KNOWLEDGE ORGANISER

UNITY
ACADEMY BLACKPOOL

Name:

Tutor Group:

Academic Year:
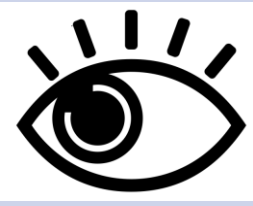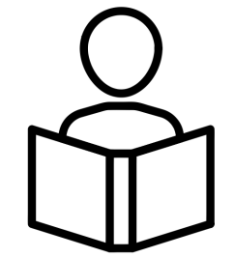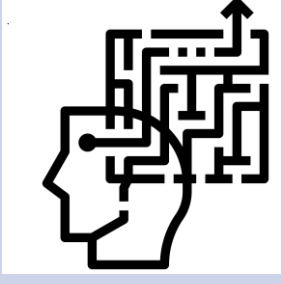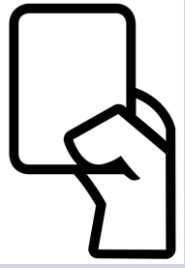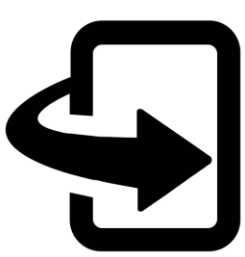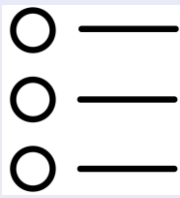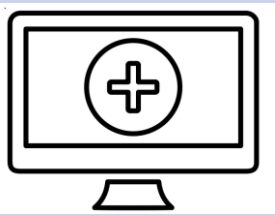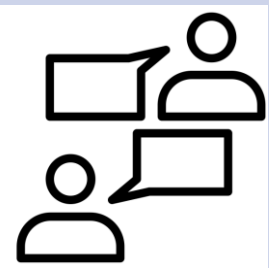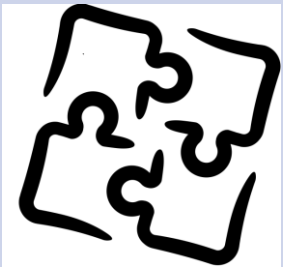
How to use your Knowledge Organiser

The aim of the knowledge organiser is to ensure that **ESSENTIAL KNOWLEDGE** is stored and retrieved over a long period of time.
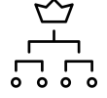
You need to ensure that you keep your knowledge organiser in your bag, ready for revision, quizzing and to refer to at any time in all of your subjects.

	Look, Cover, Write, Check	Definitions to Key Words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your knowledge organiser	Write down the key words and definitions.	Use your knowledge organiser condense and write down key facts and/or information on your flash cards.	Read through a specific area of your knowledge organiser	Create a mind map with all the information that you can remember from your knowledge organiser.	Ask a partner or someone at home to have the quiz questions or flash cards in their hands.
Step 2	Flip the knowledge organiser and write everything you can remember.	Try not to use the solutions to help you.	Add diagrams or pictures if appropriate. Write the solutions on the back of the cards.	Turn over and answer the questions related to that area.	Check your knowledge organiser to correct or improve your mind map.	Ask them to test you by asking questions on the section you have chosen from your knowledge organiser.
Step 3	Check what you have written. Correct mistakes and add extra information. Repeat.	Check your work. Correct using red pen and add more information if appropriate.	Self quiz using the cards or ask some to help by quizzing you.	Turn back over and mark your quiz. Keep quizzing until you get all questions correct.	Try to make connections that links information together.	Either say or write down you answers.

CORE

Macbeth

Context

👑	**Royalty:** James I was on the throne – he had a keen interest in the supernatural and was believed to be a descendent of Banquo. The 'Divine Right of Kings' asserts that monarchs were appointed from God above, and that any attempt to question them was to question God himself. *"All hail Macbeth that shalt be King hereafter"- The Witches*
	The Great Chain of Being: A strict religious hierarchical structure of all matter and life which was believed to have been decreed by God. This idea dominated Elizabethan beliefs. The chain starts from God and progresses downward, placing kings and royalty above nobles, commoners and all other life.
	Women: Society at the time was patriarchal – women were considered inferior to men. Women belonged to their fathers and then their husbands. They were not permitted to own land or enter most professions. They were instead expected to bear children, and be gentle and womanly. *"Why then, alas, do I put up that womanly defence, to say I have done no harm?" – Lady Macduff*

Big Ideas

Ambition	The play exposes the dangers of ambition when it is not held by **moral** constraints. The witches' **prophecies** spur the Macbeths to action, but the witches never make them do anything; they act on their own to fulfil their deepest desires and ambitions. Both Macbeth and Lady Macbeth sacrifice their morals to achieve power: *"I have no spur to prick the sides of my intent, but only vaulting ambition" - Macbeth*
Order and disorder	Wherever the **natural order** is disturbed in Macbeth, disorder and chaos soon follow. There is only peace when the natural order is restored (Malcolm is seated on the throne). Through Macbeth, Shakespeare expresses that the **inversion** of the natural order is dangerous and destructive.
Gender and masculinity	Although Macbeth has already acknowledged what he will have to do to become king, Lady Macbeth provokes her husband further by questioning his masculinity. She states that she wishes she could be 'unsexed' so as to give her bravery to commit the deed. Masculinity is frequently associated with raw aggression, and femininity with weakness and kindness. *"Unsex me here... take my milk for gall" – Lady Macbeth*
Appearance and reality	From the very first scene (*'Fair is foul…'*), things are not what they seem. The natural order of the world cannot be trusted. People are **deceitful** (the Macbeths pretend to be welcoming and then angry at Duncan's murder); the supernatural interferes with the natural world; people experience visions (daggers, blood and ghosts). *"Look like th'innocent flower, but be the serpent under't" – Lady Macbeth*
The Supernatural	The supernatural interacts with key characters in different ways: witchcraft exposes Macbeth's inner evil and directs him to certain deeds; Lady M appeals to the supernatural to possess her and instill power within her; Banquo resists the witches' prophecies, refusing to submit to the supernatural. *"Come, you spirits" – Lady Macbeth*
Fate vs Free Will	Throughout the play, the audience is frequently forced to question the notion of **fate** vs free will – does the story pan out the way that it does because it was pre-ordained, or because of the actions that Macbeth chose to take? Macbeth fervently attempts to fight the negative aspects of his fate, and yet it is these very actions (his free will) that cause the predetermined downfall (fate).

Key Quotes

'Fair is foul, and foul is fair' – The Witches (1.1)
"there's no art to find the mind's construction of the face" – Duncan (1.4)
'thy nature, It is too full o'th'milk of human kindness' – Lady Macbeth (1.5)
'Is this a dagger I see before me, the handle toward my hand?' – Macbeth (2.1)
'O, full of scorpions is my mind, dear wife!' – Macbeth (3.2)
'I shall do so, but I must also feel it as a man' – Macduff (4.3)
'Those he commands move only in command, nothing in love' – Angus (5.2)

Common Error!

Lady Macbeth does not instigate the murder of Duncan – Macbeth acknowledges his desire to become king and what will be involved before Lady Macbeth hears of the prophecy or his promotion: *"Stars, hide your fires; Let not light see my black and deep desires." - Macbeth*

Transferable knowledge

Tragedy	Macbeth is one of Shakespeare's tragedies and follows specific conventions. The climax must end in a tremendous catastrophe involving the death of the main character; the character's death is caused by their own flaw(s) (**hamartia**) yet the character has something the audience can identify with.
Dramatic Irony	The audience knows more than the characters in the play: Duncan trusts Macbeth, but the audience knows that Macbeth is plotting Duncan's murder: *"It is a peerless kinsman" - Duncan*

Macbeth

Context

- Who was on the throne at the time the play was written?
- What is the Divine Right of Kings?
- What was the problem with questioning the authority of a monarch?
- Describe the Great Chain of Being.
- Describe the role of a Jacobean woman.
- Write a page of your reflection log on the role of Jacobean women and how this is demonstrated in 'Macbeth'.

Big Ideas

Ambition
- How do Macbeth and Lady Macbeth respond differently to the witches' prophecies? Write a page of your reflection log to explain their reactions.
- What do you think Shakespeare might have been saying about ambition? What is his message?

Order and disorder
- Give three examples of natural order being *inverted* in the play.
- Why might Shakespeare have wanted to show that inversion of the natural order is destructive?

Gender and masculinity
- How does the play depict masculinity and femininity?
- Give three examples or quotations from the play that relate to this theme. 'Explode' each one with a piece of analysis.

