1 and 26.
5. State 2 ways a programmer can build more robust code.	Use input sanitisation. Use validation techniques.
6. State what a logical error is.	An error with the code that will still allow the computer to run, but not work properly.
7. A programmer misses the colon (:) from their code when programming. Is this a syntax or runtime error?	Syntax.

KEYWORDS

Need to know
1. Integer – whole numbers (i.e. 4 or -17). 2. Real/Float – decimal numbers (i.e. 6.3 or -8.4). 3. String – any set of characters from the keyboard. 4. Character – a single character from the keyboard. 5. Boundary – data that is on the edge of what should/shouldn't be accepted. 6. Erroneous – data that is the wrong type of data for your program. 7. Robust – strong and healthy. 8. Maintainability – cause or enable a condition or situation to continue. 9. Iterative – repeating. 10. Terminal – final.

Computer Systems

1.1, 1.2

The Central Processing Unit **PROCESSES** data and intructions.
The CPU is made up of other compontents such as –

- Control Unit (CU) -
- Arithmetic Logic Unit –
- Registers
- Cache – Expensive, small but very fast memory. Stores frequent instructions.
- Clock
- Program Counter
- Accumulator
- The buses
  - Data Bus
  - Address Bus
  - Memory Bus

Each CPU has a **clock speed**. This tells you how many instructions **per second** it can execute.

- Hertz = 1
- KHz = 1000 - Thousands
- MHz = 1,000,000 - Million
- GHz = 1,000,000,000 – Billion

A CPU has multiple cores

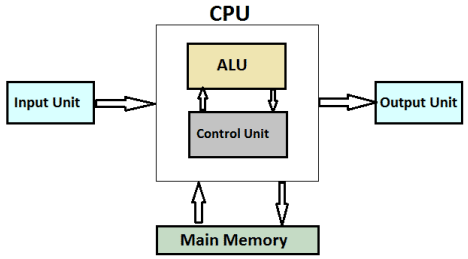
- Dual = 2
- Quad = 4
- Cores allow some CPUs to process multiple instructions are once

The CPU processes data by following some specific steps.

1. Data an instruction from a memory location
2. Decode that instruction
3. Execute that instruction – this means run it

The fetch decode execute system uses the following components

- MAR – Memory Address Register
- MDR – Memory Data Register
- Program Counter
- Accumulator



Cache

- Cache is closers to the CPU
- It is the fastest and most expensive type of memory
- There are 3 levels of cache
- L3 is shared between all cores of a CPU

Embedded Systems

Computer can have Embedded systems in them. These are small dedicated CPUs with a single purpose.

For example a Traffice light will have a CPU designed to control the lights, a washing machine a CPU designed to contorl the spin cycle, a rocket a CPU designed rocket launch.

Computer systems can fit into 3 categories

- **General Purpose - Systems that can be programmed to perform a wide range of tasks. Example : laptops and tablet computers**
- **Dedicated systems - Systems that perform a single function or set of functions. Example: ticket vending machine at a railway station.**
- **Control systems - Designed to control machinery. Provide limited output for humans but are really important in manufacturing. Example: industrial robots.**

Storage

Storage and memory **are not the same thing!**
Storage stores file and programs in **long term**. This means you can access these files again at a later time.

There are three types of Secondary Storage

- Magnetic
  - Moving read write head
  - Moves over a magnetic surface/disk
  - Includes Hard drives, Floppy Disks
- Optical
  - Uses light to read and write data
  - Includes CDs, DVDs, Blu-Rays
- Solid State
  - Uses electric signals to read and write data
  - No moving parts hence Solid State
  - Memory Sticks, SSD Drives, SD Cards

	Capacity	Speed	Portability	Durability	Reliability	Cost
Magnetic	1	2	3	3	2	1
Optical	3	3	2	2	3	2
Solid State	2	1	1	1	1	3

Main Memory

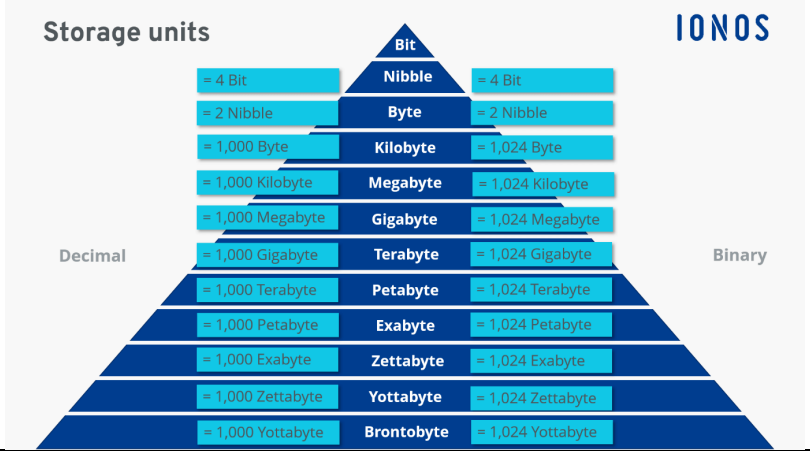
Storage and memory **are not the same thing!**
Memory stores **current instructions or data**, and can be either RAM or ROM.

- RAM – Random Access Memory
  - Volatile – Loses Data when the Computer shuts down
  - Stores **current instructions and data**
  - This means your current program is stored in RAM
  - Upgrading the Size of RAM improves the speed of a computer
- ROM – Read Only Memory
  - Non-Volatile – Data is not lost when power is
  - ROM stores data you don't want to delete
  - Such as your Boot Driver or Operating System
- Virtual Memory
  - When RAM is full Virtual Memory is created
  - This uses Secondary Storage to act as RAM
  - Virtual Memory is slower than RAM as a consequence

Data Sizes

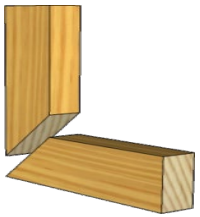
Computers use different Units of data to calculate information
Data is stored in Base 2 (binary) therefore it doubles each time

- Bit
- Nibble (4 bits)
- Bytes (8 bits)
- Kilobyte (1000 bytes or 1024 bytes aka 1KB)
- Megabyte (1000 KB or 1024 KB)
- Gigabyte (1000 MB or 1024 MB)
- Terabyte (1000 GB or 1024 GB)
- Petabyte (1000 TB or 1024 Tb)

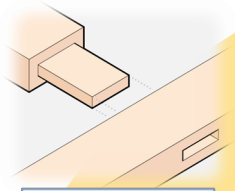


CONSTRUCTION IN PRACTICE

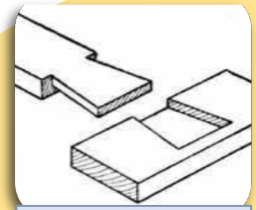
JOINERY TECHNIQUES:



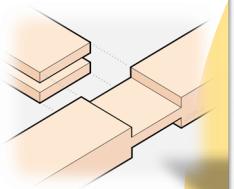
MITRE



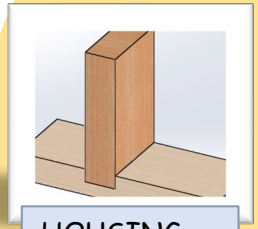
MORTISE AND TENON



DOVETAIL HALVING

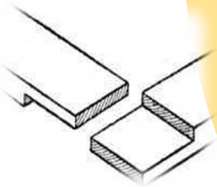


T BRIDLE

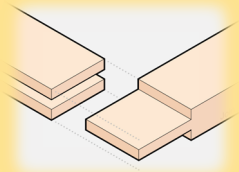


HOUSING

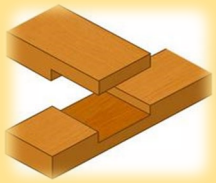
DOWEL JOINT



CORNER HALVING



CORNER BRIDLE



TEE HALVING

FINISHING TECHNIQUES:

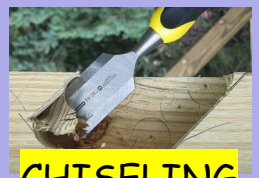
SURFACE FILLING

SANDING

WASTING TECHNIQUES:

CUTTING

DRILLING

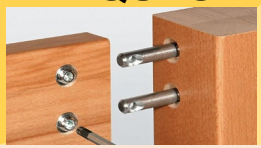


CHISELING

PLANING

ASSEMBLY TECHNIQUES:

ADHESVIVES (GLUES)



MECHANICAL FIXINGS

MOULDING

CAPPING RAIL

RISK ASSESSMENTS: BEFORE ANY HIGH-RISK ACTIVITY (SUCH AS USING TOOLS AND EQUIPMENT) YOU MUST COMPLETE A RISK ASSESSMENT USING A RISK RATING MATRIX

RISK RATING:
Multiply the severity (how bad it could be) by the likelihood (what is the chance of it happening?)

HAZARD	ASSOCIATED RISK	PEOPLE AT RISK	SEVERITY (S) 1 = NEGLIGIBLE 5 = CATASTROPHIC	LIKELIHOOD (L) 1 = RARE 5 = ALMOST CERTAIN	INITIAL RISK RATING (S x L)	PROPOSED CONTROL MEASURES	UPDATED LIKELIHOOD	FINAL RISK RATING (S x U)
PHYSICAL POLLUTION (SAWDUST)	BREATHING PROBLEMS, EYE IRRITATION	STAFF, STUDENTS, VISITORS	3	4	12 HIGH	VENTILATION AND EXTRACTION SAFETY GOGGLES	1	3 LOW
SOUND POLLUTION (SOUND OF TOOLS AND EQUIPMENT)	DAMAGE TO EARS, LOSS OF HEARING	STAFF, STUDENTS, VISITORS	3	2	6 MODERATE	LIMIT ON THE AMOUNT OF MACHINES IN USE EAR DEFENDERS WHEN NEEDED	1	3 LOW
REPETITIVE USE OF EQUIPMENT	REPETITIVE STRAIN INJURY	STAFF, STUDENTS	2	2	4 MODERATE	USERS TRAINED AND MONITORED WHEN WORKING. TAKE A BREAK WHEN FEELING DISCOMFORT.	1	2 LOW
USE OF SHARP TOOLS: CHISEL	STABBING INJURY	STAFF, STUDENTS	5	3	15 EXTREME	USERS TRAINED IN THE CORRECT AND SAFE USE OF EQUIPMENT. ACTIVITY SUPERVISED BY A SUPERIOR	1	5 MODERATE
USE OF SHARP TOOLS: SAWS	CUTS AND GRAZES	STAFF, STUDENTS	3	3	9 HIGH	USERS TRAINED IN THE CORRECT AND SAFE USE OF EQUIPMENT. ACTIVITY SUPERVISED BY A SUPERIOR	2	6 MODERATE
USE OF SHARP TOOLS: WOOD PLANE	CUTS AND GRAZES	STAFF, STUDENTS	2	3	6 MODERATE	USERS TRAINED IN THE CORRECT AND SAFE USE OF EQUIPMENT. ACTIVITY SUPERVISED BY A SUPERIOR	1	2 LOW
USE OF BLUNT TOOLS: MALLET AND HAMMER	BRUISING, BROKEN BONES	STAFF, STUDENTS	3	4	12 HIGH	USERS TRAINED IN THE CORRECT AND SAFE USE OF EQUIPMENT. ACTIVITY SUPERVISED BY A SUPERIOR	2	6 MODERATE

Risk rating matrix

		Likelihood				
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost certain
Severity	5 Catastrophic	5 Moderate	10 High	15 Extreme	20 Extreme	25 Extreme
	4 Major	4 Moderate	8 High	12 High	16 Extreme	20 Extreme
	3 Moderate	3 Low	6 Moderate	9 High	12 High	15 Extreme
	2 Minor	2 Low	4 Moderate	6 Moderate	8 High	10 High
	1 Negligible	1 Low	2 Low	3 Low	4 Moderate	5 Moderate

Knowledge Organiser: Design & Technology / Year 10 / Construction (Component 1) OVERVIEW

A1 Low rise construction requirements

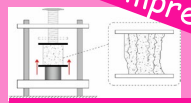
Timber grading

Deciduous (D) = Hardwood

Coniferous (C) = Softwood

Concrete testing

Compressive



Tests how much pressure set concrete can take

Slump

Tests the ratio of cement and water

A2 Sustainability

Timber cladding

Renewable materials

Grass sedum roof

Brownfield

Has previously been built on

Greenfield

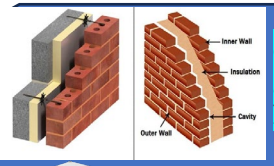
Has never been built on

Prefabrication

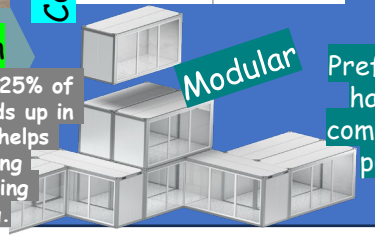
Currently, an estimated 25% of construction material ends up in landfills. Prefabrication helps reduce waste by optimising material usage and enabling offcut reuse or recycling.

A3 Common structural forms

Cavity wall:



Outer layer = bricks
Middle layer = insulation
Inner layer = blockwork



Modular

Prefabricated parts that have been made before coming to site and can be put together in lots of different ways!

B1 Pre-construction work

Temporary fencing

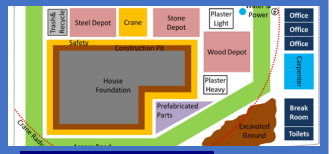
Temporary lighting

Health and safety signs

HSE Health & Safety Executive

The **Health and Safety Executive (HSE)** is Britain's national regulator for workplace health and safety.

Site clearance



Site layout plan

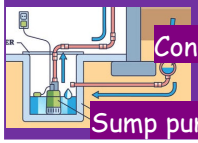
B2 Sub-structure groundworks

Steel

Timber

Trench support

HAZARDS
Working in confined spaces



Control of sub-soil water

Sump pump

Gravity drainage

FOUNDATIONS

Pile

Trench fill

Raft

Strip

C1 Walls

Lintels

Sills

Windows

Damp proof course (DPC)

What does a wall do?

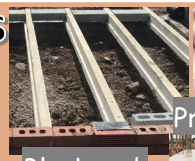
- Thermal insulation
- Sound insulation
- Containing electrical and plumbing fittings

Structural support of:
Walls
Floors
Ceilings

C2 Floors

What do floors do?