Appearance and reality
- Give three examples from the play where appearance differs from reality. 'Explode' each one with a piece of analysis.

The supernatural
- Describe the influence of the supernatural on the events of the play.
- "The witches are the most dangerous characters in the play." Do you agree or disagree? Why? Write a page of your reflection log to explain your point of view using evidence from the play.

Fate vs Free will
- Which characters does Shakespeare use to explore the theme of fate in the play?
- Do you believe Macbeth had a choice over the events of the play? Write a page of your reflection log to explain your point of view using evidence from the play.

Key Quotes

- For each of the key quotations listed on the knowledge organiser (highlighted in yellow and in the 'key quotes' box), write down the quotation and then complete an 'explosion' task, exploring its links to themes and characters.
- Use a page of your reflection log to copy out the quotes from memory – categorise them by theme or character.

Transferable knowledge

Tragedy
- What are the conventions of a tragedy? Research **Aristotelian tragedy** – to what extent does Macbeth meet these conventions?
- What is a hamartia? What is Macbeth's hamartia?

Dramatic irony
- What is dramatic irony? Give one example of dramatic irony in the play and explain why you think Shakespeare has chosen to use this technique.

Vocabulary

Key vocabulary is included on the knowledge organiser in bold and italics.
- Find each word and write a list of key vocabulary.
- Look up and write down a definition for any word you don't understand or are unsure of.
- Write a new sentence for each word, relating it to an aspect of 'Macbeth'.

Extra research: Characters

- Macbeth: find three quotations that show the development of Macbeth's character across the play.
- Lady Macbeth: How does Lady Macbeth influence Macbeth? How does she respond to the murders? Explain with examples from the text.
- Banquo: In what way is Banquo similar to Macbeth? How is he different? Why do you think Shakespeare chose to write the characters in this way?
- Macduff: Is Macduff motivated more by loyalty or revenge? Why do you think this?
- Lady Macduff: Explain the contrast between Lady Macduff and Lady Macbeth.
- Duncan: Explain the contrast between the leadership of Duncan and Macbeth.
- Malcolm: How does Malcom's character develop throughout the play? Give examples.

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Congruent Triangles

4 ways of proving that two triangles are congruent:

1. **SSS** (Side, Side, Side)
2. **RHS** (Right angle, Hypotenuse, Side)
3. **SAS** (Side, Angle, Side)
4. **ASA** (Angle, Side, Angle) or **AAS**

Area and Volume Scale Factor

Lengths x2
Areas x2²
Volume x2³

5

10
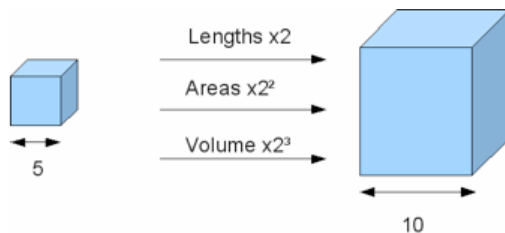
If the length scale factor is x the area scale factor is x^2 and the volume scale factor is x^3

Trigonometric Graphs

Tan Sin Cos
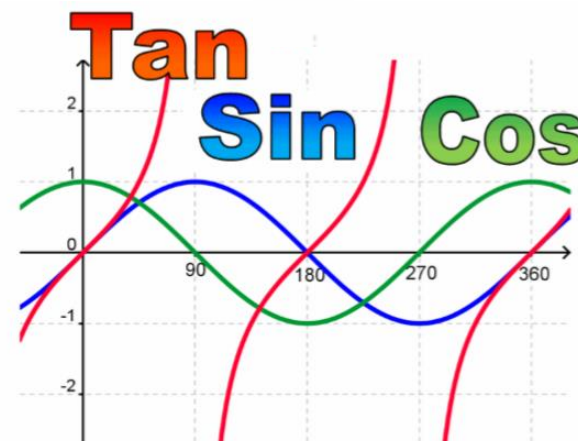
Exact Trigonometric Values

	0°	30°	45°	60°	90°
sin	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
cos	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
tan	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	Undefined

Cosine Rule

$$a^2 = b^2 + c^2 - 2bc\cos A$$

$$b^2 = a^2 + c^2 - 2ac\cos B$$

$$c^2 = a^2 + b^2 - 2ab\cos C$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$
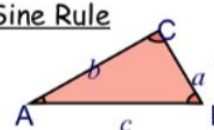
$$\cos B = \frac{a^2 + c^2 - b^2}{2ac}$$

$$\cos C = \frac{a^2 + b^2 - c}{2ab}$$

Sine Rule

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

KEY VOCABULARY/TERMS

Congruent – Shapes that are identical – same shape and same size.
Similar – Shapes that are the same shape but different sizes. The proportions of matching sides must be the same.
Scale Factor – the ratio of ratio of corresponding sides of two similar shapes.
Trigonometric functions: Cosine, Sine, Tangent

**Mathematics Knowledge Organiser
Year 11 Higher – Similarity and Congruence. Trigonometry.**

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Congruent Triangles

The following pairs of triangles are congruent, state the condition that shows they are congruent.

(a)

12cm
9cm
10cm

9cm
12cm
10cm

(b)

6cm
30°

6cm
30°
7cm

(c)

60°
18cm
55°

60°   55°
18cm
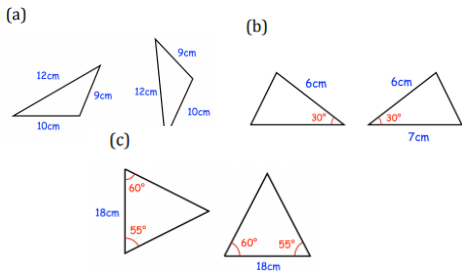
Area and Volume Scale Factor

Below are two similar parallelograms.

4cm A

6cm B

The area of parallelogram A is 28cm²

Work out the area of parallelogram B.

Shown below are two mathematically similar cuboids.

B

A

4cm   24cm
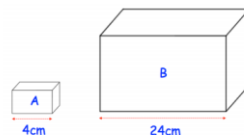
The volume of cuboid B is 1728cm³

Find the volume of cuboid A.

Trigonometric Graphs

Sketch the graph of $y = cos(x)$ for $0° \leq x \leq 360°$

Sketch the graph of $y = sin(x)$ for $0° \leq x \leq 360°$

Sketch the graph of $y = tan(x)$ for $0° \leq x \leq 360°$

y
1
0.5
0
0°   90°   180°   270°   360°   x
-0.5
-1
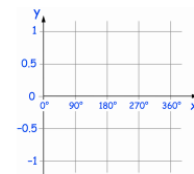
Here is part of the curve $y = sin(x)$

(a) Write down the coordinates of the point A

(b) Write down the coordinates of the point B

y
A
x
B
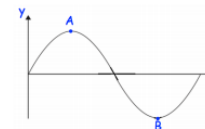
Exact Trigonometric Values

Write down the exact values of each of the following

(a) sin 30°   (b) cos 0°   (c) tan 45°
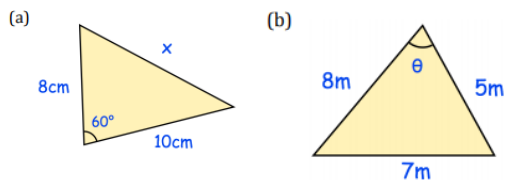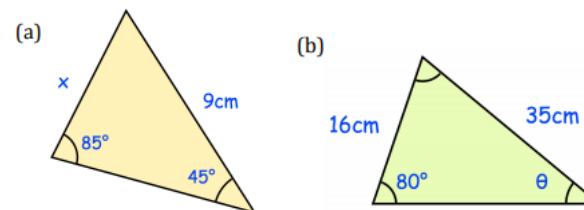
(d) sin 90°   (e) sin 0°   (f) cos 60°

(g) tan 0°   (h) sin 45°   (i) cos 30°

(j) tan 60°   (k) cos 90°   (l) sin 60°

Cosine Rule

(a)

x
8cm
60°
10cm

(b)

8m
θ
5m
7m

Sine Rule

(a)

x
9cm
85°
45°

(b)

16cm
35cm
80°
θ

KEY VOCABULARY/TERMS

Congruent – Shapes that are identical – same shape and same size.
Similar – Shapes that are the same shape but different sizes. The proportions of matching sides must be the same.
Scale Factor – the ratio of ratio of corresponding sides of two similar shapes.
Trigonometric functions: Cosine, Sine, Tangent

Mathematics Knowledge Organiser
Crossover – Probability

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Keywords

Dependant – When events are dependant the outcome of one does affect the outcome of another.

Mutually exclusive – Events are mutually exclusive if they cannot happen at the same time. Eg selecting a King and queen from a deck of cards.