A = They transfer the load from walls to the foundation

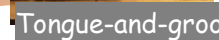


Precast concrete

Block and beam flooring

Concrete screed

Eco-joists



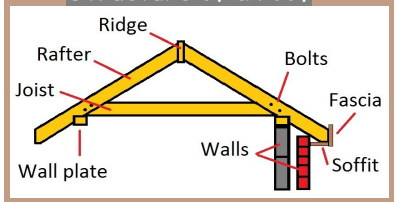
Tongue-and-groove

Types of floors:
- solid
- timber
- precast concrete
- beam and block
- engineered timber
- eco-joists

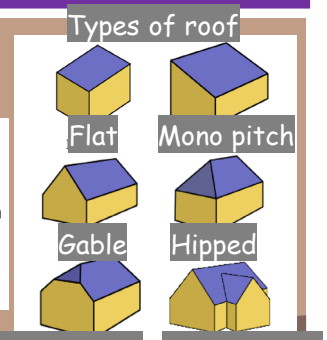
Types of floor finish:
Screeded
Tongue-and-groove

C3 Roofs

Structure of a roof



Types of roof



D1 The type of work in the construction industry

Civil engineering

Transport

Commerical

Education

Healthcare

Residential

D2 The built environment

Coastal defences

Water ways

Roads

Railways

Cycle paths

Moorside High School
Enriching Lives, Inspiring Ambitions

D&T AND OUR WORLD

ETHICS & THE ENVIRONMENT

6Rs:
Reduce, Reuse, Repair, Recycle, Rethink, Refuse

Sustainability

AI, VR, Robotics & Biometrics

IMPACT OF NEW TECHNOLOGIES

2D DESIGN

Manufacturing

CAD/CAM

Consumer Rights & Protection

Power Stations

ENERGY & REGENERATION

Renewable Energy

MECHANISMS

TYPES OF MOTION

Linear
Rotary
Oscillating
Reciprocating

LEVERS

BRAKE LEVER
EFFORT
FULCRUM

LINKAGES

PIVOT
FIXED PIVOT POINT

GEARS

PINION
RACK

PULLEYS

CAMS

SLIDE
FLAT FOLLOWER
CENTRE OF ROTATION

MATERIALS

METAL

Ferrous
Non Ferrous

TIMBER

Softwood
Hardwood
Natural
Manufactured

PAPER & BOARD

POLYMERS

Thermosetting
Thermoforming

FIBRES

Mixed
Blended
Natural
Synthetic

ELECTRONICS

CIRCUITS

Microprocessor
PIC
PROGRAMMABLE

PUSH SWITCH ACTIVATED

COMPONENTS

Transistor
Resistor
LED
Switch
Capacitor
Diode

ELECTRONIC SYSTEMS

Inputs
Process
Outputs

SMART MATERIALS

SMART MATERIALS

- Biomimetics
- Electroluminescent Material
- Micro Encapsulation
- Photochromic Pigment
- Polymorph
- Quantum Tunnelling Composite (QTC)
- Shape Memory Alloy (SMA)
- Thermochromic Pigment

TECHNICAL TEXTILES

- Breathable fabrics
- Geotextiles
- Interactive textiles
- Microfibres
- Nomex
- Phase Changing Materials
- Sun-Protective Clothing

COMPOSITE MATERIALS

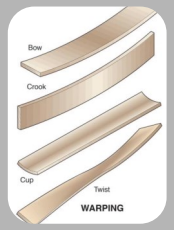
- Carbon Fibre Reinforced Polymer (CRFP)
- Kevlar
- Glass Reinforced Plastic (GRP)

Knowledge Organiser: D&T / Year 10 / Autumn Half Term 1 / Ball Bearing Game Project

Moorside High School
Enriching Lives, Inspiring Ambitions

ADVANTAGES OF MANUFACTURED TIMBER

- ✓ Available in much larger sheets than natural timber
- ✓ Consistent properties across whole board
- ✓ More stable and less likely to warp, shrink or twist than natural timbers



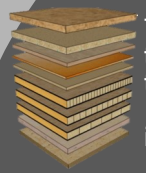
- ✓ Make use of lower grade timber so can have environmental and economic benefits
- ✓ Can be faced with a veneer or a laminate to improve their appearance
- ✓ Well suited to CNC machining and volume production

KEY TERMS

VENEER

A thin sheet of natural timber used to cover manufactured board

STOCK FORMS



The standard shapes and sizes of materials that are commonly available. Manufactured boards typically come in 2440mm × 1220mm, and 1220mm × 610mm sheets. They are also available in a range of thicknesses between 1mm and 40mm

LAMINATED BOARDS

Made by gluing large sheets or veneers together e.g. plywood and blockboard

COMPRESSED BOARDS

Made by gluing particles, chips or flakes together under pressure e.g. MDF, hardboard and chipboard

MOULDINGS & DOWELLING

Timber ca be supplied as dowelling which are cylindrical rods and decorative mouldings which are very useful for products such as picture frames

WORKSHOP TOOLS & EQUIPMENT

FRET SAW

PILLAR DRILL

BANDFACER (SANDER)

BENCH HOOK

TENON SAW

SCALES OF PRODUCTION

ONE OFF PRODUCTION

Used to make bespoke products, products are manufactured by skilled workers and are high quality. This process is expensive and time consuming.

BATCH PRODUCTION

A range of products can be made at once (2-100). Materials can be purchased in bulk which reduces cost. Machinery can be set up to manufacture in quantity which saves time.

MASS PRODUCTION

The industrial-scale manufacture of large quantities of products, usually on a production line.

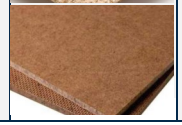
CONTINUOUS FLOW

Products are made continuously 24 hours a day, 7 days a week. The process can be automated which deskills the workers and reduces jobs. Initial setup costs are high.

JUST IN TIME

JIT Manufacturing is where the correct amount of materials are ordered and these arrive just as they are needed by production. This saves money on storage, and reduces waste.

TYPES OF MANUFACTURED BOARD

NAME	IMAGE	DESCRIPTION	PROPERTIES
MEDIUM DENSITY FIBREBOARD (MDF)		Made from compressed fine wood fibres bonded together with resin	This board is relatively inexpensive and has a flat sooth surface
PLYWOOD		Made from wood veneers glued together with alternating grain	Very strong, with a flat, smooth surface
CHIPBOARD		Made from wood chips bonded together with resin	Inexpensive construction material, limited strength
HARDBOARD		Made from compressed fine wood fibres bonded together with resin. Has one smooth side and one textured side	Very inexpensive materials used for drawer bases and backs of wardrobes

Knowledge Organiser: D&T / Year 10 / Autumn –Spring Term / Storage Speaker Box Project

Moorside High School
Enriching Lives, Inspiring Ambitions

HARDWOODS

Hardwoods come from **DECIDUOUS** trees. Deciduous trees have broad flat leaves that fall off the trees in autumn. Hardwoods are generally harder, more expensive, More durable and take longer to grow than softwoods.

Hardwood	Image	Properties	Common Uses
Jelutong		• Close grained • Pale Colour • Medium hardness & toughness • Easily worked	• Pattern Making
Birch		• Even grain • Easy to cut and shape • Liable to rot and insect attacks	• Furniture
Beech		• Hard & strong • Close grained • Light brown colour with distinctive flecks of brown • Prone to warping and splitting • Can be difficult to work with	• Furniture • Children's toys • Tool handles • Bench tops
Mahogany		• Strong &durable • Deep reddish colour • Available in wide planks • Can have interlocking grain • Fairly easy to work	• Good quality furniture • Panelling • veneers
Oak		• Hard, tough & durable • Open grained • Can be finished to a high standard	• Timber framed buildings • High quality furniture • flooring
Balsa		• Lightweight & Soft • Easily worked • Pale in colour • Week and not very durable	• Model making • Floats & rafts
Ash		• Strong & flexible • Finishes well • Liable to rot and insect attacks	• Ladders • Tool handles • Walking sticks • Equipment e.g. oars

NATURAL TIMBERS

FELLING

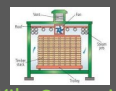
The process of cutting down trees

GREEN TIMBER

Newly felled timber containing lots of moisture

SEASONING

Air Seasoning



Kiln Seasoning

Seasoning is reducing the timbers moisture content. Timber can be Air Seasoned (which takes longer) or Kiln Seasoned

DEFORESTATION

Deforestation is when the cutting down of trees leads to fertile soil being washed away resulting in a barren landscape.

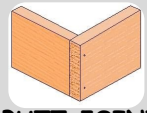
Organisations like the Forest Stewardship Council make sure forests are correctly managed to avoid deforestation

DEFECTS

When timber is allowed to dry out in an uncontrolled way it can develop defects such as shrinkage, shakes, splits, knots and fungal attacks

KEY TERMS

WOOD JOINTS



BUTT JOINT

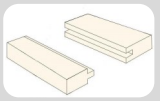
BISCUIT JOINT

LAP JOINT

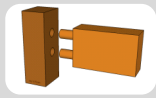
MORTISE & TENON KOINT

FINGER JOINT

DOVETAIL JOINT



TONGUE & GROOVE JOINT



DOWEL JOINT

HOUSING JOINT

SOFTWOODS

Softwoods come from **CONIFEROUS** trees. Coniferous trees have needle type leaves which they keep all year round (Evergreen). Softwoods are generally easier to work with and are considered more sustainable as they grow faster tan hardwoods.

Softwood	Image	Properties	Common Uses
Western red cedar		• Resistant to weathering & decay • Light reddish brown colour • Close, straight grain • Easily worked	• Fencing • Fence posts • Cladding
Scots Pine		• Straight grained • Light yellow colour • Soft & Easy to work • Can be quite knotty	• Interior Joiner • Furniture • Window frames
Parana Pine		• Distinctive open grain • Contains few knots • Strong & durable	• Internal Joinery • Staircases
Larch		• Durable • Resistant to water • Expensive	• Exterior cladding • Boats • Fence posts

Knowledge Organiser: D&T / Year 10 / Autumn –Spring Term / Storage Speaker Box Project

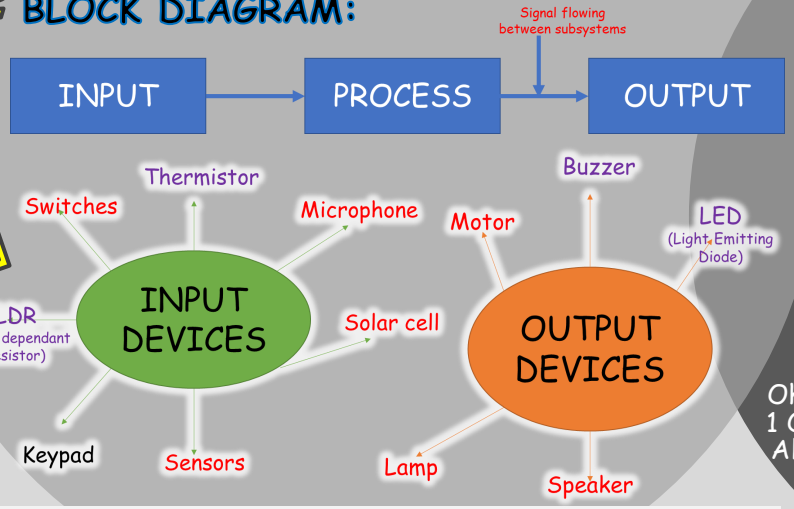
Moorside High School
Enriching Lives, Inspiring Ambitions

ELECTRONIC SYSTEMS

SYSTEM:
A set of parts which work together to provide functionality to a product

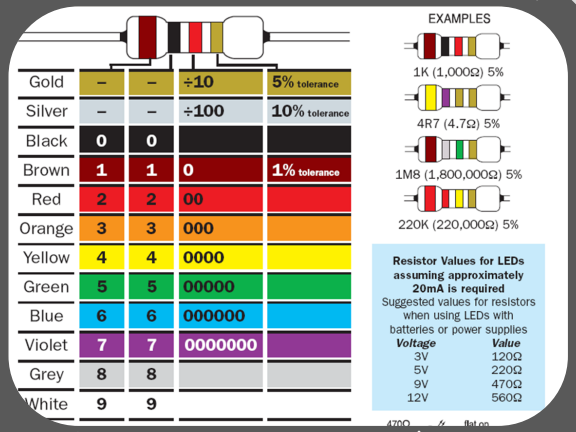
SUBSYSTEM:
The interconnected parts of a system

BLOCK DIAGRAM:



ELECTRONICS

A resistor is an electrical component that limits or regulates the flow of electrical current in an electronic circuit.



Resistors are measures in ohms.
Ohms can be written as a symbol in two ways: Ω or R.
1 Ohm = 1Ω or 1R, 1000Ω = 1K and 1,000,000Ω = 1M.
All resistors have different coloured bands on them; this is how we can tell how much a resistor is worth or how much resistance it offers

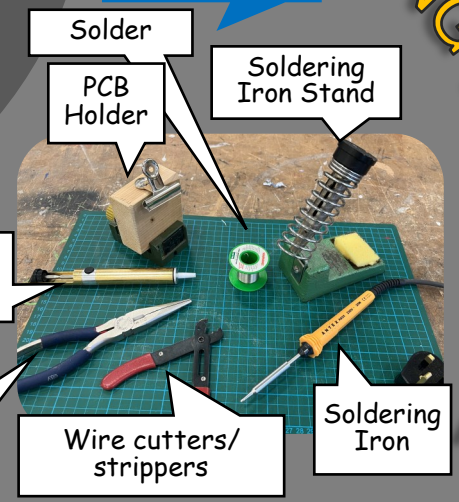
RESISTORS

FLOW CHART SYMBOLS

Symbol	Name
	Start/End
	Arrows
	Input/Output
	Process
	Decision

SOLDERING TECHNIQUE

Solder is an alloy with a low melting point



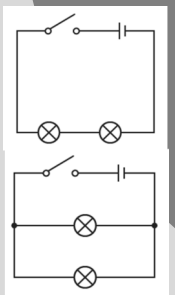
Two soldering types: Surface Mount & Through Hole

THE SOLDERING PROCESS

1. Heat the Joint
2. Feed the Solder
3. Remove the Solder
4. Remove the Heat

SERIES & PARALLEL

In a ***series circuit***, components are connected one after another on the same loop of the circuit.
On a ***parallel circuit,*** components are connected on separate loops and the current is shared. An advantage of this is that if one lamp breaks in a parallel circuit the other will still work.



ELECTRONIC SYMBOLS

NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL
LDR (Light Dependant Resistor)		Capacitor (Non Electrolytic)		Capacitor (Electrolytic)	
Ammeter	A	Battery		Cell	
Diode		LED		Thermistor	
Lamp / Bulb		Operational Amplifier IC		Voltmeter	V
Speaker		Motor	M	Switch Closed	
Resistor		Variable Resistor		Switch Open	

Knowledge Organiser: Graphic Design / KS4 / CA1: **Components of Graphic Design**

COLOUR

There are two main groups of colours:
PRIMARY & SECONDARY

PRIMARY COLOURS are **RED**, **BLUE** and **YELLOW** and can be mixed together to make many other colours. **SECONDARY COLOURS** are **ORANGE**, **PURPLE** and **GREEN** these are made by mixing primary colours together.

COMPLIMENTARY COLOURS

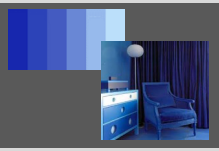
Work well together but they contrast with each other e.g. green and red. These are opposite each other on the colour wheel.

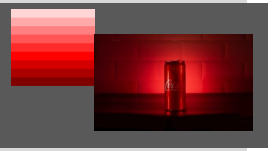
HARMONIOUS COLOURS

Work well together to create colour schemes e.g. Yellow, orange and red. These are next to each other on the colour wheel.

MONOCHROMATIC

Uses only ONE colour





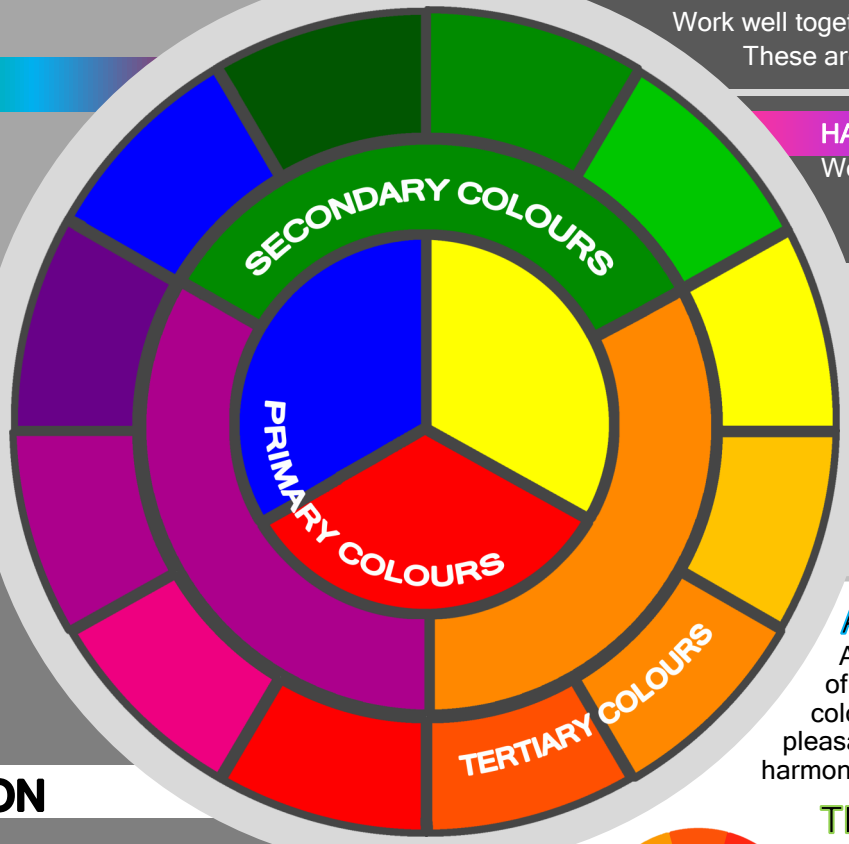
SATURATION VALUES

Saturation is the intensity of the colour. High saturation is vivid and low saturation is closer to grayscale

Colours can be presented on a

COLOUR WHEEL

which shows you how all the colours fit together. **PRIMARY** colours are shown on the first layer of the colour wheel and **SECONDARY** Colours are shown on the middle layer. **TERTIARY** colours make up the third layer of the colour wheel and are made by mixing Primary and Secondary colours together.



RED: FEAR, WARNING, BLOOD, ANGER, HORROR

GREEN: CALM, ENVIRONMENT, NATURAL, ENVY, EVERLASTING

YELLOW: COWARD, WEAK, BRIGHT, LIGHT

COLOUR ASSOCIATION

BLACK: EVIL, SINISTER, MOURNING, DEATH, DARKNESS, MYSTERY

Certain colours are associated with feelings and emotions. Designers, companies and manufacturers use colours cleverly to convey a certain feeling about their products

BLUE: SKY–OPENNESS, COLD, COOL, ICE, CHILLED

ORANGE: WARMTH, ENERGY, HAPPY, SUNSET

PURPLE: DREAMS, SUCCESS, LENT

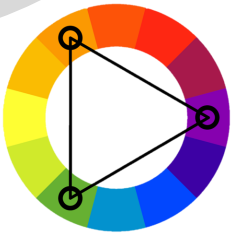
WHITE: PURE, HYGENIC, CLEAN, GOODNESS, EMPTY

ANALOGOUS

An analogous colour scheme uses 3 shades of colour that are next to each other on the colour wheel. Analogous colour schemes are pleasant and comfortable to look at they use harmonious colours which do not clash with one another

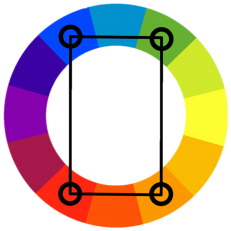
TRIADIC

A colour scheme using 3 colours that are evenly spaced around the colour wheel On a basic colour wheel there are only 4 combinations:
Red, **Yellow**, **Blue**.
Red-orange, **Yellow-green**, **Blue-violet**.
Orange, **Green**, **Violet**.
Yellow-orange, **Blue-green**, **Red-violet**.



TETRADIC

Square / Rectangular colour scheme using 4 colours evenly spaced around the colour wheel



COLOUR SCHEMES

LINE

A line can be strong, delicate, hesitant, vigorous, broken, dotted, textured, regular, changing, and created with a variety of tools.

ORIGINAL
MY DESIGN

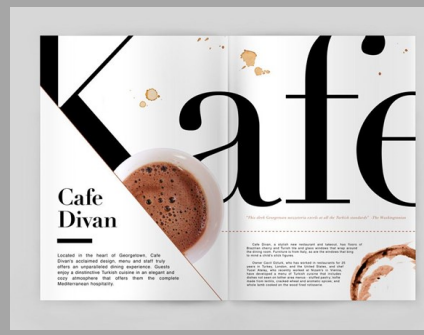
OUTLINE
MY DESIGN

UNDERLINE
MY DESIGN

Line can be used to add emphasis to any object including images and text. Above you can see how an outline has been used to make the writing in the middle more noticeable. Another way of adding emphasis is to add an underline as shown on the writing on the right.

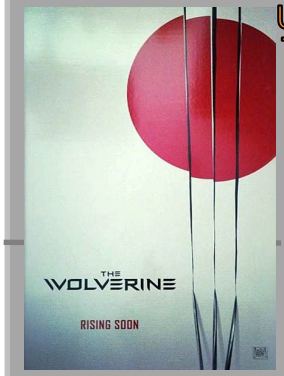
TYPES OF LINE

A line can be **thick** or thin, it can be straight, angled or curved, it can come in different colours
You can put a number of lines together
You can use line to make a border



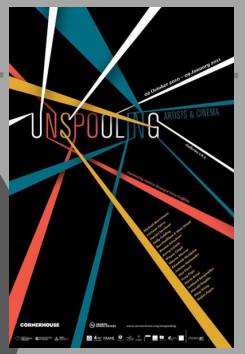
Three main purposes of line in design:

- TO CREATE EXPRESSION
- TO CREATE EMPHASIS
- TO DEFINE SPACE



USING LINE TO DEFINE SPACE

USNG LINE TO CREATE EXPRESSION



LINE IN DESIGN

USNG LINE TO CREATE EMPHASIS

TYPOGRAPHY

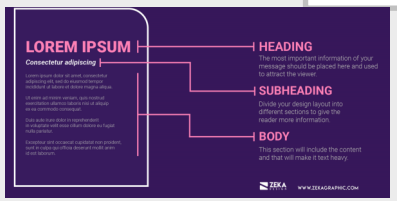
There are a number of words related to Typography including:
FONTS, LETTERING, Typesetting

HIERARCHY

Typographic hierarchy shows the reader which information to focus on, which is most important, and which just supports the main points.

You can create visual hierarchy by changing the following:

- Font size
- Case (Uppercase / lowercase)
- Weight (thickness of letters)
- Colour
- Position
- Alignment (left, right, centre)
- Typeface (style of font)
- Spacing (changing the tracking, leading & kerning)



The main three sections of text hierarchy are:

- Heading
- Subheading
- Body

OPPOSITES ATTRACT RULE

When putting fonts together don't use fonts that are too similar, use fonts that are opposite to each other. E.g. thin and thick, serif and sans serif, fancy and simple.

FONT STYLES

Display Font - A display typeface is a typeface that is intended for use at large sizes for headings, rather than for extended passages of body text

Traditional Fonts - Fonts that are older, classic, have been used in the past, Often these are serif fonts.

Modern Fonts - Styles that are new to our present time, and are different from the fonts of the past

FONT BANK

SERIF

- Times New Roman
- Accord SF
- ALGERIAN
- Belfast
- Combat Ready
- Courier New
- Henny Penny
- Lucida Bright
- Modern 735 BT
- Playbill
- STENCIL
- Tennessee

SANS SERIF

- Adamsky
- AMATIC
- Candy Square BTN Striped
- Darlin BTN
- Forte
- Gill Sans Nova
- Impact
- Jokerman
- Papyrus
- Trebuchet

SCRIPT

- Script MT Bold
- Adelline
- Brush Script
- Edwardian Script
- Embassy BT
- Handscript
- Lucida Calligraphy
- Mystical Woods script
- Palace Script
- Segoe Script
- Tropicali Script

CALLIGRAMS

A calligram is where a word looks like its meaning...

CHARACTERISTICS OF FONTS

SERIF & SANS SERIF

Serif

A serif is a small decorative stroke at the end of a letter. Any font that has this is a serif font

Sans Serif

Sans Serif fonts do NOT have any strokes or lines at the end of a letter

Bold

Italic

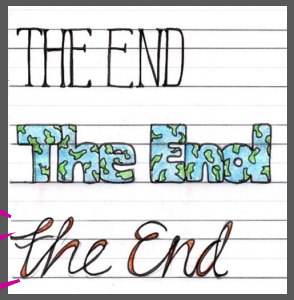
Underline

UPPER CASE

lowercase

CONSTRUCTION LINES

We use construction lines to make sure all the letters in our fonts are the same height



CAP HEIGHT

X HEIGHT

BASELINE

TRACKING, LEADING, KERNING

Tracking is how spaced out a word is

Tight Normal L o o s e

Kerning is the spacing between each letter

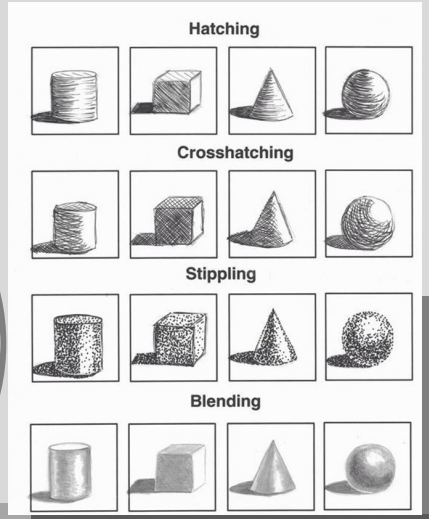
Leading is the space between two words

Knowledge Organiser: Graphic Design / KS4 / CA1: **Components of Graphic Design**

TONE

Tone is the quality of colour, it refers to the shading, lightness and darkness of colours. Tone can be used for a number of reasons in design, including:

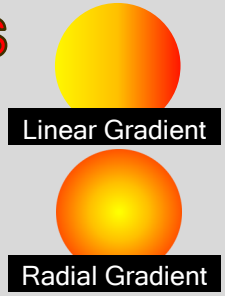
Providing CONTRAST
Creating DEFINITION
Creating SHAPE
Creating DEPTH



TONE PROCESSES

HATCHING is a drawing technique which uses lines or linear strokes to add texture and value to an image

GRADIENT is the merging of two or more colours or shades of colour



VALUE

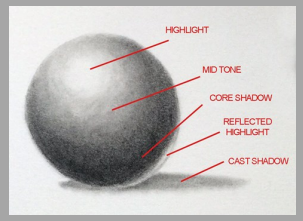
Value refers to how light or dark a tone is. Dark tones are said to have low value and Light tones are said to have high value

TONE TO PROVIDE CONTRAST

We can see contrast when tones of opposite value are next to each other. E.g. putting the darkest and lightest tones together creates more contrast than two colours that are of a similar tone.

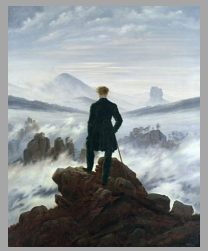
TONE TO CREATE SHAPE & DEFINITION

Use of highlights, shadows and different tones can add definition to parts of your design and can also create shapes and patterns.



TONE TO CREATE DEPTH

Tone can be used to show depth by slowly changing the tone of objects that are in the foreground or background of an image. This suggests a change in the amount of light hitting an object which is related to how far they are from the viewer



MONOTONE & DUOTONE

Monotone means using only one colour. This is particularly used to mean black and white. Many photographers choose to work with black and white images. Removing colour means that the images rely fully on tone to describe light, shape and form.

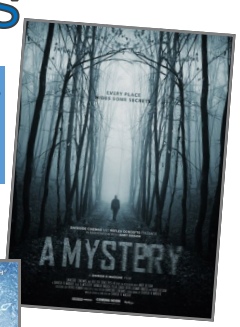
A **duotone** is similar to a monotone but is made up of two colours rather than black and white. The choice of colours lets an artist or designer make an image seem warm or cool, bold or subtle.

VISUAL EXAMPLES

USE OF CONTRAST

MONOTONE

HIGHLIGHTS & SHADOWS



HIGH VALUE

LOW VALUE

DUOTONE

Knowledge Organiser: Graphic Design / KS4 / CA1: **Components of Graphic Design**

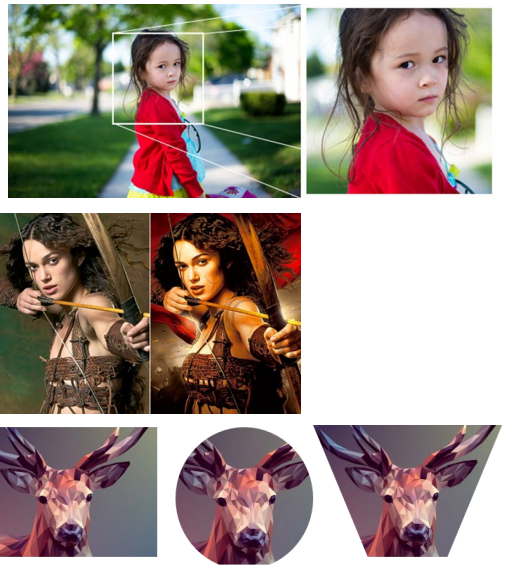
IMAGERY

Imagery can be used in design for a number of reasons:

To create meaning
To link image and text
To communicate a message or an idea

IMAGE MANIPULATION

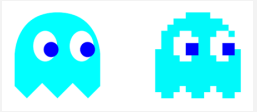
- **CROPPING** - images can be cropped so you can use the best part of the image for your design. Most CAD packages have a crop tool
- **RECOLOURING** - Recolouring an image is changing the colour from its original. This can give a different feel or convey a different message depending on what colours you choose
- **RESHAPING** - Another way to manipulate an image is to edit the shape of it, this can be the shape of the whole image or to manipulate the shape of areas within an imagery warping, bumping, pinching, and twirling



VECTOR vs PIXEL

The main difference between pixel and vector based graphics is how the image is structured.

Pixels are tiny coloured squares on a screen and when there are a lot of them together, they make up a pixel based graphic, also known as a raster image. Files ending in .JPG, PNG, TIFF or .PSD are pixel based



Vector graphics are mapped out using mathematical equations which calculate where the edges of the shapes sit in relation to one another. Files ending in .AI or .EPS are vector based.

Vector graphics can be easily scaled up or down without losing quality and so are used for fonts or logos. Whereas digital photographs are always made up of pixels which allows an efficient way of blending colours as each pixel block is an individual colour.

DIFFERENT TYPES OF IMAGERY

DIGITAL

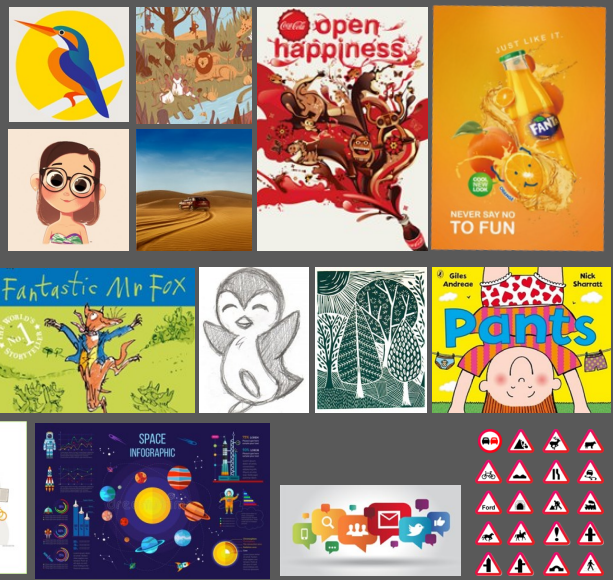
* VECTOR
* PIXEL
* CARTOON
* PHOTOG-RAPHY

HANDMADE / FREEHAND

* ILLUSTRATION
* STENCIL
* CARTOON
* MONOPRINT
* LINOPRINT
* SKETCH

INFOGRAPHICS

* SYMBOLS
* SHAPES



COMPOSITION

Composition and layout are the foundation of any design. It is used to **give your work structure** and make **easier for the audience to navigate.** This could involve using margins on the sides of the page to aligning the contents in the middle of the page.

There are 5 main principles of layout & composition, including **proximity**, **white space**, **alignment**, **repetition** and **contrast.**

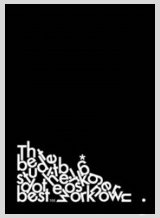
PROXIMITY – Using your space to show relationships between your content e.g. things that are related to each other should be grouped together

WHITE SPACE – Making use of the 'negative space' e.g. the space between the things on your page or around the edges

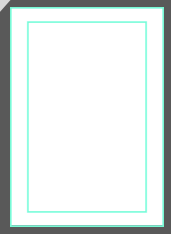
ALIGNMENT – The arrangement of your text or images and how they are lined up in relation to each other

REPETITION – Keeping things consistent by repeating or echoing certain elements of your design

CONTRAST – Where one item is different from another

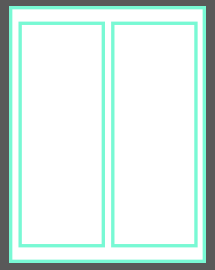


TYPES OF GRID

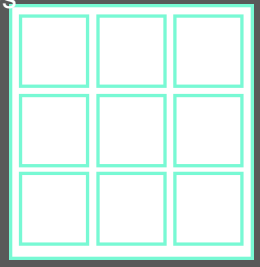


SINGLE COLUMN–The simplest type of grid, often used for documents with a large amount of text.

MULTIPLE COLUMNS – Multiple columns are used in print design and can be used to help organise text and images.



MODULAR – Modular grids use columns and rows so that the grid works both horizontally and vertically.



HIERARCHY

HIERARCHY IS THE RELATIVE IMPORTANCE OF ELEMENTS IN A LAYOUT

As a designer its important that you make it as easy as possible for your audience to navigate a layout.

There are three ways in which you can achieve order in your work:

1. Order through the use of **Typography**
2. Order through **colour**
3. Order through **scale**

WAYS TO ACHIEVE HIERARCHY

SIZE · UPPERCASE · WEIGHT · POSITIONING · COLOUR · CONTRAST

SCALE & VISUAL WEIGHT

Visual weight refers to the size (weight) of an object on the page. The bigger the object the more the eye is attracted to it.