Independent- When events are independent the outcome of one does affect the outcome of another.

Not mutually exclusive – When two things can happen at the same time eg: picking a red or a king from a deck of cards.

Which Sides Are Greater Than 3?

Number of Favorable Outcomes = 3

How Many Possibilities Are There?

Total Number of Possibilities = 6

Number of Favorable Outcomes / Total Number of Outcomes = 3/6 = 50%

Missing probabilities

Find the missing value in the probability distribution:

x	1	2	3	4	5
P(x)	0.16	0.22	0.28	0.2	

→ Remember that all the probabilities should add up to be 1

$0.16 + 0.22 + 0.28 + 0.2 = 0.86$

$1 - 0.86 = 0.14$

Venn Diagrams

A set is a collection of things, called elements

The set of prime numbers less than 12 $A = \{2, 3, 5, 7, 11\}$

Intersections (∩) and Unions (∪)

$A = \{2, 3, 5, 7, 11\}$ $B = \{1, 3, 5, 7, 9\}$

$A \cap B = \{3, 5, 7\}$ – Intersection of A and B

The crossover between sets

$A \cup B = \{1, 2, 3, 5, 7, 9, 11\}$ – Union of A and B

All values in the sets

$A' \cap B = \{1, 9\}$

Values in B but not in A

ξ H G 50   25   60   65

$P(G) = \frac{85}{200}$

$P(H \cap G) = \frac{25}{200}$

$P(H \cap G') = \frac{50}{200}$
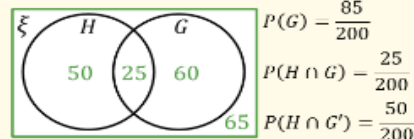
Tree Diagrams

Probability trees are really useful to calculate the probabilities of combined events happening

1st Bag   2nd Bag
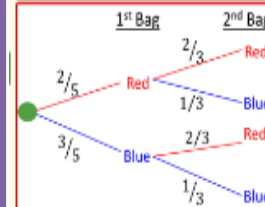
Multiply along branches

$2/5$ Red $2/3$ Red $1/3$ Blue

$3/5$ Blue $2/3$ Red $1/3$ Blue

$P(Red\ and\ Red) = \frac{4}{15}$

$P(1\ Red\ and\ 1\ Blue) = \frac{2}{15} + \frac{6}{15} = \frac{8}{15}$

Add together all combinations

The probability of each outcome is written by a branch.

Each branch adds up to 1.

Multiply across for outcomes, Add down for more then one event.

Dependent events

Probability trees where the outcome of one events affects the outcome of the next event e.g. no replacement, weather etc.

0.3 Rain   0.4 Late   0.6 On Time

0.7 Dry   0.2 Late   0.8 On Time
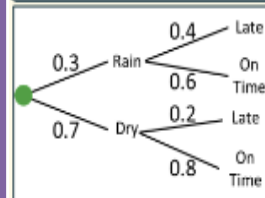
$P(Rain\ and\ late) = (0.3 \times 0.4) = 0.12$

$P(On\ time) = (0.18 + 0.56) = 0.74$

When dealing with **no replacement**, remember to reduce the denominator by **one** for the second event

KEY VOCABULARY/TERMS

Dependant   Mutually exclusive   Independent   Not mutually exclusive   Probability   Outcome   Frequency
Set   Union   Intersection   Replacement

Keywords

Dependant – When events are ._____ the outcome of one does affect the outcome of another.

_____ – Events are mutually exclusive if they cannot happen at the same time. Eg selecting a King and queen from a deck of cards.

Independent - When events are _____ the outcome of one does not affect the outcome of another.

Not mutually exclusive – When two things .happen at the same time eg: picking a red or a king from a deck of cards.

Which Sides Are Greater Than 3?

Number of Favorable Outcomes = 3

How Many Possibilities Are There?

Total Number of Possibilities = 6

Number of Favorable Outcomes / Total Number of Outcomes = 3/6 = 50%

Missing probabilities

Each table shows the probability of selecting different coloured counters from a bag. Find the missing probability and answer the questions

Blue	Green	Yellow	Orange	Black
0.2	0.1		0.3	0.1

1) Find P(Green or Blue)
2) Find P(Not yellow)

Blue	Green	Yellow	Orange	Black
0.1	0.2	0.4		0.1

1) Find P(yellow or orange)
2) Find P(Not blue)

Blue	Green	Yellow	Orange	Black
0.14	0.23	0.31		0.11

1) Find P(black or Blue)
2) Find P(Not black)

Blue	Green	Yellow	Orange	Black
0.33	0.41	0.1		0.05

1) Find P(yellow or green)
2) Find P(Not green)

Venn Diagrams

1) We have:

$$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$A \cap B = \{2, 4\}$$

$$A \cup B = \{1, 2, 4, 5, 6, 9, 10\}$$

$$A = \{1, 2, 4, 9\}$$

Draw a Venn diagram for this information.

Define and write the symbol used for Union and Intersection

Tree Diagrams

1st flip	2nd flip	outcome	probability

0.5 T — 0.5 T — TT — 0.5 x 0.5 = 0.25
0.5 T — 0.5 H — TH
0.5 H — 0.5 T — HT
0.5 H — 0.5 H — HH
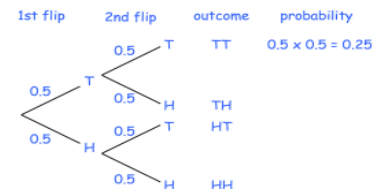
Question 1:   A fair coin is flipped twice.

(a) Find the probability of getting two heads

(b) Find the probability of getting a head and then a tail

(c) Find the probability of getting at least one head

Teddy Grabber	Penny Drop	outcome	probability

$\frac{1}{3}$ Win — $\frac{2}{5}$ Win — WW — $\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$
Win — Lose
Lose — Win
Lose — Lose
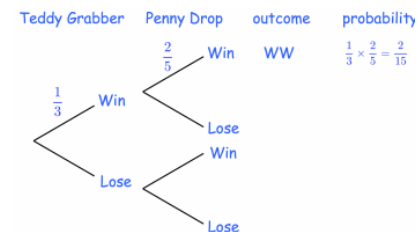
(a) Copy and complete the tree diagram

(b) Work out the probability that Harry loses on the Teddy Grabber and he also loses on the Penny Drop

(c) Work out the probability that Harry wins on exactly one machine

KEY VOCABULARY/TERMS

Write a definition for each of the key words below.

Dependant   Mutually exclusive   Independent   Not mutually exclusive   Probability   Outcome   Frequency

Set   Union   Intersection   Replacement

Describing Waves:

Wavelength	*Distance from one point on a wave to the same point of the next wave*
Amplitude	*The maximum disturbance from its rest position*
Frequency	*Number of waves per second*
Period	*Time taken to produce 1 complete wave*
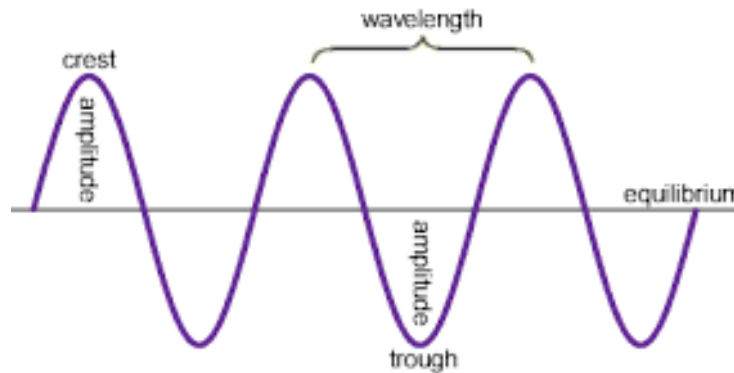
Wave speed	Wave speed = frequency X wavelength	$V = f \times \lambda$
Wave period	Wave period = 1 ÷ frequency	$T = 1 \div f$
Speed	Speed = distance ÷ time	$v = d \div t$

Types of Waves:
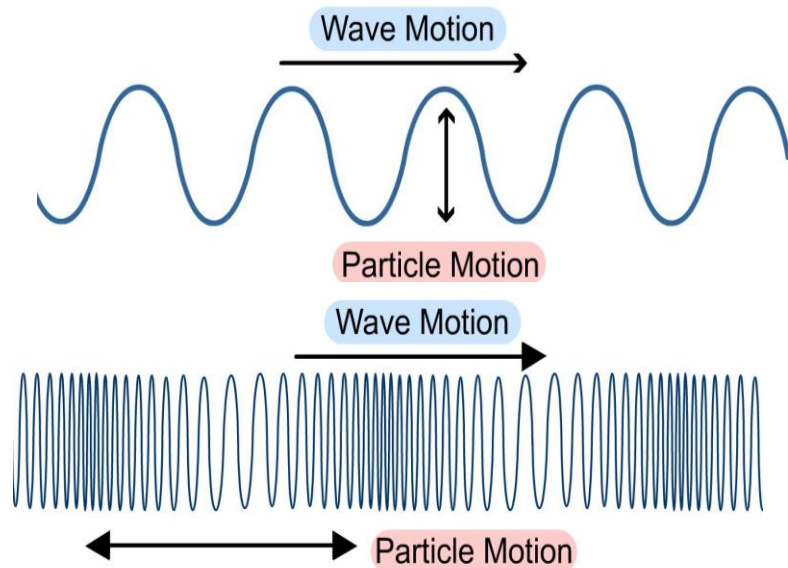
Transverse wave	*Vibration causing the wave is at right angles to the direction of energy transfer*	Energy is carried outwards by the wave. E.g. Light.
Longitudinal wave	*Vibration causing the wave is parallel to the direction of energy transfer*	Energy is carried along the wave. E.g. Sound.