There are various attributes that can affect the visual weight of an object such as size, tone, shape and texture.

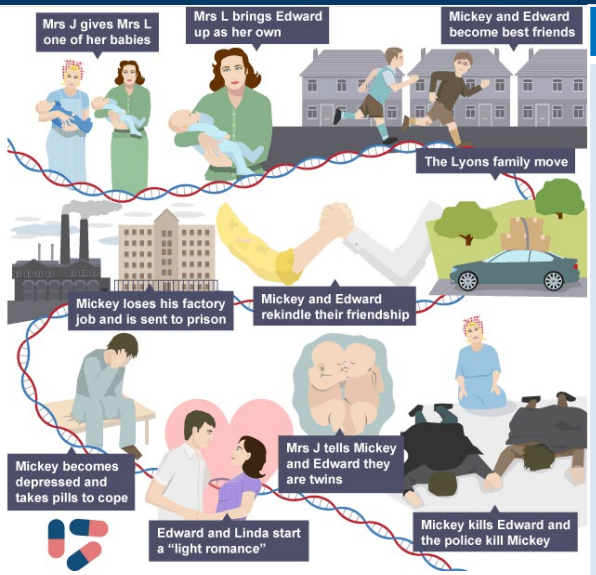
A shape with texture also seems to carry more visual weight than the untextured one.

Darker tones appear to have a heavier visual weight than the lighter ones

A regular shape appears to have more visual weight than an irregular shape

Larger items have more weight than smaller ones.

Knowledge Organiser: Drama / Year 11 / Component 1 - Blood Brothers



Movement	Posture	Gesture	Voice	Facial Expressions
• Gait (the way someone walks, e.g. confident gait, nervous gait...) • Soft • Gentle • Heavy • Light • Quick • Slow • Limping • Energetic • Eye contact	**(The way someone holds themself when they are sitting/standing)** • Straight • Upright • Slumped • Hunched	**(Signals with your hands/arms to show feelings)** • Shrugging shoulders • Pointing finger • Raising fist • Thumbs up • Hands on hips • Putting arm round someone	**Remember "Apparently, People Prefer Pepperoni Pizza To Eat"** • **A**ccent • **P**itch – High & squeaky or low & soft • **P**ace – Fast or slow • **P**ause – Stop talking for a moment • **P**rojection (or volume) – How loud or quiet the voice is • **T**one – (The emotion behind the voice) Aggressive, happy, sad, scared • **E**mphasis – Putting extra importance on a specific word	• Wide eyed • Narrow eyed • Raised eyebrows • Furrowed eyebrows • Turned down mouth • Lips pierced together

6.1

This question will always be a design question. It will ask you about <u>one</u> of the following:

Costume, Set, Lighting or Sound

Worth 4 marks.

4 minutes.

Requires 1 paragraph.

This question just needs one short paragraph. You need to explain how you would design a certain character's **costume**, or how you would design a **set** for a certain scene, and <u>why</u> you would decide to do this. The same applies for **sound** and **lighting**.

ALWAYS think about the context of the scene/character and think about the context of the play at this point.

6.2

This asks you to focus on one line, said by a particular character. You need to talk about vocal and physical skills, and why you would use these skills.

Worth 8 marks.

8 minutes.

Requires 2 paragraphs.

Split the line into 3 sections

1) *Give some context – What is happening at this point in the play?*

2) 1st part of line – *1 vocal skill, 1 physical skill, what are you showing and why?*

3) 2nd part of line – *1 vocal skill, 1 physical skill, what are you showing and why?*

4) 3rd part of line – *1 vocal skill, 1 physical skill, what are you showing and why?*

6.3

This asks you to focus on the <u>shaded</u> part of the extract. You have to explain how you would use your vocal and physical skills to portray a certain character, and explain how they would <u>interact</u> with the other actor.

Worth 12 marks.

Requires 3 paragraphs.

12 minutes

1) *Choose a line from the top of the shaded part – Vocal skill, physical skill, proxemics, why?*

2) *Choose a line from the middle of the shaded part – Vocal skill, physical skill, proxemics, why?*

3) *Choose a line from the bottom of the shaded part – Vocal skill, physical skill, proxemics, why?*

<u>Please remember</u> – the vocal and physical skills that you mention in this question should be all about the interaction between the characters, so physical touch, movement, eye contact etc.

6.4

This asks you to describe how you would portray a certain character in the extract and the whole play.

Worth 20 marks.

Requires 5 paragraphs.

30 minutes

1) Describe the characters **general traits** and **characteristics**, *e.g. what is their personality like in the extract?*

2) *Choose* **1 line** from the top of the extract - **vocal skill**, **physical skill**, *how does this show the same characteristics?*

3) *Choose* **1 line** from the middle of the extract - **vocal skill**, **physical skill**, *how does this show the same characteristics?*

4) *Choose* **1 line** from the end of the extract - **vocal skill**, **physical skill**, *how does this show the same characteristics?*

5) COMPARE - *Choose* **another line**, from **another scene** within the play where the character shows a **<u>similar</u>** personality trait that you have already mentioned. Mention a **vocal skill**, **physical skill**, and **interaction** with other characters when you say this line and how this shows the personality trait.

6) CONTRAST - *Choose* **another line** from **another scene** within the play where the character shows a **<u>different</u>** personality trait that you have already mentioned. Mention a **vocal skill**, **physical skill**, and **interaction** when you say this line and how this shows the personality trait.

Root: Prox
Meaning: Near

Keystone Vocabulary:

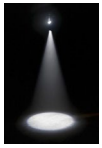
1. Movement
2. Posture
3. Gesture
4. Voice
5. Facial expressions
6. Proxemics

Knowledge Organiser: Drama / Year 10 / Term 1 / Lizzie Borden

Performance skills

Narration: Performers speak directly to the audience to tell the story

Choral Speech: A group of people narrating a piece of text.



Marking the moment: Making a specific moment in the performance stand out to the audience

Movement: Using our bodies on stage to communicate meaning.

Still image: When you freeze in an image on stage

Flashback: A scene that happens in the past

What is Grand Guignol theatre?

- A form of theatre designed to shock and horrify the audience
- It would consist of lots of pretend horror!
- The actors used stage tricks and 'special effects' to make the audience believe in the violence
- On average, 2 members of the audience fainted in each performance!

Top tips for Devising

Discuss and act upon ideas within your group

Consider the impact you want to have on the audience

Experiment with different ideas and techniques – don't 'play it safe'

Communicate effectively with your group – contribute your own ideas

Try everything! There are no bad ideas!

Top tips for Script work

Ensure you have a good understanding of the context of the play as a whole

Understand your characters motivations (what do they WANT in the scene?)

Consider the staging and stage awareness. Why have you placed your characters in certain places?

Learn your lines! The quicker you can do this, the better!

Rehearse, rehearse, rehearse!

Climax

When the tension in the scene builds to its highest point.

Anti-Climax

A release of tension. When you expect a climax, but don't get one!

Lizzie Borden took an axe

Gave her mother 40 whacks

When she saw what she had done

She gave her father 41

Monologue

A speech presented by a single character

Root: Dia
Meaning: Across/Through

Keystone Vocabulary:

1. Grand Guignol
2. Climax
3. Anti-climax
4. Marking the moment
5. Flashback
6. Atmosphere
7. Tension

Knowledge Organiser: English/ Year 10 / AU 1 / Topic: A Christmas Carol

Moorside High School
Enriching Lives, Inspiring Ambitions

Context and authorial intent:

- Through the **allegorical novella**, Dickens intended to draw readers' attention to the **plight of the poor** and to highlight the **hypocris**y of Victorian society during **the Industrial Revolution**
- Dickens' deep social commitment and awareness of social issues originate from his traumatic childhood: his father was **imprisoned for debt**, and he was forced to work in a shoe-blacking factory
- **Poor Law Amendment Act: 1834** allowed the poor to receive public assistance only if they endured the appalling conditions of the the workhouse
- Dickens **criticises Malthusian** attitudes which viewed the poor as a 'surplus' burden
- Christmas traditions popularised by Queen Victoria in the 19th Century

Key characters and vocabulary :

Scrooge
- Miserly
- cantankerous
- Recluse
- Misanthropist
- Callous
- Ignorant
- Selfish
- Represents politicians like Thomas Malthus
- Avarice
- Exploitative
- feared
- Sinner
- Repents

Bob Cratchit
- Emblematic (Face of the poor)
- Hardworking
- Positive
- Polite
- Exploited by Scrooge
- Appreciative

Belle
- Scrooge's ex fiancé,
- emblematic of Scrooge's **avarice** taking 'root'.
- Deeply loved Scrooge

Marley's ghost
- sinner
- Avaricious
- Appears as a warning
- Chained symbolically
- Regretful

Fred
- Kind
- Considerate
- Welcoming
- A foil character to Scrooge
- Optimistic
- Appreciative
- Understands the importance of Christmas, giving and family

Fezziwig
- Scrooge's former employer
- Kind
- Fair
- Benevolent
- A foil character to Scrooge
- Humble
- Exuberant
- Respects all

Ghost of Christmas Past = Memory, regret and knowledge
Ghost of Christmas Present= Abundance, celebration and goodwill
Ghost of Christmas Yet to come = Isolation uncertainty and death

Sentences in action:

The reader is caught between… <u>The reader is caught between outrage</u> at Scrooge's callous behaviour in Stave 1, and sympathetic support for Scrooge as he embraces his path to redemption.

not only but also… Dickens uses Marley's Ghost **<u>not only</u>** as a cautionary tale for Scrooge**, <u>but also</u>** to establish the concept of religious justice.

Perhaps Dickens ___to criticise/ to warn… <u>Perhaps Dickens</u> highlights social injustice **[<u>to criticise</u>** the corrupt capitalist system**]/[<u>to warn</u>** against the destructive nature of ignorance**].**

Despite Scrooge's 'tight fisted' nature at the start of the novella, he goes on to experience a great journey of change.

Theme:	Quotation
Isolation	"I wish to be left alone," said Scrooge. 'A solitary child, neglected by his friends, is left there' 'as solitary as an oyster.' 'Scrooge took his melancholy dinner in his usual melancholy tavern.'
Social Injustice/ poverty	'the treadmill and the poor law are in full vigour then?' said Scrooge 'a stale and shrivelled hand, like that of age, had pinched, and twisted them, and pulled them into shreds.' "Every person has a right to take care of themselves. He always did."
Importance of family	"I want nothing from you; I ask nothing of you; why cannot we be friends? 'Then all the Cratchit family drew round the hearth, in what Bob Cratchit called a circle'
Celebration and goodwill	'Oh what a wonderful pudding! Bob Cratchit regarded it as her greatest success" 'Come in and no me better man!'
Redemption / change	'I will honour Christmas with all my heart and live in the past present and future.' 'I am as light as a feather.' And to Tiny Tim he became a second father.'
Greed/ Ignorance	'Tight fisted hand at the grindstone.' 'Are there no workhouses , are there no prisons?' 'Scrooge had a very small fire, but the clerk's fire was so very much smaller that it looked like one coal'

Key terminology:	Definition:
Diatribe	a <u>forceful and bitter</u> verbal attack against someone or something.
Pathetic fallacy	the attribution of human feelings and responses to <u>inanimate</u> things or animals, especially in art and literature.
Parallel structure	Staves 1 and 5 follow the same patten. Scrooge sees the same people/ visits the same places in the same order yet this time he changes his attitude.
Asyndetic Listing	A list broken up by commas. Dickens uses heavily descriptive language to bring characters and settings to life.

Root: Omni
Meaning: all

1. Omniscient
2. Omnipotent
3. Benevolent
4. Philanthropist
5. Subverts
6. Criticises
7. Celebrates
8. Solitude
9. Consequence
10. Morality

Knowledge Organiser: English / Year 10 / Autumn 2 – Spring 1 / Macbeth

Context and authorial intent:

- Written in 1606, in early in the reign of James I, who succeeded to the English throne in 1603 after being King of Scotland.
- The play pays homage to the king's Scottish lineage and his obsession/ hatred of witches.
- Inspired by Guy Fawkes' attempt to overthrow parliament, exploring treason and its fatal consequences
- Shakespeare's female characters were usually 'meek and mild' yet Lady Macbeth breaks the conventions and is instead, ambitious and devious. Women were expected to be domesticated and submissive.
- The Divine Right of Kings was an important idea in Jacobean society. This meant that kings got their power from God and not from their subject. James I was a believer in this, and the idea meant that any treasonous activity was a crime against God.

Key characters and vocabulary :

Macbeth
Courageous
Heroic
Indecisive
Ambitious
Tyrannical
Manipulated
Violent
Machiavellian
Duplicitous
spellbound
Emasculated
Tragic hero

Lady Macbeth
Duplicitous
Machiavellian
Coercive
Dominant
Authoritative
Controlling
Merciless
Ruthless
Subverts
Forceful
Guilt-stricken
Hysterical
Sinner

The Witches
Beguiling
Ominous
Malevolent
Treacherous
Bewildering
Obscene
Powerful
Wicked
Deceit
Scheming
Prophetic
Sinister

Banquo
Noble
Honest
Integrity
Loyal
Skeptical
Honorable
Victim
Virtuous
Innocent
Moral

Lady Macduff
Kind
Gentle
feminine
Betrayed
Conforms to the stereotype of women

Macduff
Quiet man
Heroic
Distrusting
Vengeful
Well Respected

Analytical verbs to help explore Shakespeare's big ideas and purpose

Shakespeare: **Warns/ critiques/ criticises/ exposes / celebrates/ reveals/ teaches/ questions/ condemns / examines / cautions against**

Sentences to help structure essays responses

Despite Macbeth's heroic nature at the beginning, we are influenced by the witches to believe he has evil tendencies.
Whilst some critics believe that the witches plant the seed of the ambition in Macbeth, others believe that it was in fact Duncan who released his desire to become King; 'I will plant thee and make thee full growing.'
Not only does Lady Macbeth subvert the gender stereotypes of the typical Jacobean woman in terms of her maternal role, **but she also** intentionally emasculates her husband to gain power.

Big ideas	Quotation & relevance in the novel:
Ambition	'Vaulting ambition' 'stars hide your fires, let not light see my black and deep desires.'
Supernatural	'fair is foul and foul is fair' ac 1 sc 1 'what are these so withered and wild' ac t sc 3 'tis said they ate each other' act 2 sc 4
Appearance vs reality	'a gentleman on whom we built an absolute trust' 'look like the innocent flower but be the serpent under't' 'make our faces visards to our hearts'
Masculinity	'when you durst do it, then you were a man.' 'we are men, my liege,' 'I must also feel it as a man.'
Order/ kingship	'I will plant thee and make thee full growing' 'first I am his kinsman and his subject.' 'you know your own degrees.'
Violence and villainy	'unseamed from the nave to the chaps' 'pluck my nipple from his boneless gums and dash the brains.' 'give them the edge of the swords, his wife, his babes and all innocent souls.' 'dead butcher and his fiend like Queen'

Key terminology:	Definition:
Paradox	A statement that is seemingly contradictory 'fair is foul and foul is fair'
Dramatic Irony	a literary technique, originally used in Greek tragedy, by which the full significance of a character's words or actions is clear to the audience or reader although unknown to the character.
Hamartia / fatal flaw	A Fault or imperfection that brings about a weakness within us
Machiavellian	Cunning, scheming, unscrupulous

Root: Sub
Meaning: Under

Keystone Vocabulary:
1. Machiavellian
2. Subverts
3. Chastise
4. Tyrannical
5. Hamartia

Knowledge Organiser: Fine Art / Year 10/ Close-up

Moorside High School
Enriching Lives, Inspiring Ambitions

- Artist research page
- Visits to exhibitions and galleries
- Your own responses in the style of the artist
- Interviews with artists/ photographers
- Annotate and analyse what you have found out.

AO1 EXPLORE
DEVELOP
DEVELOP IDEAS
INVESTIGATE & RESEARCH OTHER ARTISTS WORK
ANALYSE
ANNOTATE

AO2 REVIEW
REFINE
EXPERIMENT
EXPLORE DIFFERENT IDEAS AND MEDIA
A RANGE OF TECHNIQUES & PROCESSES
SELECT
IMPROVE

- Experimenting with a range of different materials and techniques
- Experiment /exploring techniques
- Selecting best possible outcomes
- Improving work as it progresses
- Exploring a variety of ideas

- Title page
- Mind Map
- Observational drawing/ Photography
- Using a variety of media
- Annotating to explain ideas

AO3 EVIDENCE
RECORD
PRESENT IDEAS
PRIMARY OBSERVATION
DRAWING, PAINTING, PRINTING, WRITING, PHOTOGRAPHY …
ANNOTATE
DIFFERENT MEDIA

AO4 OUTCOME
PRESENT
FINAL IDEAS
DEVELOPED AS PLANNED
CLEARLY RESPONDS TO ARTISTS EXPLORED
CONNECTION
CONCLUSION

- Plans and drawings for final piece ideas
- Mini mock-ups and experiments for final piece
- Creating an original final piece, that is clearly inspired by your research and creative journey
- Evaluation of final piece (how does it develop from your ideas

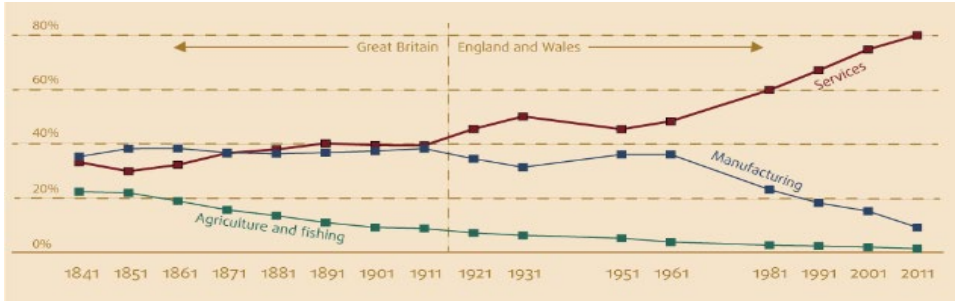
Close-Up Artists

Boyle Family
Robert Cottingham
Domenico Gnoli
Alison Watt
Michael Chase
Sarah Graham
Cara Thayer and Louie Van Patten
Jenny Saville
Ronit Baranga

The Visual Elements

- Colour
- Line
- Texture
- Focus
- Shape
- Space
- Form

Knowledge Organiser: Geography / Year 11/ Half-term 3 / Changing Economic World UK

11. There is a major focus on improving transport infrastructure to support the economy. This has included hundreds of miles of smart motorway, HS2, Liverpool 2 deepwater port and a planned third runway at Heathrow.	12. There are many arguments for and against each of the major transport projects. They cost billions of pounds, and the benefits are often social and economic but not environmentally sound. HS2 has recently been partly cancelled due to cost.	13. The North-South divide is a debatable feature of the UK. Generally, the south is flat, has fertile farmland, higher employment, and high house prices. The north is hillier, the past home of manufacturing and has lower population growth.	14. The UK is the leader of the Commonwealth which some countries are choosing to leave. The UK has been a member of and left the EU. It is now trying to establish new trading links with the USA, Australia and China.
7. A recent priority has been to make industry more sustainable. A key example has been the car industry with aims to reduce energy used to make cars, water used in production, waste sent to landfill, and CO_2 emissions.	8. A major development in the car industry has been the change to electric vehicles. This has involved the development of charging infrastructure and the recent deal to make electric batteries in the UK instead of importing them.	9. There have been major changes in how we live and in rural areas of the UK. In South East England people are moving into the countryside causing social and economic changes. Such as putting pressure on services whilst also bringing in wealth.	10. Some rural parts of the UK have seen rural depopulation where people leave due to a lack of opportunities and services. This reduces tax income in that area reducing services and can leave important jobs unfilled.
3. Deindustrialisation is the process of decline of heavy industry like coal mining. Our last working coal mine was closed in 2015. Other closures in ship building, iron, steel and chemicals have particularly impacted North East England.	4. Two key government policies of nationalisation and privatisation were key in shaping the UK. To create more manufacturing jobs to replace those lost the government has used private investment in major infrastructure projects like HS2.	5. Today the UK is a post-industrial economy. The growth of the quaternary sector or knowledge economy is based in IT. This has created growth corridors in England, Scotland and Wales. One example is Liverpool-Manchester-Leeds.	6. Around the United Kingdom a number of hi-tech hubs, Science Parks and Business Parks have developed where there are good transport links, near universities where there is an educated workforce and space to build good amenities.
1. The industrial structure of the UK (types of work people do) is always changing. During the 20th century primary work declined followed by secondary work, the service sector has grown and now the knowledge sector has grown.			2. Globalisation has also changed the UK. Our connections to other countries have created economic growth, cheaper goods and services, foreign investment, migration, outsourcing, reduced manufacturing and inequality.

Root: form
Meaning: shape

Keystone Vocabulary:

1. Industrial
2. Knowledge sector
3. Globalisation
4. De-industrialisation
5. Privatisation
6. Private investment
7. Growth corridor
8. Hi tech hub
9. Business Park
10. Science Park
11. Sustainable
12. Landfill
13. Counter-urbanisation
14. Rural depopulation
15. Traffic congestion
16. High speed rail
17. Commonwealth
18. EU
19. Trading partners
20. North South divide

1. Food, water and energy are fundamental to human development. They are essential to our social and economic well being BUT not everywhere has the same access to these resources.

2. In the UK there is a growing demand for food from overseas due to all year demand and from LICS as it is cheaper to buy from them BUT we now have more food miles and a larger carbon footprint.

3. In the UK there is a growing demand for water due to home appliance and personal use growth as well as for farming BUT supply does not match demand. There are also issues with water pollution in our rivers.

4. In the UK we are using less energy due to more efficient technology and awareness BUT there is a current cost issue. Our energy mix is also changing to more renewables and less fossil fuels as we try to limit environmental impact.

ENERGY

5. Demand for energy is rising globally and can lead to conflict. There are areas of surplus (security) and areas of deficit (insecurity).

ENERGY

6. There are reasons why energy demand is increasing including population growth, wealth growth and more technology.

ENERGY

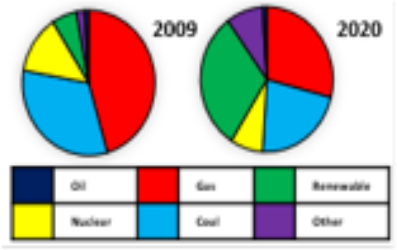
7. There are a wide range of impacts of needing more energy as we explore more sensitive areas for new supplies and prices rise.

ENERGY

8. There are a range of strategies for increasing energy supply: more renewable, using fossil fuels like nuclear power, reducing waste.

ENERGY

9. We need to move towards a sustainable resource future by changing home design, changing transport types, reducing demand and improving technology. This includes insulation, new heat pumps and electric cars.



ENERGY

10. Nepal
Issue: not enough energy and current deforestation for wood.
Solution: micro-hydro schemes using glacial meltwater to generate 'run-of-the river' energy.

Root: ion
Meaning: from the Greek for 'to go'.

Keystone Vocabulary:

1. Economic wellbeing
2. Social wellbeing
3. Scarcity
4. Security
5. Organic
6. Food miles
7. Carbon footprint
8. Agribusiness
9. Surplus
10. Deficit
11. Water transfer
12. Stakeholder
13. Energy mix
14. Run off
15. Industry
16. Agriculture
17. Fracking
18. Pollution
19. HIC/LIC
20. Sustainability

Knowledge Organiser: History / Year 10 / Autumn 1 / Crime and Punishment through time

Moorside High School
Enriching Lives, Inspiring Ambitions

Crime and Punishment 1000-1500
The Medieval Period

Crime

Anglo Saxon

Most common crimes Were those against property, usually theft more serious crimes included murder

Norman England:

Following the Norman invasion definitions of crime changed.
Killing a Norman and prevention of hunting,

known as the Forest Laws.

Policing

No police force meant communities would police themselves.
Both the following methods were continued following the **Norman invasion:**
Tithings: group of 10 men over the age of 12 all responsible for each others behaviour
Hue & Cry: If a crime was committed, the whole village was expected to hunt down the criminal
During the later middle ages:
Constables: appointed annually, unpaid, respected in the community
Sheriff: Each county had one, raised a posse if Hue & Cry failed
Coroners: Royal officials responsible for investigating unnatural deaths

Punishment

Anglo-Saxon England: Anglo Saxon punishment were mainly fines but they also used corporal and capital punishment
Wergild: compensation payment made to the victim of the crime, the level of which was set by the king's law
Execution: The death penalty was used for serious crimes, treason against the King or betraying your lord.
Mutilation: Reoffenders could lose a body part, usually a hand, an ear, nose or even blinded

Norman England: Following the Battle of Hastings, William needed to control 2 million Anglo-Saxons with around 7000 Norman soldiers
Murdrum fine: Payable by the whole village if a Norman was murdered
Forest Laws: Trees could no longer be cut down and living near a forest, you were forbidden to own dogs or bows. If caught, two fingers were chopped off, repeat offenders were blinded.

Root: Sen
Meaning: Old

Vocabulary List:

1. Tithing
2. Hue & Cry
3. Wergild
4. Execution
5. Mutilation
6. Constable
7. Coroner
8. Trial
9. Normans
10. Anglo-Saxon
11. Community
12. Conquest
13. Invasion
14. Clergy
15. Courts
16. Murdrum
17. Trial by Combat
18. Trial by Ordeal
19. Trial by hot iron
20. Trial by Blessed Bread

Knowledge Organiser: History / Year 10 / Autumn 1 / Whitechapel

Moorside High School
Enriching Lives, Inspiring Ambitions

Life in Whitechapel

- Poor housing, overcrowding & unemployment were common
- Attempts to improve conditions included building new housing and providing orphanages
- These solutions existed alongside traditional responses to poverty, such as the workhouse

Tensions in Whitechapel

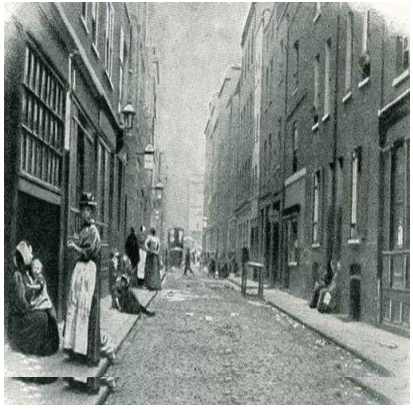
- By the 1880s there had been two distinct waves of recent immigration into Whitechapel: Irish and Eastern European
- In both cases there were fears that the immigrants brought dangerous political views
- Immigrants seems to be a threat to local people's options for housing and jobs
- Immigrants were often stereotyped as dangerous criminals

Policing the nation

- Unlike other forces, the Metropolitan Police was controlled directly by the government
- Following a series of scandals, the CID was set up in 1878
- Useful sources for investigating policing include: reports from individual police stations, records of court cases, memoirs and national and local newspapers – but these all have drawbacks as well as advantages

Police organisation in Whitechapel

- Police were seen as the government in uniform, representing unpopular laws – they were many physical attacks on them
- Prostitution, alcoholism and the narrow streets made policing challenging
- Police numbers were too few to cope with lawlessness
- Many believed the police were enforcing irrelevant rules instead of preventing serious crime



Investigative policing in Whitechapel

- The failure to solve the Ripper murders led to criticism of H Division, the Met Police and the CID team at Scotland Yard
- Methods were inadequate
- However, some CID inquiries were imaginative since they had a lack of scientific knowledge compared with today
- The Met Police were slow to learn the lessons of their failures
- There were improvements in lighting, housing and health as a result of national concern about the killings

Root: Sen
Meaning: Old

Vocabulary List:

1. Sanitation
2. Pogrom
3. Anarchy
4. Socialist
5. Capitalist
6. Anti- Semitic
7. Sensationalist
8. Satirical
9. Prostitute
10. Brothel
11. Post-mortem
12. Dissecting
13 Forensic
14. Gin palace
15. Home Office
16. Home Secretary
17. Fenians
18. H Division
19. Workhouses
20. Immigration

KEY KNOWLEDGE

Logo Components

1. Shapes and symbols.
2. Company name
3. Strapline/slogan

Client Brief

Carefully read the client brief

- What have you been asked to create?
- Who is the client?
- What file types should you use?
- Who is the audience?
- Do you need to save the file in a specific way?
- What software will you need to use?

Concept Sketches

These can be annotated with colour, font styles, size, dimensions etc.

Documents

You could create the following documents to help you generate ideas for your project –
Mood boards
Mind maps

Bitmap

Vector

MB1 1–2 marks	MB2 3–4 marks	MB3 5–6 marks
Use of technical skills to create the visual identity is **limited** in its effectiveness.	Use of technical skills to create the visual identity is **adequate** in its effectiveness.	Use of technical skills to create the visual identity is **effective**.
Properties and format(s) of the visual identity are **limited** in appropriateness.	Properties and format(s) of the visual identity are **adequate** in appropriateness.	Properties and format(s) of the visual identity are clearly **appropriate**.
Dictionary definitions		
forming an essential foundation or starting point	satisfactory or acceptable in quality	producing or able to produce a desired effect suitable or proper in the circumstances

Assets

Remember to save all images used in a folder, and add them to your assets table.
Edit them *before* you put them into photoshop

Visual Identity

A visual identity consistent of

- Distinct logo
- Colour scheme
- Strapline

Rules of the NEA Coursework

- Must use the specification
- Tasks must be completed within classroom
- You have access to the assignment
- Notes can be taken and used within class
- Reference all sources, to avoid plagiarism
- Guidance is fine but you cannot copy or use templates
- Your teach can only tell you if something needs to be improved, not how to improve it
- Work must be your own

KEYWORDS

Need to know

1. Strap line – Slogan for the brand
2. Colour Scheme – The colours used
3. Vector – An image type that uses maths to calculate the curves of an image
4. Annotation – Notes about your designs, explaining why
5. Justification – Detailed explanation as to your designs and reasons why
6. Visualisation – A diagram that shows what the final product could look like
7. Visual Identity – The colour, shape, design and branding of a company

Knowledge Organiser: PE / GCSE PE / The Cardiovascular System

Functions of the cardiovascular system:

The cardiovascular system consists of the:

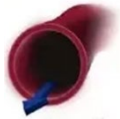
- **The heart** pumps blood around the body
- **Blood** transports gasses, blood cells and nutrients
- **Blood vessels** carry the blood

Function	Explanation
Transport of nutrients	Nutrients we eat are broken down from the food we eat and transported to the body in the blood
Transport of oxygen	The cardiovascular system transports oxygen around the body in the blood Oxygen is needed to provide energy to the working muscles during aerobic exercise
Transport of carbon dioxide	Carbon dioxide is produced as a by-product during aerobic energy production. The cardiovascular system takes carbon dioxide away from the muscles to the lungs and exhaled.
Clotting of open wounds	Blood contains blood cells called platelets. They are transported in the blood. They help to clot wounds by performing a plug to prevent blood loss
Regulation of body temperature	Blood vessels can help regulate body temperature. When we get hot blood vessels near the skin will get bigger (**vasodilation**) this will increase blood flow so heat can radiate from the skin When we get cold the blood vessels near the skin will get smaller (**vasoconstriction**) this will decrease blood flow so less heat is lost through radiation

Redistribution of blood flow:

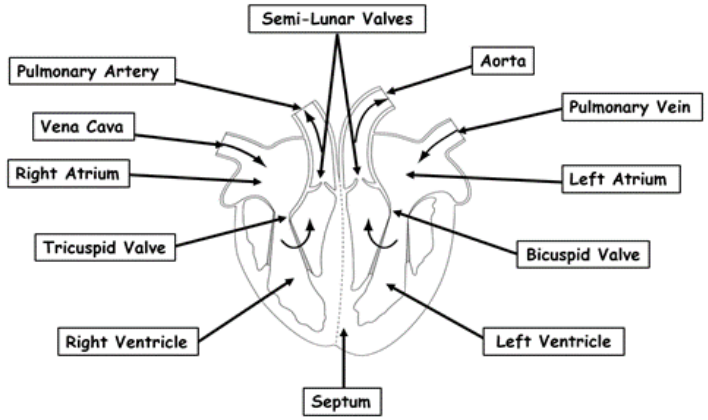
Vascular Shunting: When we exercise blood is redistributed. The working muscles need more oxygen than other inactive areas of the body such as the stomach. Blood is diverted away from inactive areas to the working muscles.

Vasoconstriction means that the blood vessels constrict to make them smaller, especially to **inactive** areas.



Vasodilation means that the blood vessels dilate to make them bigger, to dilate blood vessels that supply active areas.