Electromagnetic Spectrum:

High frequency, short wavelength

Low frequency, long wavelength.

*Continuous **spectrum** of transverse waves*
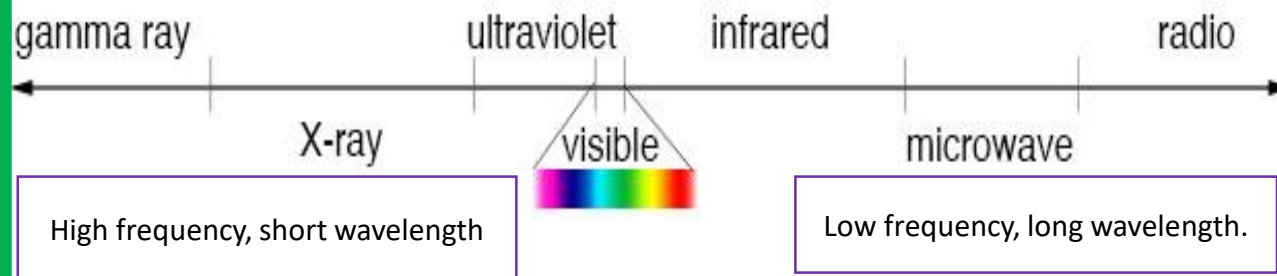
EM wave	Danger	Use
Radio	Safe.	Communications, TV, radio.
Microwave	Burning if concentrated.	Mobile phones, cooking, satellites.
Infrared		Heating, remote controls, cooking.
Visible	Damage to eyes.	Illumination, photography, fibre optics.
Ultra violet	Sunburn, cancer.	Security marking, disinfecting water.
X-ray	Cell destruction, mutation, cancer.	Broken bones, airport security.
Gamma		Sterilising, detecting and killing cancer.

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Self Quizzing Questions

Describing Waves:

1. Describe what is meant by wavelength.
2. Describe what is meant by amplitude.
3. Describe what is meant by frequency.
4. Describe what is meant by time period.
5. Write the equation linking wave speed, wavelength and frequency.

Wave Types:

1. Give an example of a transverse wave.
2. Give an example of a longitudinal wave.
3. Compare the direction of oscillations with the direction of energy in a transverse wave.
4. Compare the direction of oscillations with the direction of energy in a longitudinal wave.

Electromagnetic Spectrum:

1. What type of wave are electromagnetic waves?
2. Which Electromagnetic wave has the shortest wavelength?
3. Which electromagnetic wave has the longest wavelength?
4. Which Electromagnetic wave has the most energy?
5. State one danger of and one use of infrared waves.
6. State one danger and one use of x-rays.
7. Give three uses of microwaves.
8. State two uses of visible light.

Further Opportunities:

Research and describe the required practical for measuring speed of waves.

Illumination
Power Supply
Shallow tank of water
Oscillating paddle
Wave patterns on a viewing screen or table

Reflection & Refraction:

Specular	Flat surface reflection.
Diffuse	Rough surface reflection.
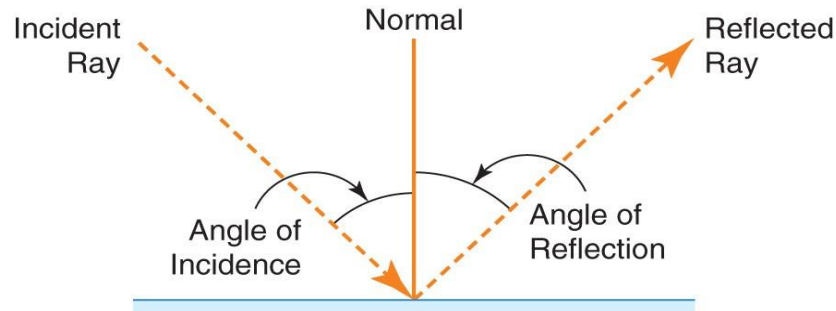
Angle of incidence = Angle of reflection
(i) = (r)

Reflection	Wave bounces off the surface.
Refraction	Waves changes direction at boundary. Light slows down in a denser material.
Transmitted	Passes through the object.
Absorbed	Passes into but not out of, transfers energy and heats up the object.
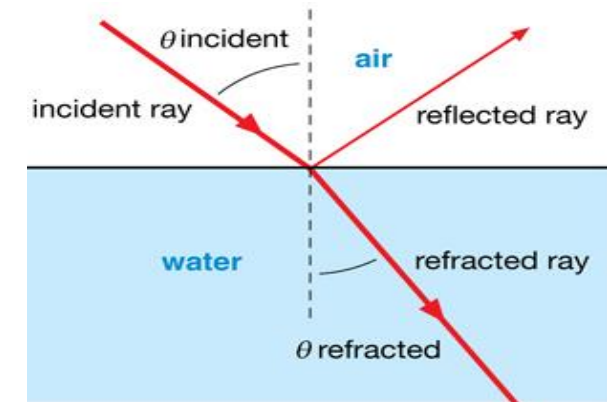
Uses of Waves:

Hearing	Frequencies between 20 – 20,000 Hz	Longitudinal waves cause ear drum to vibrate, amplified by three ossicles which creates pressure in the cochlea.
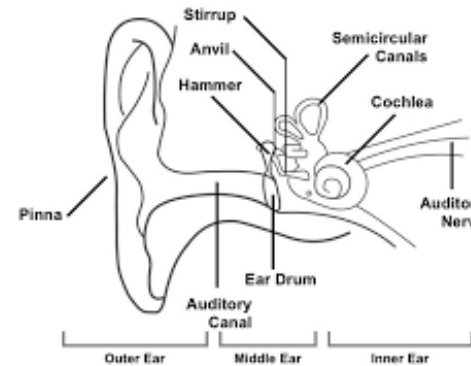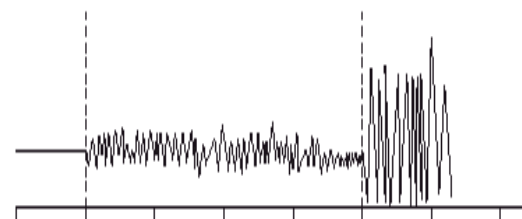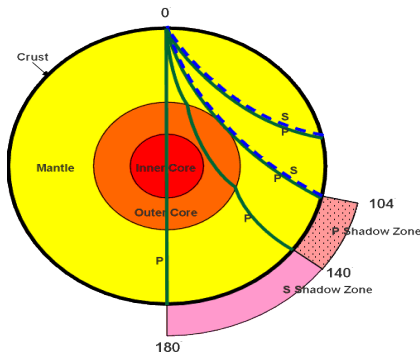
P wave	S wave	Seismograph
Longitudinal	Transverse	Shows P and S waves arriving at different times.
Fast	Slow	
Travel through solids and liquids	Travels through solids	By using the times the waves arrive at the monitoring centres, the epicentre of earthquake can be found. (v = x ÷ t).
Produced by earthquakes.		
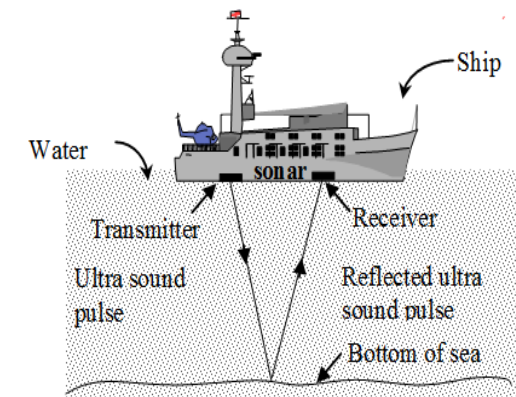
Ultra sound	Partially reflected off boundary	Used for medical and foetal scans.
Sonar	Reflected off objects	Used to determine depth of objects under the sea.

Self Quizzing Questions

Reflection & Refraction:

1. State the law of reflection.

2. Compare diffuse and specular reflections.

3. What does it mean for a wave to be absorbed?

4. What about transmitted?

5. What happens when a EM wave (like light) refracts?

Uses of Waves:

1. What are the 2 types of seismic wave?

2. Which is longitudinal and which one is transverse?

3. Describe how an ultrasound scanner works.

4. Describe how to use reflected sound waves for sonar.

5. What does a seismograph show?

Further Opportunities:

Research and describe the required practical for measuring reflection and refraction of light.
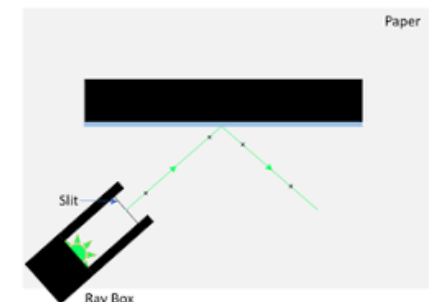
Higher Tier Only

Lenses:
1. **Draw a diagram for light entering a converging (convex) lens.**

2. **Draw a diagram for light entering a diverging (concave) lens.**

Lenses:
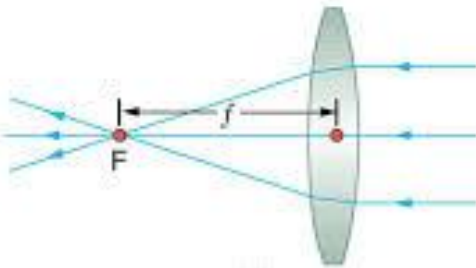
Converging lens = convex
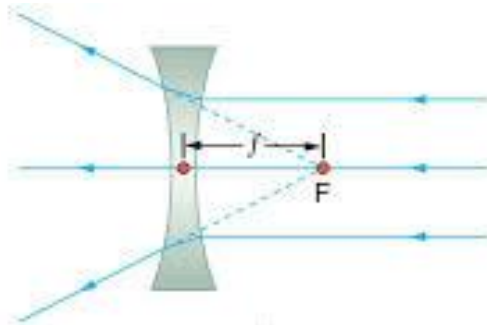
Diverging lens = concave

	Convex	Real or virtual images.
	Concave	Only virtual images.

2F	Image same size, upside down, real.
2F - F	Image larger, upside down, real.
< F	Image bigger, right way, virtual.

Biology Knowledge Organiser
Inheritance, Variation and Evolution

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INHERITANCE AND VARIATION

Meiosis

Nucleus

Chromosome (2n)

A

B

C

Halves the number of chromosomes

Uncoil the Chromosome

Gametes(n)

Introduces variation during fertilisation

DNA
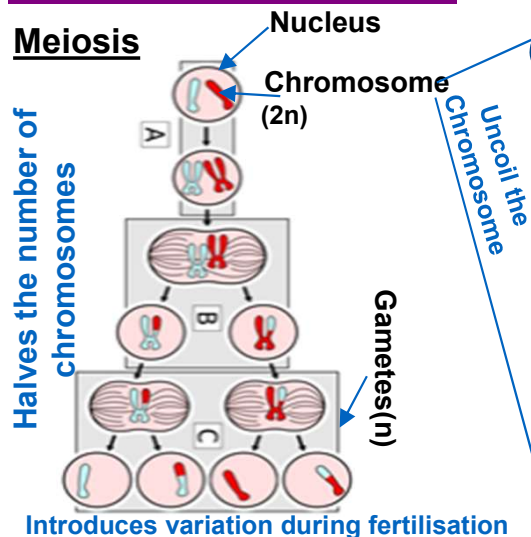
Nucleotide

Phosphate
Base
Sugar

Bases
- Adenine
- Thymine
- Cytosine
- Guanine

A-T   C-G

Phosphate and sugar back bone
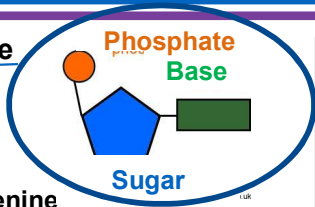
Inherited diseases
Polydactyly – Extra fingers and toes (dominant allele)
Cystic Fibrosis – cell membrane disorder (recessive allele)

Probability

There are four possible combinations of gametes that offspring can inherit.

Punnet Square

male genotype

	A	a
A	AA	Aa
a	Aa	(aa)

female genotype

One of these four has the genotype aa, that's $\frac{1}{4}$, 25% or 0.25.

EVOLUTION - gradual change of a population over time due to natural selection.

Theory of natural selection
1. Variation within a population
2. Change in the environment
3. Those better adapted to the environment survive and reproduce.
4. The gene for the better adapted characteristic is passed on to offspring.

CHARLES DARWIN
1809 - 1882

Peppered Moths

Carl Linnaeus classified living things

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Primates
Family	Hominidae
Genus	Homo
Species	sapiens
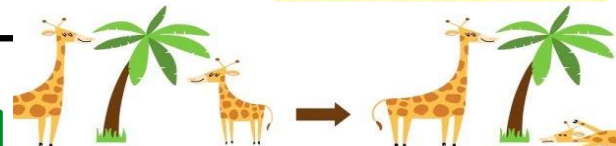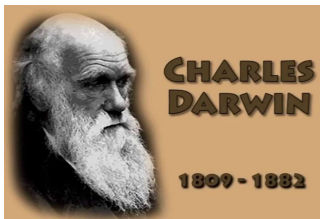
Embryo transplants

Adult cell Cloning
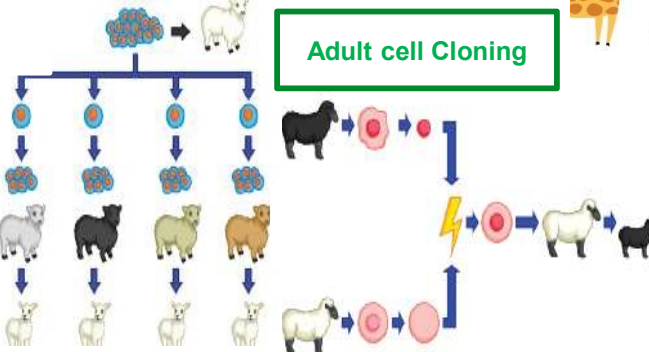
Benefits of Adult Cell Cloning
Produce many individuals with useful features, save species from extinction

Risks of Adult Cell Cloning
Reduction in genetic variety, people "playing god".

Benefits of Genetic Engineering
Drought resistant crops, insulin that won't be rejected by the body, improved growth rate of crops.

Risks of Genetic Engineering
Do not know the long term effects, may affect wildlife.

KEY VOCAB

Sexual reproduction – Fusion of male and female gametes

Asexual reproduction – One parent only (**Mitosis** only)

Gamete – Sex cells produced by **Meiosis**

Fertilisation – fusion of gametes

Genome – The entire genetic material of an organism

Gene – A section of DNA which codes for a protein

Inherited/Genetic – genes passed down from parents

Phenotype – physical character expressed

Genotype – Combination of alleles

Allele – an alternative form of the same gene

Homozygous – 2 of the same allele (e.g. 2 dominant)

Heterozygous - 1 recessive 1 dominant allele

Variation – difference between individuals

Mutation – Random change in DNA

Genetic engineering – modifying the genome of an organism

Selective breeding - choosing desirable characteristics and only allowing those to reproduce (**artificial selection**)

Extinction – No members of a species survive

Fossils – preserved remains/ traces of ancient organisms.

Binomial Name – Genus and species (Human : *Homo sapiens*)

Key Vocabulary

1. How many parents are required in asexual reproduction?
2. What is a gamete? Give an example
3. What is the fusion of gametes called?
4. What is the difference between a genotype and a phenotype?
5. What are the alternative forms of genes called?
6. Define variation.
7. What is it called when there is a random change in DNA?
8. What is modified during genetic engineering?
9. What is it called when individuals with desirable characteristics are bred together?
10. What is the binomial name for humans?