Structure of the heart:



Septum separates the right and left sides of the heart

Valves prevent the backflow of blood

Arteries take blood away from the heart

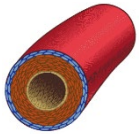
Veins take blood towards the heart

Pulmonary artery take blood to the lungs

Pulmonary vein takes blood from the lungs back to the heart

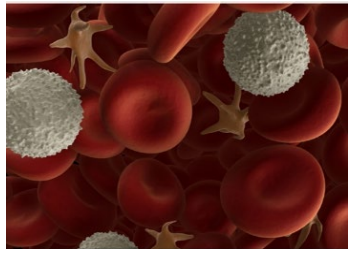
Aorta delivers oxygenated blood to the body

Structure of blood vessels:

Blood Vessel	Structure	Importance During Physical Activity
Artery 	• Thick muscular elastic walls • Small lumen (internal diameter) • Carry blood at high pressure • Cary blood away from the heart	When we exercise, blood pressure increases due to the demand for oxygen from the working muscles. Arteries take the blood to the working muscles. They dilate to allow more blood through
Vein 	• Thin walls • Large lumen (internal diameter) • Carry blood at low pressure • Contain valves	When we exercise aerobically the body produces waste products such as carbon dioxide. The blood in the veins take this to the lungs to be exhaled. The valves in the veins prevent the back flow of blood at low pressure
Capillary 	• Very thin walls (one cell thick) • Link smaller arteries with small veins • Allow gaseous exchange	When we exercise, we need to deliver oxygen to the working muscles and remove the waste product, carbon dioxide. Capillaries allow the gaseous exchange at the lungs and the muscles

Function of blood:

Blood has four components that each play a role in physical activity:



Red blood cells

Red blood cells carry oxygen and carbon dioxide.

The waste product carbon dioxide is also transported by the red blood cells, it is also carried by the plasma

White blood cells

White blood cells fight infection and disease. When playing sport, they prevent infection if we get cut or scratched.

Platelets

Platelets help prevent bleeding by clotting (sticking together) and forming a plug.

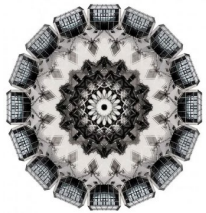
Plasma

Plasma is the liquid part of the blood it acts as a transport system that transports the blood cells, platelets, and nutrients to different parts of the body

Knowledge Organiser: Photograohy / Year 10/ Autumn / Distortion

What to include in an artist analysis

- What kind of photographs does the artist produce? What is in the image?
- What camera techniques do you think they have used? You might be able to found out for definite by researching on their website, if you can't make an educated guess.
- What editing has been used and how effective is it?
- What might the photographer want you to think about? Is he/she communicating a message/meaning?
- What is the mood or atmosphere in the picture? How is it created?
- Comment on the lighting and shadows. Are they natural? How might they have been created?
- Look at the use of colour. Comment on the brightness/ dullness/ contrast etc. and the effectiveness of the colour scheme.
- Refer to a specific image. Analyse it. Ask yourself why the photographer has done things the way he/she has.
- Add your opinion of the artists work. What do you like about the work? What techniques do you want to try? How will this artist influence your photoshoot?



Artists

- Suzanne Saroff
- Bruce Boyd
- Cory Stevens
- Reynald Drouhin

What to include in an annotated contact sheet

- Explain what has worked well in the photoshoot
- Explain what hasn't work in your photoshoot
- Discuss the lighting and composition that you have used
- How could you improve your photoshoot if you were going to do it again?

What to include when writing about your favourite images

- Why are these you favourite?
- How do they relate to your artists?
- Do the photos follow your plan?
- How are you going to edit these photos?

AO1
Develop ideas through investigations, demonstrating critical understanding of sources

AO2
Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes

AO3
Record ideas, observations and insights relevant to intentions as work progresses

AO4
Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language

Root: Com
Meaning:

Vocabulary List:

1. Distort
2. Analysis
3. Composition
4. Communication
5. Influence
6. Atmosphere
7. Technique
8. Annotate
9. Hue
10. Saturation
11. Curves
12. Gradient
13. Pattern
14. Viewpoint
15. Converging Lines
16. Geometric
17. Develop
18. Refine
19. Adjustment
20. Overlap

Knowledge Organiser: Science / 10/ HT 1 / Energy of moving particles

Moorside High School
Enriching Lives, Inspiring Ambitions

Density	
1. which two quantities do you need to find the density of a solid or a liquid?	Mass and Volume
2. How do you find the volume of a regular shaped object?	Use a ruler and measure the height, width and depth and multiply them
3. How do you find the volume of an irregular shaped object?	Use a Eureka can and measure the amount of water displaced with a measuring cylinder
4. How do you find the volume of a liquid?	Use a measuring cylinder
5, How do you find the mass	Use a balance
6. What is the formula for density	Density = mass / volume
States of matter	
7. Why are changes of state physical changes?	No new substances produced
8. How are the particles in a solid arranged?	The particles are touching and vibrate around a fixed pattern.
9. How are the particles in a liquid arranged?	Particles are touching but not in fixed positions. They are free to flow around.
10. How are the particles in a gas arranged?	Particles are far apart and move around quickly and randomly.
11. Which state of matter is most dense?	Solid.
12. What are the names of the five state changes?	Melting (solid → liquid), evaporating (liquid → gas), freezing (liquid → solid), condensing (gas → liquid), sublimating (solid → gas/gas → solid).
13. What is internal energy?	Internal energy is the total kinetic energy and potential energy of all the particles that make up a system.

Specific latent heat	
14. What is specific latent heat	The energy required to change the state of one kilogram of that substance with no temperature change
15. On a graph of temperatures against time for a substance being heated what do flat sections show?	The time when the substance is changing state but no temp change is occurring
16. Why doesn't the temperature of a material change as it's changing state?	Energy goes into breaking/making bonds.
17. The specific latent heat of fusion gives what state change?	From solid to liquid.
18. The specific latent heat of vaporisation gives what state change?	From liquid to gas.
19. What is the equation to calculate energy needed for a state change?	$E = m \times L$
Specific heat capacity	
20. What is the definition of specific heat ca-	The energy needed to heat up 1kg of a ma-
21. What is the equation to calculate energy change from specific heat capacity?	$\Delta E = m \times c \times \Delta\theta$
Pressure	
22. How do the molecules in a gas move?	In random motion.
23. What happens to the speed of particles in a gas as the gas is heated?	The pressure would increase as particles would hit the walls of the container more often.
24. What happens to pressure if the size of a container is reduced?	The pressure would increase as particles would hit the walls of the container more often.

Knowledge Organiser: Science / 10/ HT 1 / Human Systems

Moorside High School
Enriching Lives, Inspiring Ambitions

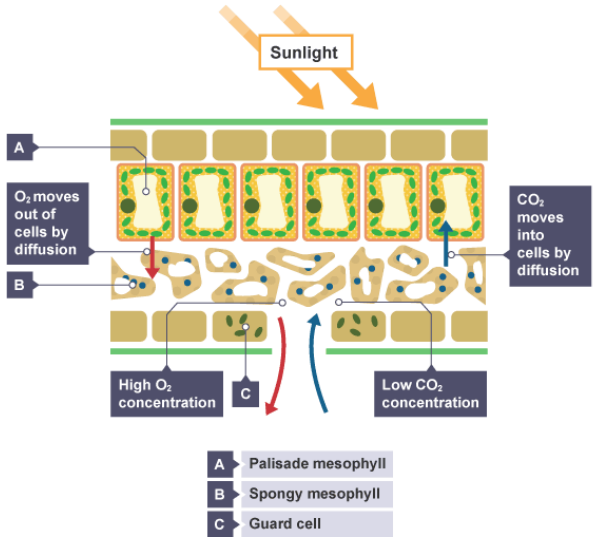
Digestion	
1. What is the function of bile in digestion?	Neutralises hydrochloric acid from the stomach and emulsifies fat
2. What is the function of saliva in digestion?	Lubrication to help swallowing—contains amylase
3. Name three enzymes produced in the pancreas	Amylase, protease, lipase
4. What is the role of active transport in the small intestine?	Sugars can be absorbed when the concentration in the small intestine is lower than the concentration of sugar in the blood
5. What are enzymes?	Biological protein catalysts that increases the rate of specific reactions
6. What does catalyse mean?	Speed up a reaction
7. What does denatured mean?	The shape of the enzyme's active site changes once it passes the optimal condition and it cannot bind with substrates
8. What are three factors that affect the rate of activity of an enzyme?	pH, substrate concentration and temperature
9. Why are enzymes described as specific?	The active site only binds with certain substrates (lock and key model)
Organ Systems (Circulatory system and respiratory system)	
10. Name the four main components of blood	Red blood cell, white blood cell, plasma, platelets
11. Describe three adaptations of red blood cell.	1) Bi-concave disc shape to increase SA 2) contains haemoglobin 3) no nucleus
12. Why is the human circulatory system a double circulatory system?	Blood passes through the heart twice—loop for oxygenated blood and loop for deoxygenated blood
13. How does the structure of an artery relate to its function?	Carries blood away from the heart at high pressure—has a small lumen and thick elasticated walls
14. How does the structure of a vein relate to its function?	Carries blood back to the heart at low pressure—valves to prevent backflow
15. How does the structure of the capillary relate to its function?	Carries blood to cells—has a one-cell-thick wall to provide short diffusion distance
16. List the structures air passes through when breathing in.	Mouth/nose —> trachea —> bronchi -> bronchioles —> alveoli

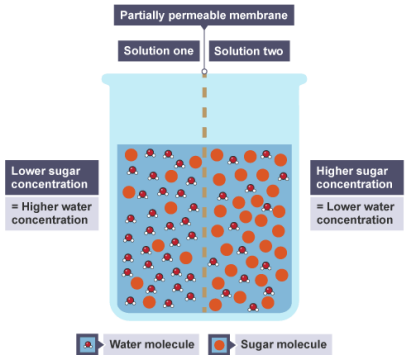
Organisation in plants	
17. How is the upper epidermis adapted for its function?	Single layer of transparent cells allow light to pass through. Cells secrete waxy substances that makes leaves water proof
18. How is the palisade mesophyll adapted for its function?	Tightly packed calls with lots of chloroplasts to absorb as much light for photosynthesis
19. How is the spongy mesophyll adapted for its function?	Air spaces increase the SA and allows gases to diffuse quickly
20. What is the function of the xylem?	Transports water and mineral ions from the root to the rest of the plant
21. Give three adaptations of the xylem.	1) made of dead cells 2) no end wall between cells 3) walls strengthen by lignin to withstand pressure of water
22. What is the function of the phloem?	It is where translocation takes place
23. What is translocation?	Transport of dissolved sugars from the leaves to the other parts of the plant
24. What is transpiration?	Movement of water from the roots to the leaves through the xylem
25. Name four factors that affect the rate of transpiration	Temperature, light intensity, humidity and wind speed
26. What is the function of the stomata?	Allows diffusion of gases into and out of the plant

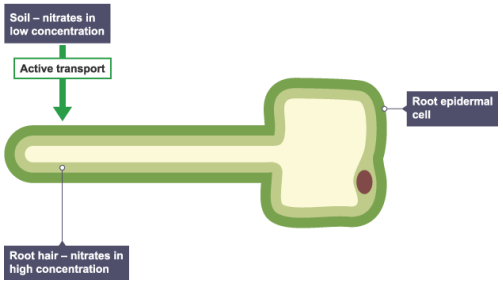
Knowledge Organiser: Science / 10/ HT 1 / cell transport

Moorside High School
Enriching Lives, Inspiring Ambitions

Diffusion	
1. what is diffusion	The net movement of particles from an area of high concentration to low concentration
2. Name three factors which affect the rate of diffusion	Concentration gradient, temperature, membrane surface area.
3. How are villi adapted for exchanging substances	Long and thin—big surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradient
4. How are the lungs adapted for gas exchange	Alveoli—large surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradi-
5. How are fish gills adapted for efficient gas exchange	large surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradient
Osmosis	
6. What is osmosis	The movement of water particles from a high concentration to a low concentration through a partially permeable membrane
7. Give one examples of osmosis in a plant	Water from the soil into the root
8. What is active transport	Movement of particles against a concentration gradient using energy
9. Why is active transport needed in the plant routes	Concentration of mineral ions is lower in the soil that in the roots
10. what is the purpose of active transport in the small intestine	Sugars can be absorbed when the concentration of sugar is lower in the small intestine than in the blood







Knowledge Organiser: Science / 10 / Half term 1 / Coordination & Control

What is the word given for controlling internal environments	**Homeostasis**
What three things does homeostasis control	**Body temperature, blood glucose and water level**
What is another term for a nerve cell	**Neurone**
What are the three types of neurone	**Sensory, relay, motor**
Which nerve type detects stimuli	**Sensory**
Which nerve type responds to a stimulus	**motor**
A muscle or a gland – Part of a control system that produces a response is refered to as an..	**Effector**
What is the central nervous system	**Brain and spinal cord**
What is a synapse	**A gap between two neurones**
What is the name given to a gap between neurones	**Synapse**
What type of responses happen without needing the brain	**Reflex**
How do the chemicals move across a synapse	**Diffusion**
What does reaction time mean	**The time it takes to respond to a stimulus.**
How might you measure response time	**Ruler catch test**
What is the order for the reflex arc	**Stimulus-->receptor-->sensory neurone-->relay neurone-->motor neurone-->effector-->response**
Which is quicker a nervous response or a hormonal response	**Nervous**
Which lasts longer a nervous response or hormonal response	**Hormonal**
What does the endocrine system release	**Hormones**
How are hormones transported around the body	**Blood stream**
What hormone does the thyroid release	**Thyroxine**
What hormone does the adrenal gland release	**Adrenaline**
What hormone does the pancreas release	**Insulin**
What hormone does the male testes release	**Testosterone**
What hormones do the female ovaries release	**Oestrogen, Progesterone**
What is the name given to the pituitary gland	**Master gland**
What hormone is released when blood sugar is too high	**Insulin**

What hormone is released when the blood sugar is too low	**Glucagon**
What disease means you cannot control blood sugar	**Diabetes**
Where is insulin produced	**Pancreas**
What is glucose converted into for storage in animals	**Glycogen**
Which type of diabetes is when the pancreas produces little or no insulin	**Type 1**
Which type of diabetes is when the body cells no longer respond to insulin	**Type 2**
How can type 1 diabetes be treated	**Insulin injections**
How can type 2 diabetes be treated	**Carbohydrate controlled diet and exercise**
What type of diabetes can be caused by obesity	**Type 2**
Development of secondary sexual characteristics is called..	**Puberty**
How often does ovulation occur?	**Every 28 days**
What day in the Menstrual cycle is an egg released from the ovary	**Day 14**
What is it called when an egg is released from the ovary	**Ovulation**
What is one function of testosterone	**Stimulates sperm production**
Name of hormone the stimulates follocile to mature	**Follicle stimulating hormone (FSH)**
Hormones that causes ovilation	**Leutanising hormone (LH)**
Which hormones are involved in maintaining the uterus lining	**Oestrogen and Progesterone**
What hormone can be used to stop the release of the egg	**Progesterone**
Name a non-hormonal, barrier method of contraception	**Condom or Diaphragm**
What do spermicidal agents do	**Disable or kill sperm**
What is the “fight or flight” hormone called	**Adrenaline**
Rate of metabolism, heart rate and temperature and contolled by the hormone...	**Thyroxine**
To prepare the body for a fight or flight response a hormone called....	**Adranalin**
What happens to the levels of glucose and oxygen when adrenalin is released	**Increase**

Root:

Meaning:

Vocabulary List:

1. Adrenaline
2. Contraception
3. Follicle stimulating hormone (FSH)
4. Homeostasis
5. Receptors
6. Selective reabsorption
7. In Vitro Fertilisation (IVF)
8. Glucagon
9. Deamination
10. Antidiuretic hormone (ADH)
11. Coordination centres
12. Dialysis
13. Effectors
14. Negative feedback cycle

Knowledge Organiser: Chemistry / Year 10/ Term 1 / Material Properties

Allotropes of Carbon	
Closed tube or hollow ball shaped molecules of carbon is called a	Fullerene
What element is both graphite and diamond made from	Carbon
Why does diamond have a high melting point	Giant Covalent structure
What type of bonding occurs between graphite and diamond	Covalent
Why does graphite conduct electricity	Has delocalised electrons

Identifying State Symbol's	
What does the state symbol (s)	Solid
What does the state symbol (l)	Liquid
What does the state symbol (g)	Gas
What does the state symbol (aq)	Aqueous (dissolved in water)