Inheritance

11. What happens to the number of chromosomes during meiosis?
12. Does meiosis or mitosis introduce variation into offspring?
13. Where are chromosomes located?
14. Name four bases? How are they paired together?
15. Describe a nucleotide.
16. What is used to calculate the probability of a characteristic passing onto the offspring?
17. Describe an inherited disease caused by a dominant allele
18. Describe an inherited disease caused by a recessive allele

Evolution

19. Who came up with the theory of evolution by natural selection?
20. Define evolution
21. Describe natural selection
22. Which coloured moth is more camouflage on the dark tree bark? What will happen to the other moth.
23. CHALLENGE. Describe how the giraffe has evolved through natural selection to have a long neck.
24. Give an advantage of genetic engineering
25. Give an advantage of adult cell cloning.

Further Opportunities

1. Visit Kayscience and work through topic 6, answer the questions in your reflection log
https://www.kayscience.com/biology.html

2. Look for and describe links between this topic and previous topics. E.g. Describe the link between cell structure and inheritance.

3. Evaluate the use of genetic engineering.

4. Research protein synthesis and describe the process.

Chemistry Knowledge Organiser
Year 10: Organic chemistry part 1 (Triple FT)

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Crude oil, hydrocarbons and alkanes:

Crude oil is a finite resource that will eventually run out. It was made from the remains of ancient plankton. Crude oil is a mixture of different length chains of hydrocarbons.

Hydrocarbons are compounds made from hydrogen and carbon atoms only, covalently bonded. They come in many lengths. Most of the HC's in crude oil are alkanes.

Alkanes are HC's with single covalent bonds only, between the carbon atom chain.

The general formula for alkanes is: CnH2n+2 . Eg: C_2H_6 and C_4H_{10}

Display formula for first four alkanes:

Methane (CH_4) Ethane (C_2H_6) Propane (C_3H_8) Butane (C_4H_{10})
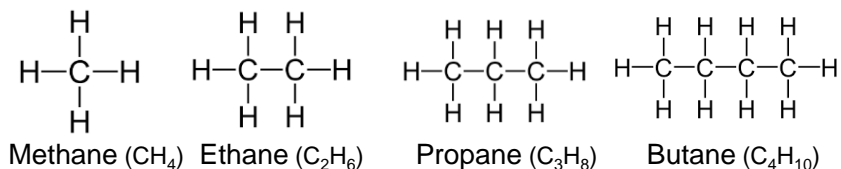
Properties of hydrocarbons:

- As the hydrocarbon chain length increases, boiling point increases, viscosity increases & flammability decreases.
- During the complete combustion of hydrocarbons, the carbon and hydrogen in the fuels are oxidised, releasing carbon dioxide, water and energy.

Complete combustion of methane:

Methane + oxygen → carbon dioxide + water + energy

CH_4 (g) + $2O_2$ (g) → CO_2 (g) + $2H_2O$ (l)
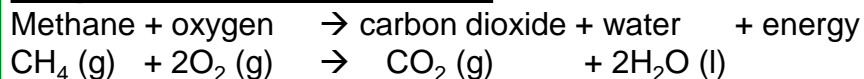
Using fractions:

Fractions can be processed to produce fuels and feedstock for petrochemical industry.
We depend on many of these fuels; petrol, diesel & kerosene.
Many useful materials are made by the petrochemical industry; solvents, lubricants and polymers.

Fractional distillation:

Hydrocarbon chains in crude oil come in lots of different lengths.
The hydrocarbons in crude oil can be split into fractions.
The boiling point of the chain depends on its length. During fractional distillation, they evaporate and condense at different temperatures due to this.
Each fraction contains molecules with a similar number of carbon atoms in them.

Fractional distillation:

Crude Oil

The oil is heated in a furnace

20 °C — Butane & Propane
150°C
— Petrol
200 °C
— Kerosene
300°C
370 °C
— Diesel
— Fuel Oil
400 °C
Lubricating oil, Parrafin Wax, Asphalt

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Cracking & properties of alkenes:
- Long chain alkanes are cracked into short chain alkenes.
- Alkenes are hydrocarbons with a double bond.
- Alkenes are more reactive than alkanes and react with bromine water. Bromine water changes from orange to colourless in the presence of alkenes.

Cracking methods:
Cracking: The breaking down of long chain hydrocarbons into smaller chains. The smaller chains are more useful. Cracking can be done by various methods:

Catalytic cracking: The heavy fraction is heated until it vaporises. After vaporisation, the vapour is passed over a hot catalyst forming smaller, more useful hydrocarbons.

Steam cracking: The heavy fraction is heated until vaporised. After vaporisation, the vapour is mixed with steam and heated to a very high temperature forming smaller, more useful hydrocarbons.

Alkenes:
Hydrocarbons with a double carbon-carbon bond.

Alkenes are unsaturated because they contain two fewer hydrogen atoms than their alkane counterparts.

General formula for alkenes: = C_nH_{2n} C_2H_4; C_4H_8

Displayed formula for the first 4 alkenes:
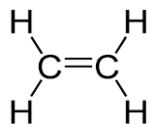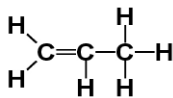
Ethene C_2H_4 Propene C_3H_6 Butene C_4H_8 Pentene C_5H_{10}
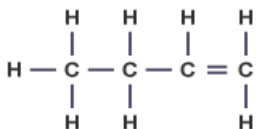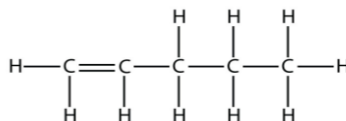
Addition polymerisation:
Alkenes are used to make polymers by addition polymerisation.

Many small molecules, (monomers) join together to form polymers (very large molecules).

In addition polymers, the repeating unit has the same atoms as the monomer.

It can be displayed like this:

ethene   poly(ethene)
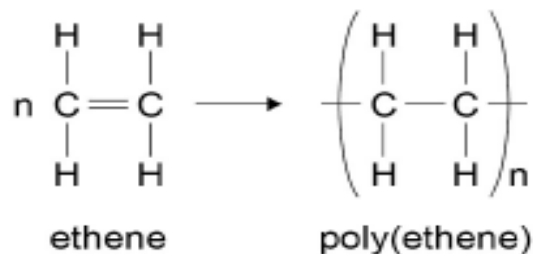
<u>Key Vocabulary:</u>
1. What is crude oil a mixture of?
2. What is a hydrocarbon?
3. What is fractional distillation?
4. What does viscosity describe?
5. What is the difference between an alkane & an alkene?

<u>Crude oil, hydrocarbons and alkanes:</u>
6. Why will crude oil eventually run out?
7. What type of bonding is in hydrocarbons?
8. What is the general formula for alkanes?
9. What is the formula for Butane?
10. Have a go at drawing the displayed formula for pentane

<u>Fractional distillation:</u>
11. What is the first stage of fractional distillation?
12. Why do most of the HC's boil and condense at different temperatures?
13. What does each fraction contain?
14. Which fraction has the lowest boiling point?
15. Apart from fuels, name 3 other useful products that are made from the fractions?

<u>Properties of hydrocarbons:</u>
16. If the HC chain is longer what happens to the boiling point?
17. If the HC chain is longer what happens to the flammability?
18. If the HC chain is longer what happens to the viscosity?
19. What are the products of complete combustion?
20. What type of reaction is combustion?

<u>Cracking & properties of alkenes:</u>
21. What happens during cracking?
22. Which is more reactive butane or butene?
23. A test for alkenes is to react it with Bromine, What colour change will you see?

<u>Cracking methods:</u>
24. Why do we crack long chain HC's?
25. Name the two cracking methods?
26. What do both methods produce?
27. What happens at the start of both methods?

<u>Alkenes:</u>
28. What does the = in C=C mean?
29. What is the general formula for alkenes?
30. What is the formula of butene?
31. What do you think the formula of hexene will be?

<u>Addition polymerisation:</u>
32. The small molecules at the start are called?
33. The longer molecules at the end are called?
34. To make polythene we need many molecules of what?
35. What letter do we use to describe many?
36. Which molecules have double bonds, the starting ones or the products?

EBACC

French Knowledge Organiser
GCSE core information

UNITY ACADEMY BLACKPOOL

Prior Knowledge

G Using different time frames

present	perfect	near future
je visite	j'ai visité	je vais visiter
je fais	j'ai fait	je vais faire
je vois	j'ai vu	je vais voir
je prends	j'ai pris	je vais prendre
je vais	je suis allé(e)	je vais aller

Ma matière préférée est …			c'est	facile/fascinant/ difficile/utile/inutile.
J'adore/J'aime/Je n'aime pas/Je déteste …		parce que/qu'		
Je trouve …	intéressant(e)(s) passionnant(e)(s) ennuyeux/euse(s)		je suis	fort(e)/faible/doué(e) en …
Je pense que …	est sont		le/la prof est	bon(ne)/sympa/marrant(e)/ sévère/gentil(le)/impatient(e).
			on a trop de devoirs.	