Nano Science (Triple)	
How big are nanoparticles?	Nanoparticles are particles that are between 1 and 100nm in size.
Nanoparticles are used for…	• medical treatments • cosmetics, deodorants and sunscreens • electronics • Catalysts
Sunscreen	block harmful ultraviolet light from the sun reaching the skin. Zinc oxide blocks ultraviolet light, so is used in sunscreens
Nanoparticles	Nanoparticles have a large surface area to volume ratio

State Changes	
Why do metals conduct electricity	Delocalised electrons
What do we call it when a gas goes into a liquid	condensing
What do we call it when a liquid goes into a solid	Freezing
What do we call it when a solid goes into a liquid	Melting
What do we call it when a liquid goes to a gas	Boiling / Evaporating

Polymers	
What is a Polymer?	Polymers have very large molecules. The atoms in a polymer molecule are joined together by strong covalent bonds in long chains. There are variable numbers of atoms in the chains of a given polymer
Is the melting point of polymers high or low?	High melting point due to strong intermolecular forces
What is a monomer	Repeating unis which make up a polymer

Root: Sta
Meaning: To make firm

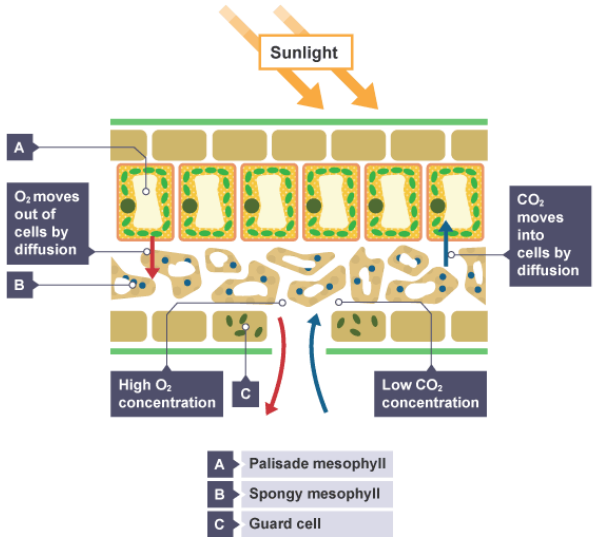
Vocabulary List:

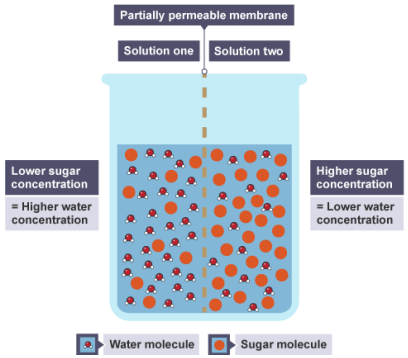
1. Electrostatic
2. Condensing
3. Freezing
4. Melting
5. Boiling
6. Delocalised
7. Electron
8. Fullerene
9. Covalent
10. Giant Covalent
11. Aqueous
12. Molten
13. Solid
14. Liquid
15. Gas
16. Structure
17. Allotropes

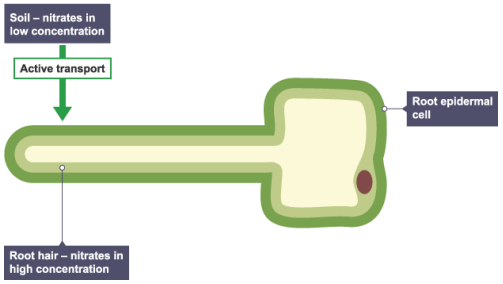
Knowledge Organiser: Science / 10/ HT 1 / cell transport

Moorside High School
Enriching Lives, Inspiring Ambitions

Diffusion	
1. what is diffusion	The net movement of particles from an area of high concentration to low concentration
2. Name three factors which affect the rate of diffusion	Concentration gradient, temperature, membrane surface area.
3. How are villi adapted for exchanging substances	Long and thin—big surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradient
4. How are the lungs adapted for gas exchange	Alveoli—large surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradi-
5. How are fish gills adapted for efficient gas exchange	large surface area, one cell thick—short diffusion distance, good blood supply—maintains diffusion gradient
Osmosis	
6. What is osmosis	The movement of water particles from a high concentration to a low concentration through a partially permeable membrane
7. Give one examples of osmosis in a plant	Water from the soil into the root
8. What is active transport	Movement of particles against a concentration gradient using energy
9. Why is active transport needed in the plant routes	Concentration of mineral ions is lower in the soil that in the roots
10. what is the purpose of active transport in the small intestine	Sugars can be absorbed when the concentration of sugar is lower in the small intestine than in the blood







Knowledge Organiser: Science / Year 10/ HT1 / Circuit Calculations

Definitions	
1. What is current?	Flow of electric charge
2. What is resistance?	Anything that slows down the flow of charge
3. What is potential difference also known as?	Voltage
4. What device do you use to measure current?	Ammeter
5. How do you measure potential difference?	Voltmeter
6. Name the 3 fossil fuels	Coal, oil, gas
7. Define non-renewable.	We cannot replace the resource as quickly as we use it.
8. Define renewable.	We can replace it as quickly as we use it.
9. What is a biofuel?	A fuel created from plant products or animal dung.

Units and formulae	
10. What is the unit for current?	Amps (A)
11. What is the unit for potential difference?	Volts (V)
12. What is the unit for resistance?	Ohms (Ω)
13. What is the formula for calculating voltage?	V=IR
10. What is the formula for charge?	Q=It

Series and Parallel	
11. Describe current in a series circuit.	Same everywhere
12. Describe voltage in a series circuit.	Shared
13. Describe current in a parallel circuit.	Shared
14. Describe voltage in a parallel circuit.	Same everywhere

Root: Circ
Meaning: Ring

Vocabulary List:

1. Current
2. Potential Difference
3. Voltage
4. Resistance
5. Ammeter
6. Voltmeter
7. Charge
8. Series
9. Parallel
10. Circuit
11. Renewable
12. Non-renewable
13. Fossil Fuel
14. Biofuel

Knowledge Organiser: Español/Y10 Half-term 1/Familia y Amigos

BIG QUESTION – Háblame de tu familia y amigos.

1. Describe a tu familia y amigos.

Ahora/Antes	Now/Before
Es/Eras	(S)he is/was
contento(a)/alegre/feliz	happy
travieso(a)/antipático(a)	naughty/mean
generoso(a)/abierto(a)	generous/naughty
egoïsta/molesto(a)	*selfish/annoying*
cariñoso(a)/amable	caring/friendly
Tiene/tenía	(s)he has/used to have
el pelo rubio/rizado/ondulado	blond/curly/wavy hair
pecas	freckles
un tatuaje	a tattoo
gafas	glasses
Me parezco a	I look like

2. ¿Te llevas bien con tu familia?

Me llevo bien/mal con	I get on well/badly with
Nos llevamos bien/mal con	We get on well/badly with
porque/ ya que/ dado que	because/ as/ given that
me ayuda	(s)he helps me
me escucha	(s)he listens to me
me da cariño	(s)he gives me love
me comprende	(s)he understands me
es un buen modelo a seguir	is a good role model
tenemos mucho en común	we have a lot in common
tiene un buen sentido del humor	(s)he has a good sense of humour
me vuelve loco(a)	(s)he drives me crazy
no me deja salir	(s)he doesn't let me go out
es honrado(a)/fiel	(s)he is honest/loyal

3. ¿Cómo sería tu novio(a) ideal?

Mi novio(a) ideal sería	My ideal boyfriend girlfriend would be
alto(a)/rico(a)/gracioso(a)	tall/rich/funny
debería ser impressionante	(s)he must be impressive
tendría los ojos grandes	(s)he would have big eyes
haríá mucho ejercicio	(s)he would do alot of exercise
cuando sea mayor	When I am older
me gustaría casarme con	I would like to get married to
me gustaríá tener hijos	I would like to have children
quiero ser madre/padre	I want to be a mum/dad
una boda es cara	a wedding is expensive

4. ¿Quién es más importante, familia o amigos?

mi madre dice que	my mum says that
algunos piensan que	some think that
a mi modo de ver	from my point of view
desde mi punto de vista	from my point of view
la familia es más/menos importante	family is more/less important
ambos son importantes	both are important
somos como uña y mugre	we are like nails and dirt

no hay guerra más hiriente que entre hermanos y parientes – there is no more hurtful war than between siblings and relatives (there's nothing worse than family conflict)

la familia real de España

el rey Felipe VI

la reina Letizia

las princesas Leonor y Sofía

The Imperfect – an ongoing activity in the past tense (was doing sth/used to do sth.
The conditional – what could happen/what we would like to happen

Root: ex
Meaning: out/out of/out from

Vocabulary List:

1. presente
2. tiene
3. es
4. imperfecto
5. tenía
6. era
7. condicional
8. tendría
9. sería
10. ahora
11. antes
12. mayor
13. menor

Knowledge Organiser: GCSE Textiles / Year 10/ The Living World Project

Moorside High School
Enriching Lives, Inspiring Ambitions

The Living World
Vocabulary
Mother Earth
Life & Death
Seasons
Human form
Nature
Wildlife
Identity

- Mind map
- Mood board
- Photography
- Initial Drawings
- Tactile mood board
- Historical context

Sketchbook Presentation is important and you should have a consistent application to all pages.

A02 Artist Analysis
Select four artists to develop your project. Each artist will need to be analysed and evaluated. Here is a list of textiles artists to explore.
-Sophie Standing
-Teresa Barboza
- Mr Finch
- Cas Holmes
- Judith Scott
- Nick Cave

A02 Developing Examples
With each artist analysis you will need to develop two fabric examples that capture the style of the artist. You could produce a stencil, embroidery or patchwork sample.

KS4 Key Art Vocab

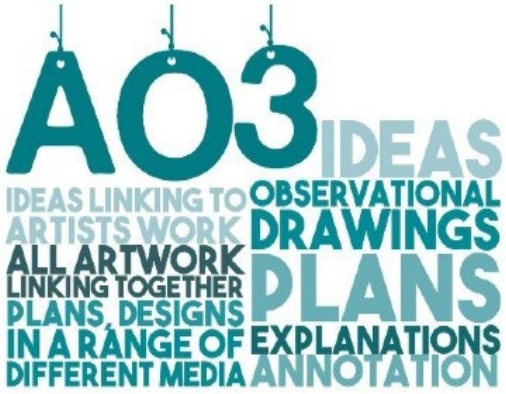
Shape and Form
Closed
Open
Distorted
Organic
Flat
Positive
Negative
Foreground
Background
Composition
Elongated
Large
Small
2D/3D

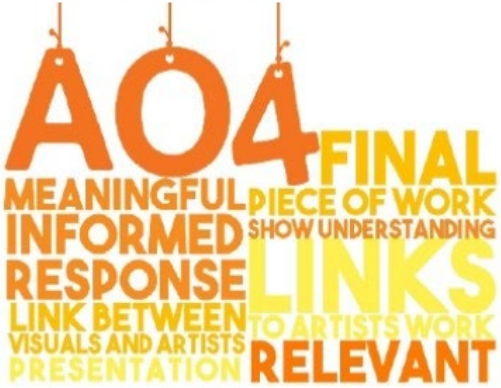
Pattern and Texture
Repeated
Uniform
Geometric
Random
Symmetrical
Soft
Irregular
Bold
Rough
Smooth
Uneven
Broken
Furry

Line
Fluent
Free
Rough
Controlled
Powerful
Strong
Geometric
Angular
Delicate
Thick
Thin
Horizontal
Overlapping
Broken

Colour
Bright
Bold
Primary
Secondary
Tertiary
Dull
Deep
Contrasting
Harmonious
Neutral
Earthy
Subtle
Luminous
Cool
Warm
Strong

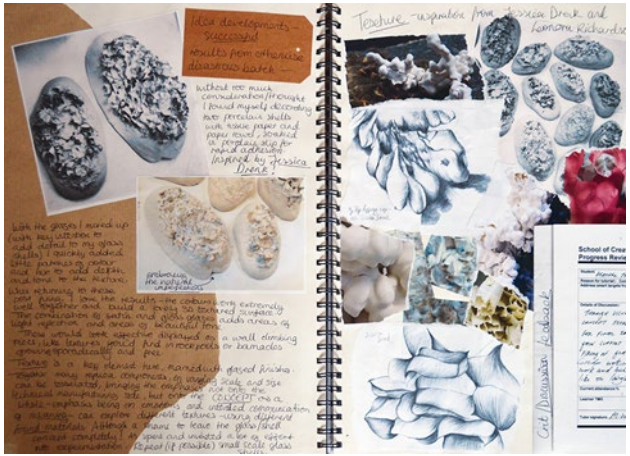
Knowledge Organiser: GCSE Textiles / Year 10/ The Living World Project





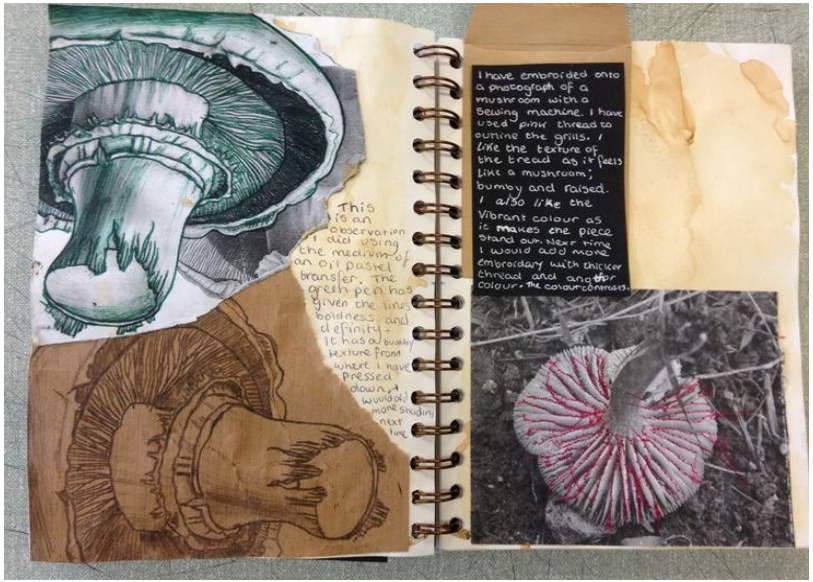
Each art project contains the learning and development of the four Art Objectives. You will be assessed when you develop ideas, how you refine those ideas, and the development of the final making stage.

A01	Develop ideas through investigations informed by contextual and other sources, demonstrating analytical and cultural understanding.
A02	Refine ideas through experimenting and selecting appropriate resources, media, materials, techniques and processes .
A03	Record ideas, observations and insights relevant to their intentions in visual and/or other forms.
A04	Present a personal, informed and meaningful response demonstrating analytical and critical understanding, realising intentions and, where appropriate, making connections between visual, written, oral or other elements.



A01
EXPLORE
ANNOTATE
BEGIN TO LINK A
THEME
IMAGES
TO YOUR CHOSEN ARTISTS WORK
WRITTEN ANALYSIS
ARTISTS
LINK ARTISTS WORK TO
IDEAS AND ARTWORK
RESEARCH

When developing A01 the examiner will be looking for relevant research that connects to the art brief.