G The conditional

Remember, you use the conditional to say 'would':

J'aimerais travailler comme …
I would like to work as a …

Je ne voudrais pas travailler dans un bureau.
I would not like to work in an office.

Je préférerais travailler seul(e).
I would prefer to work alone.

Ce serait bien/affreux/super/parfait pour moi.
That would be good/terrible/great/perfect for me.

Au collège

G Direct object pronouns

To say 'him', 'her', 'it' or 'them', you need a direct object pronoun. This comes <u>before</u> the verb.

*Je **le** déteste.* I hate **him/it**.
*Je **la** déteste.* I hate **her/it**.
*Je **les** aime.* I like **them**.

The pronouns *le* and *la* shorten to *l'* before a vowel.

*Je **l'**adore.* I love **him/her/it**.

G Adverbs

You use adverbs to say <u>how</u> you do something. In English, most adverbs end in '-ly'. In French, many of them end in -ement:

*sain**ement*** (healthily)
*rar**ement*** (rarely)

The following adverbs are irregular: *bien* (well), *mal* (badly), *tôt* (early).

NB In French, adverbs usually go <u>straight after the verb</u>:
Je bois uniquement de l'eau. (I only drink water).

G Using il faut and il est interdit de

il faut it is necessary to/you must …
il est interdit de it is forbidden to/you must not …

Both expressions are followed by the infinitive.

*Il faut **être** à l'heure.* You must **be** on time.
*Il est interdit de **manquer** les cours.* You must not **skip** lessons.

Au bahut

G The pronoun on

On can mean 'one', 'you' or 'we'. It is used a lot in French: much more than we would use the pronoun 'one' in English.

It is used when talking about people in general and takes the same verb form as *il/elle*:

On améliore ses compétences en langue.
You improve your language skills.

G The imperfect tense

The imperfect tense is used to describe what things <u>were like</u> in the past or what <u>used to</u> happen. You need to be able to recognise the imperfect endings, e.g. *chanter* (to sing):

je chantais	I used to sing
tu chantais	you used to sing
il/elle/on chantait	he/she/we used to sing
nous chantions	we used to sing
vous chantiez	you used to sing
ils/elles chantaient	they used to sing

The key verbs that you need to be able to **use** are:
*avoir → j'**av**ais* (I had/I used to have)
*être → j'**ét**ais* (I was/I used to be)
*faire → je **fais**ais* (I did/made/I used to do/make)

Les boulots

G Verbs followed by à or de ▸ Page 212

Some verbs are followed by *à* or *de* before the infinitive.

*apprendre **à** …* (to learn to …)
*commencer **à** …* (to start to …)
*décider **de** …* (to decide to …)
*essayer **de** …* (to try to …)

G Job nouns

The words for jobs often change according to gender. The most common patterns are:

masculine	feminine	(English)
électric**ien**	électric**ienne**	(electrician)
coiff**eur**	coiff**euse**	(hairdresser)
ac**teur**	ac**trice**	(actor/actress)
boulang**er**	boulang**ère**	(baker)
patr**on**	patr**onne**	(boss)

Jobs that end in *-e* don't change, e.g. *dentiste* (dentist), *secrétaire* (secretary).

The following jobs are also the same in both genders: *agent de police* (policeman/-woman), *médecin* (doctor), *professeur* (teacher), *soldat* (soldier).

G The relative pronoun qui ▸ Page 220

Qui means 'who', 'which' or 'that' when 'who', 'which' or 'that' is the subject of the sentence.

*Le secteur **qui m'intéresse**, c'est le commerce.*
The area **that interests** me is business.

Mes projets pour l'avenir

G The future tense ▸ Page 218

To describe future plans, you can use either <u>the near future tense</u> (*je vais* + infinitive), or <u>the simple future tense</u> to say 'will …' or 'shall …'.

*Je **passerai** mes examens puis j'**irai** à la fac.*
I **will take** my exams, then I **will go** to uni.

To form the simple future tense of regular verbs, add the following endings to the infinitive 'stem':

*je passer**ai***	*nous passer**ons***
*tu passer**as***	*vous passer**ez***
*il/elle/on passer**a***	*ils/elles passer**ont***

The following important verbs are irregular. Learn to recognise them!

*aller → j'**irai** (I will go)*
*avoir → j'**aurai** (I will have)*
*être → je **serai** (I will be)*
*faire → je **ferai** (I will do/make)*

Je crois que Je pense que	je voudrais j'aimerais
Le secteur qui m'intéresse, c'est	
Je suis	assez plutôt très un peu

travailler dans (le commerce/ le sport et les loisirs, etc.).
le commerce/la médecine et la santé (etc.).

actif/-ive.	motivé(e).
ambitieux/-euse.	sérieux/-euse.
bien organisé(e).	sociable.
créatif/-ive.	timide.
indépendant(e).	travailleur/-euse.

Je voudrais J'aimerais	avoir un métier bien payé. faire un métier à responsabilité (etc.). travailler en plein air (etc.).
J'aime le contact avec les gens.	

Translate these sentences into English.

2 Put the words in the correct order to translate each

1 Je la déteste.
2 Je ne l'aime pas.
3 Je les ai.
4 Je lui parle en français.
5 Je leur ai donné le livre.
6 J'y suis allé hier.
7 J'en ai bu ce matin.
8 Je la leur offre.

1 je déteste les (*I hate them.*)
2 ? aimes tu l' (*Do you like it?*)
3 le elle regarde (*She watches him.*) **English sentence.**
4 avons nous l' (*We have it.*)
5 lui je devoirs donne les (*I give the homework to her.*)
6 je parlé leur ai (*I spoke to them.*)
7 ai hier j' vu en (*I saw some yesterday.*)
8 y j' demain vais (*I am going there tomorrow.*)

Maria has written some sentences in French but has made a mistake in each one. Rewrite each sentence, correcting her mistake. Explain in English what her mistake is.

Example: *Il faut reste à la maison.*
*Il faut **rester** à la maison.* – She didn't use the infinitive.

1 Il faut arrive à 8h.
2 Je peut venir au concert avec toi.
3 On doit ne fumer pas au collège.
4 Tu veux parle sur Skype ce soir?
5 Nous pouvez aider le prof.
6 Les enfants doit apprendre le latin.
7 Il faut ne arriver pas en retard.
8 Antoine et Annie peuvent travaillent ce samedi.

Choose a suitable ending for each sentence. Then translate each sentence into English.

1 J'avais intelligent / un journal / Paris.
2 J'étais intelligent / une table / Manchester.
3 Je faisais beau / mes devoirs / arriver.
4 Elle avait les yeux bleus / petite / boire.
5 C'était les yeux bleus / monter / super!
6 Il faisait froid / me / pleut.
7 Il y avait poli / les cheveux bruns / un concert.
8 C'était impossible / sortir / vais.

Translate these sentences into French using the imperfect tense.

1 It was interesting.
2 There was a restaurant.
3 It was hot.
4 I was in the garden.
5 I had two friends.
6 We used to have a cat.
7 He used to be a teacher.
8 My mum was nine years old.

Translate this story into English.

Hier, ma famille a décidé de faire un pique-nique au bord de la mer. J'adore aller à la mer. J'ai essayé de contacter mon cousin mais il n'a pas répondu au téléphone. J'ai aidé mon père à préparer les sandwichs mais à 11h, il a commencé à pleuvoir. On a choisi de rester à la maison. Je préfère rester à l'intérieur quand il pleut mais j'aimerais aller à la mer aujourd'hui.

Translate each sentence into English.

1 Ma sœur, qui s'appelle Annette, est à l'université.
2 Le livre que je préfère s'appelle *Studio*.
3 La voiture qui est la plus pratique, c'est une Renault.
4 La voiture que je veux, c'est une Porsche.
5 Où est la fille qui était ici?
6 Où est le garçon que j'ai vu hier?

What will things be like for Sofia in 10 years' time? Translate what she says into English.

1 J'aurai trois enfants.
2 Je serai agent de police.
3 J'habiterai à Londres.
4 Je ferai beaucoup de sport.
5 J'irai à la salle de sport régulièrement.
6 On sera riche.
7 On aura une grande maison.
8 Mon compagnon travaillera pour Renault.

Choose the correct form of the adjective to complete each sentence.

1 Mon frère est grand / grande.
2 Ma sœur est joli / jolie.
3 Mes frères sont absent / absents.
4 Mes sœurs sont amusants / amusantes.
5 Nous sommes contente / contents.
6 J'ai les cheveux blond / blonds.

Copy out the text, changing the adjectives in the description so that they agree.