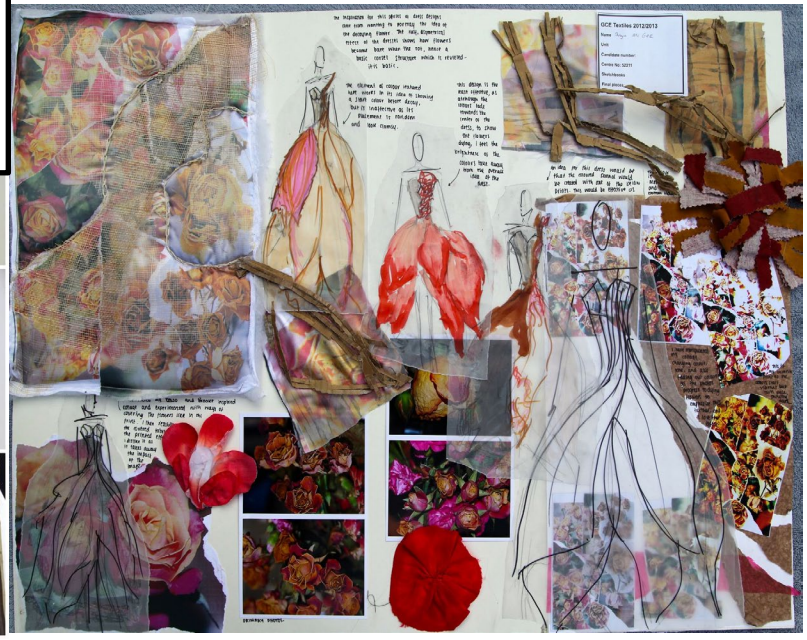
AO2

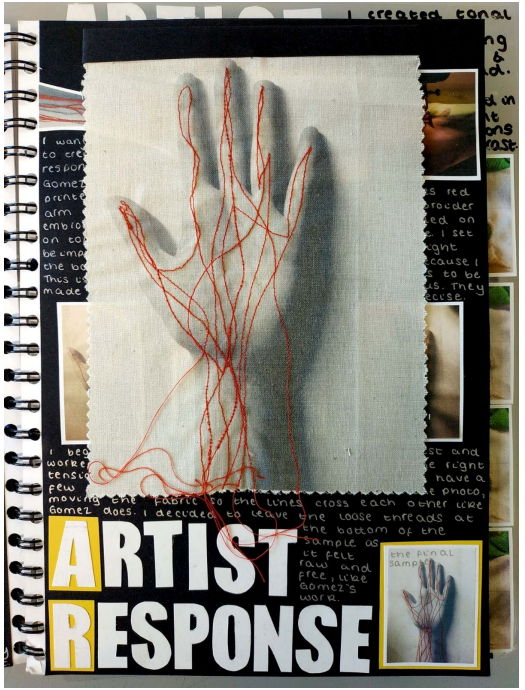
EXPERIMENT WITH A RANGE OF MEDIA

LINKING TECHNIQUES TO ARTISTS AND THEMES

DRAWING
TEXTILES
CLAY
MIXED MEDIA
PHOTOGRAPHS
OIL PASTEL
WATERCOLOUR
PEN AND INK

During the development of A02 you will link to artists and themes experimenting and exploring with different media.





Connectivity
A03 will connect to all of your research and artists.
As each design idea develops there will be a clear connection to your brief, themes and artists styles.

Explanations and Annotations
Every design idea will need to be drawn and colour developed.
Annotation for each idea describing how you will construct the final piece and the context of the idea.

Linking Artists
Each design will fuse at least two artists styles.
Consider the range of media you could experiment with.
Remember your design does not need to be flat, you could collage, incorporate fabric, recycled materials, and metal to show case the design

When developing your final product you must consider the material and construction of the final piece.
Will you upcycle, use recycled materials or new fabrics?

Knowledge Organiser: Health & Social Care / Year 10 / Component 1 – Growth & Development HT1

Growth and development are different concepts:

- Principles of growth – growth is variable across different parts of the body and is measured using height, weight and dimensions
- Principles of development – development follows an orderly sequence and is the acquisition of skills and abilities.

Holistic Development

Physical development – Physical growth and physiological change.
Intellectual development – Developing thinking and language skills and common activities that promote learning and development.
Emotional development – Developing feelings about self and others.
Social development – Forming relationships.

Qualification Structure

There are **THREE units** that you will be covering, two coursework units in Year 10 and one exam in Year 11. These are;

- **Component 1** – Human Lifespan Development (Learning from Sept – January then complete **PSA**)
- **Component 2** – Services and Values in HSC (Learning May-July and Sept to October – December/January **PSA**)
- **Component 3** – Health and Well-being (**EXAM** in May 2025)

Life stages and their expected key characteristics in each of the PIES classifications

Infancy (birth to 2 years):
Physical: rapid physical growth of weight and height, development of gross and fine motor skills, following the same pattern of growth and development but at different rates. **Intellectual:** rapid development of language and thinking skills such as memory/recall. **Emotional:** attachments are formed, emotional wellbeing is based on bonding/attachment, security and contentment. **Social:** strong dependence on adults/carers, socialisation through family, engage in solitary play.

Early childhood (3–8 years): Physical: continued growth of weight and height, mastery of gross and fine motor skills. **Intellectual:** increased curiosity, language fluency develops, strong grasp of memory/recall. **Emotional:** increased independence, wider range of relationships are formed, emotional wellbeing is based on attachment, security and contentment. **Social**: social circle widens and close friendships are formed, socialisation continues through family and also friends/carers, social play develops.

Adolescence (9–18 years): Physical: onset of puberty, differences between males and females, primary and secondary sexual characteristics. **Intellectual:** complex and abstract thinking develops. **Emotional:** independence increases further, more freedom to make own decisions, concerns over self-image and self-esteem may increase, emotional wellbeing is based on attachment, security and contentment. **Social:** wide range of formal/informal relationships develop and have influence, intimate relationships are formed.

Early Adulthood (19-45 years):
Physical: peak physical fitness, full height and sexual maturity reached, women at their most fertile. **Intellectual:** mastery of abstract and creative thinking, careers become important, may return to education. **Emotional:** independent living and control over own lives, emotional wellbeing is based on attachment, security and contentment. **Social:** intimate and long-lasting relationships are formed.

Middle Adulthood (46–65 years):
Physical: at the end of this life stage the ageing process begins, menopause occurs for women. **Intellectual:** can use knowledge and experience for complex decision making, may retire. **Emotional:** may experience changes in self-image and self-esteem linked to retirement or ageing process, emotional wellbeing is based on attachment, security and contentment. **Social**: may have more time to socialise.

Later Adulthood (65+ years):
Physical: ageing process continues, decline in strength and fitness, loss of mobility, loss of muscle tone and skin elasticity. **Intellectual:** may experience decline in cognitive ability such as loss of memory/recall. **Emotional:** may start to become more dependant on others, emotional wellbeing is based on attachment, security and contentment. **Social:** may experience bereavement and reduction of social circle.

Factors affecting growth and development

Different factors will impact on different aspects of growth and development

Physical Factors: **inherited conditions**: sickle cell disease, cystic fibrosis, muscular dystrophy, Marfan syndrome and Huntingdon's disease. **Experience of illness and disease, mental ill health:** anxiety, stress **physical ill health:** cardiovascular disease, obesity, type 2 diabetes; **disabilities, sensory impairments…**

Social Factors: **supportive and unsupportive relationships with others** – friends, family, peers and colleagues.
Social inclusion and **exclusion bullying discrimination…**

Environmental Factors: **housing needs, conditions, location (home environment)** – living with a high level of parental conflict **experiences of abuse and neglect exposure to pollution** – air, noise and light.

Emotional Factors: **fear, anxiety / worry, upset / sadness, grief / bereavement, happiness / contentment, security attachment…**

Lifestyle Factors: **nutrition, physical activity, smoking, alcohol, substance misuse…**

Cultural Factors: **religion, gender roles and expectations, gender identity, sexual orientation, community participation, race…**

Economic Factors: **employment situation, financial resources** – income, inheritance, savings.

Expected Events

Predictable, expected life events are those that individuals can be certain will happen, they are planned. Some examples are starting school at the age of four years

Unexpected Events

Events that take individuals by surprise as they do not know, they are going to happen, they are unplanned. Some examples are having an accident, divorce or an unexpected death

Knowledge Organiser: Hospitality & Catering / Year 10 / Unit 1 – The Hospitality & Catering Industry HT1

1.4.1 Food related causes of ill health - Allergens

Food Poisoning

Food Intolerance

1.4 Food Safety in Hospitality and Catering

1.4.2 Symptoms of food induced ill health

Visible symptoms

Visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:

- **Diarrhoea:** a common symptom of most types of food poisoning bacteria and can also be a symptom of lactose intolerance.
- **Vomiting:** a common symptom of most types of food poisoning bacteria, but may could also be caused by taking in chemicals accidently added to food.
- **Pale or sweating/chills:** a high temperature is a common symptom of E-coli and Salmonella.
- **Bloating:** a symptom of lactose intolerance.
- **Weight loss:** a symptom of gluten intolerance (coeliac disease).

Non-visible symptoms

Non-visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:

- **Nausea (feeling sick):** the most common symptom for all types of food-induced ill-health.
- **Stomach-ache/cramps:** abdominal pain is common symptom of lactose intolerance as well as a sign of an allergic reaction. Cramps may happen at the same time as diarrhoea.
- **Wind/flatulence:** a common symptom of lactose intolerance.
- **Constipation:** a symptom of Listeria food poisoning.
- **Painful joints:** a symptom of E-coli food poisoning.
- **Headache:** a symptom linked to Campylobacter, E-coli and Listeria.
- **Weakness:** non-stop vomiting, and diarrhoea can leave a person feeling weak. Gluten intolerance (coeliac disease) can leave a person feeling tired because their bodies can't absorb the correct amount of nutrients.

1.4.3 Preventative measures

1.4.4 The environmental Health Officer (EHO)

EHO and the law

If the EHO discovers problems with the food safety and hygiene in the premise, they are allowed by law to:

- remove any food that may be hazardous so it can't be sold
- tell the owners to improve hygiene and safety within a set time and then come back and re-inspect
- close the premises if there is a risk to health of the public
- give evidence in a court of law if the owners are prosecuted for breaking food hygiene and safety laws.

EHO inspections

The EHO can carry out an inspection of any hospitality and catering premise at any time during business hours – they do not need to make an appointment. During an inspection, the EHO will check to make sure that:

- the premises are clean
- equipment is safe to use
- pest control measures are in place
- waste is disposed properly
- all food handlers have had food hygiene and safety training
- all food is stored and cooked correctly
- all food has best-before and use-by dates
- there is a HACCP plan to control food hazards and risks.

The EHO is allowed to:

- take photographs of the premises
- take food samples for analysis
- check all record books, including fridge and freezer temperatures, cleaning schedules and staff training
- offer advice on improving food hygiene and safety in the business.

Knowledge Organiser: Hospitality & Catering / Year 10 / Unit 1 – The Hospitality & Catering Industry HT2

1.3.1 Health and safety in hospitality and catering provisions

Report of Injuries, Diseases and Dangerous Occurences Regulations (RIDDOR) 2013

What employers need to do by law	What paid employees need to do
Inform the Health and Safety Executive (HSE) of any accidents, dangerous events, injuries or diseases that happen in the workplace.	Report any concerns of health and safety matters to the employer immediately. If nothing is resolved, then inform the HSE.
Keep a record of any injuries, dangerous events or diseases that happen in the workplace.	Record any injury in the accident report book.

Health and Satefy at Work Act 1974 (HASAWA)

What employers need to do by law	What paid employees need to do
Protect the health, wellbeing and safety of employees, customers and others.	Take reasonable care of their own health and safety and the health and safety of others.
Review and assess the risks that could cause injuries.	Follow instructions from the employer and inform them of any faulty equipment.
Provide training for workers to deal with the risks.	Attend health and safety training sessions.
Inform staff of the risks in the workplace.	Not to misuse equipment.

Control of Substances Hazardous to Health Regulations (COSHH) 2022

What employers need to do by law	What paid employees need to do
Control substances that are dangerous to health.	Attend all training sessions regarding COSHH.
Provide correct storage for those substances and appropriate training for staff.	Follow instructions carefully when using the substances.
Some examples of substances that are dangerous to health include cleaning products, gases, powders & dust, fumes, vapours of cleaning products and biological agents.	Know the different types of symbols used to know different types of substances and how they can harm users and others when used incorrectly.

Personal Protective Equipment at Work Regulations (PPER) 1992

What employers need to do by law	What paid employees need to do
Provide PPE e.g. masks, hats, glasses and protective clothes.	Attend training and wear PPE such as chef's jacket, protective footwear and gloves when using cleaning chemicals.
Provide signs to remind employees to wear PPE.	
Provide quality PPE and ensure that it is stored correctly.	

Manual Handling Operations Regulations 1992

What employers need to do by law	What paid employees need to do
Provide training for staff.	Ask for help if needed.
Assess and review any lifting and carrying activities that cannot be avoided.	Squat with feet either side of the item. Keep back straight as you start to lift. Keep the item close to your body whilst walking. Make sure you can see where you're going.
Store heavy equipment on the floor or on low shelves.	
Provide lifting and carrying equipment where possible.	

1.3.2 Food Safety

Food Hazards

A food hazard is something that makes food unfit or unsafe to eat that could cause harm or illness to the consumer. There are three main types of food safety hazards:

- **Chemical** – from substances or chemical contamination e.g. cleaning products.
- **Physical** – objects in food e.g. metal or plastic.
- **Microbiological** – harmful bacteria e.g. bacterial food poisoning such as Salmonella.

All food businesses are required to:

- assess and review food safety risks
- identify critical control points to reduce or remove the risk from happening
- ensure that procedures are followed by all members of staff
- keep records as evidence to show that the procedures in place are working.

Hazard Analysis and Critical Control Points (HACCP)

Every food business lawfully needs to ensure the health and safety of customers whilst visiting their establishment. To ensure this, they need to take reasonable measures to avoid risks to health. HACCP is a food safety management system which is used in businesses to ensure dangers and risks are noted and how to avoid them.

Hazard	Analysis	Critical Control Point
Receipt of food	Food items damaged when delivered / perishable food items are at room temperature / frozen food that is thawed on delivery.	Check that the temperature of high-risk foods are between 0°C and 5°C and frozen are between -18°C and -22°C. Refuse any items that are not up to standard.
Food storage (dried/chilled/frozen)	Food poisoning / cross contamination / named food hazards / stored incorrectly or incorrect temperature / out of date foods.	Keep high-risk foods on correct shelf in fridge. Stock rotation – FIFO. Log temperatures regularly.
Food preparation	Growth of food poisoning in food preparation area / cross contamination of ready to eat and high-risk foods / using out of date food.	Use colour coded chopping boards. Wash hands to prevent cross-contamination. Check dates of food regularly. Mark dates on containers.
Cooking foods	Contamination of physical / microbiological and chemical such as hair, bleach, blood etc. High risk foods may not be cooked properly.	Good personal hygiene and wearing no jewellery. Use a food probe to check core temperature is 75°C. Surface area & equipment cleaned properly.
Serving food	Hot foods not being held at correct temperature / foods being held too long and risk of food poisoning. Physical / cross-contamination from servers.	Keep food hot at 63°C for no more than 2 hours. Make sure staff serve with colour coded tongs or different spoons to handle food. Cold food served at 5°C or below. Food covered when needed.

MAJOR & MINOR CHORDS

C E G

1 3 5

Major chords sound bright and happy

C Eb G

1 3b 5

Whereas minor chords sound tense and dark. This is because we **flatten** the middle note

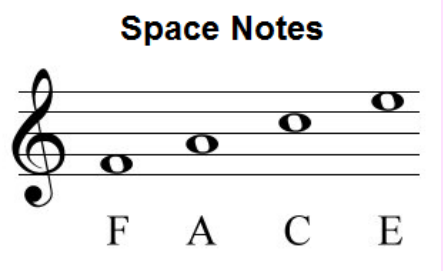
TIME SIGNATURES

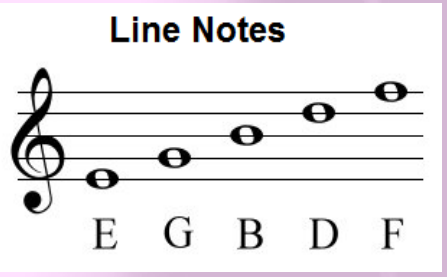
2/4	3/4	4/4	5/4	6/8
A "marching" feel	A "waltz" feel – oom pa pac	Common time – straight rhythm	Odd metre – Mission Impossible	Quaver beats – quicker feel

CADENCES

Perfect	Imperfect	Interrupted	Plagal
V - I	VI - I	V - VI	IV - I

NOTES ON THE STAVE





NOTE LENGTHS

Semibreve
4 beats

Minim
2 beats

Crotchet
1 beat

Quaver
1/2 beat

Semi-Quaver
1/4 beat

AOS1 – MUSICAL FORMS & DEVICES

- **Baroque Era, Classical Era, Romantic Era**
- **Structure** – Binary, Ternary, Rondo, Variation Form
- **Instrumentation** – Harpsicord (Baroque), Strings, Woodwind, Piano (Classical & Romantic)

Music / Year 10 / Term 1 / Theory & Appraising

Autumn 1

Root: Tele

Meaning: Far

Autumn 2

Root: Sect

Meaning: Cut

Vocabulary List:

1. **Tele**caster
2. **Sect**ion
3. Chords
4. Cadences
5. Time Signature
6. Major
7. Minor
8. Structure
9. Binary Form
10. Ternary Form