Ma prof (*préféré*) s'appelle Madame Black. Elle est (*amusant*) mais parfois (*sévère*): quand les élèves sont (*méchant*), elle devient (*furieux*). Mais en général, elle est (*compréhensif*) et (*aimable*). Ma copine Anna n'est pas très (*travailleur*) et de temps en temps, elle est (*agaçant*) mais elle est (*gentil*).

Translate these sentences into French.

Example: They don't want to take the bus. → Ils ne veulent pas prendre le bus.

1 I can take the bus.
2 We must take the bus.
3 She wants to take the bus.
4 My friends want to take the bus.
5 Alex can take the bus.
6 I don't want to take the bus.
7 We can't take the bus.
8 I would like to take the bus.

ETHICAL ISSUES: what is considered right or wrong by society.

LEGAL ISSUES: what is considered right or wrong in the eyes of the law.

CULTURAL ISSUES: how different cultures may be affected.

ENVIRONMENTAL ISSUES: how the planet is affected.

PRIVACY ISSUES: how our personal data is used and what risks to our privacy this poses.

STAKEHOLDER: someone or groups of people who have an interest in OR are affected by a particular scenario.

The **Digital Divide**: unequal access to computer science technologies due to financial, health or cultural issues.

DATA SUBJECT: someone who has data stored about them.

DPA: the act applies to all personal data held by organisations in paper or electronic form.
The Act was put into place to prevent the misuse of personal data.

CDPA: this act prevents peoples' original work being used without their consent.
The person who creates the work owns the copyright and is *the only* person who has the right to reproduce , adapt or sell it.

Data Protection Act Principles:
1. Keep data safe & secure.
2. Not ask for more data than necessary.
3. Not keep the data longer than necessary.
4. Keep the data accurate and up to date.
5. Not use the data for any other purpose without our consent.

Data Subject Rights:
1. Inspect and check the data held.
2. Demand that incorrect information is amended.
3. Demand that the data is not used in any way that could harm or distress.
4. Demand that any data held by the organisation is not used for direct marketing.

FOIA: the act creates a right of access to information held by public authorities including:
• Central and local government.
• The health service.
• Schools/colleges/universities.
• The police and courts.
Anyone can make a request for information. If the holder refuses, an appeal can be made to the Information Commissioner.

CMA: the Act was put into place to prevent the unauthorised access or modification of data. This law deals with hacking and cyber crime.
There are 3 levels of this law:
1. Unauthorised Access.
2. Unauthorised Modification.
3. Unauthorised Access *with intent*.

Create commons licenses give the public permission to share and use work under certain conditions without having to legal ask for permission from the creator. *People use CC licences when they want other people to share or build upon their work.*

<u>Attribution</u> - work can be shared, copied or modified but the creator has to be credited.
<u>Non-commercial</u> - nobody can use the work for profit.
<u>No</u> <u>derivative</u> - the work can be copied and distributed but cannot be edited or built upon.
<u>Share</u> <u>alike</u> - if you modify someone's work, you must share it under the same license terms as the original.

PROPRIETARY: software that is commercially produced, by an organisation, for profit. Only the compiled code is released. The source code is protected and there are restrictions on copying, modifying and redistributing.

✓ Professionally and carefully tested.
✓ Support is provided to keep customers happy.
✓ Regular updates and bug fixes.
✓ Come with warranties.
✗ Restrictions on how the software can be used and distributed.
✗ The source code cannot be accessed or modified.
✗ It is developed for a large audience, so may not suit individual needs.
✗ It has to be paid for, it is not free.

OPEN SOURCE: software whose source code is freely available to be modified / enhanced by anyone. Users can use the source code to create their own 'spin off' copies which can be shared under the same license as the original.

✓ Users can study the source code to see how the software works.
✓ Users can change and upgrade the software.
✓ Can share the software with other users for no charge.
✓ Software can be adapted to meet user's needs.
✓ A community of enthusiasts will provide support.
✗ May not seem as professional or have as friendly user interface.
✗ Specialist knowledge may be needed.
✗ Small projects may be buggy or have security holes.
✗ No warranties if anything goes wrong.
✗ There may be limited user documentation.

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What I need to know:

Define ethical issues.	
Define legal issues.	
Define environmental issues.	
Define cultural issues.	
Define privacy issues.	
Define stakeholder?	
State what is meant by the digital divide.	
Define data subject?	
Outline the Data Protection Act (DPA).	
Name the 5 DPA principles.	
Outline the rights of the data subject under the DPA.	
Outline the Copyright, Designs and Patents Act (CDPA).	
Outline the Freedom of Information Act (FOIA).	
Outline the Computer Misuse Act (CMA).	
Outline the purpose of Creative Commons Licensing.	
Describe the 4 types of Creative Commons license.	
Explain what is meant by proprietary software.	
List the pros and cons of proprietary software.	
Explain what is meant by open-source software.	
List the pros and cons of open-source software.	

	Censorship	Surveillance
A business monitors what their employees view online.		
A country's government blocks access to Facebook®.		
A government agency intercepts emails containing certain words.		
A school restricts access to harmful websites.		
An Internet Service Provider collects data on browsing habits.		

Define the term e-waste.

....

[1]

Identify **two** ways that electronic devices waste electricity.

1 ....

2 ....

[2]

Explain how hardware manufacturers can limit the amount of electricity wasted by electronic devices.

....

....

[2]

Identify **two** health risks caused by using technology. State how each could be prevented.

Health risk: ....

Prevention: ....

Health risk: ....

Prevention: ....

[Total 4 marks]

AQA GCSE Geography
Urban issues and challenges
Paper 2, Unit A, part 1
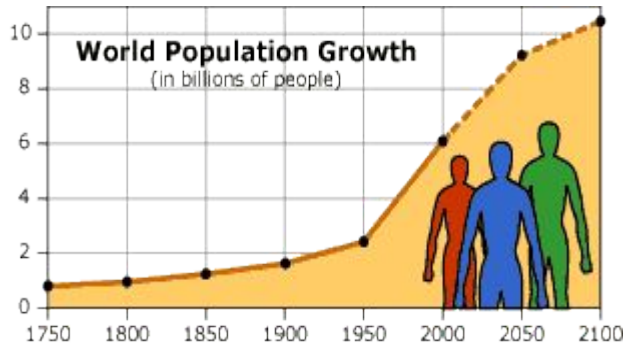
Global population change

World Population Growth (in billions of people)

The bigger the population the faster the rate of change. It took 300 years for global population to double from 500 000 to 1 billion by 1804. It took just 39 years to double from 3 to **6 billion by 1999**.

Megacities

| Megacity | An urban area with over **10 million people** living there. |

The World's Megacities Are Set for Major Growth
Population growth of the world's top 15 megacities (millions, 2011-2025)
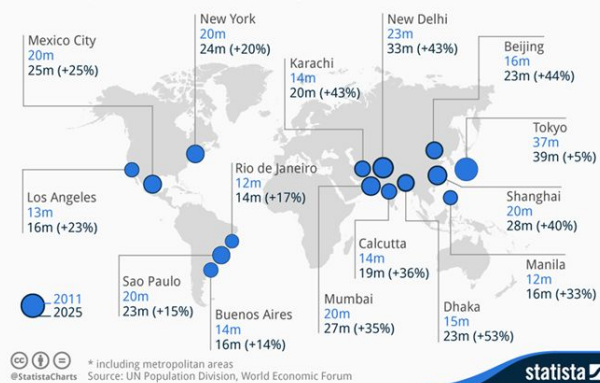
More than two thirds of current megacities are located in either NEEs or LICs. For example Lagos, Rio de Janeiro, Cairo and Delhi. The majority of megacities are located in Asia.
The number of megacities is predicted to increase from 28 to 41 by 2030.
London, Bangalore and Lima are predicted to become megacities by 2030.

Rapid growing megacities – Lagos and Mumbai
- Over 20% in squatter settlements & <50% of country's population is urban

Growing megacities – Rio and Beijing
- Under 20% in squatter settlements & 40-50% of country's population is urban

Slow-growing megacities – Tokyo and Los Angeles
- No squatter settlements & >70% of country's population is urban

Urbanisation

| Urbanisation | When an increasing percentage of a countries population lives in towns and cities (urban areas). |
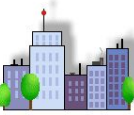
What causes urbanisation?

Urbanisation is caused by migration and natural increase

| Rural - urban migration | The movement of people from the countryside (rural areas) into towns and cities (urban areas) |

Push factors	Pull factors
Factors which encourage people to move **away** from a place.	Factors (often perceived) which encourage to move people **to** a place.
• Climatic hazards like droughts • Isolation due to poor transport links • Farming is hard and poorly paid • Few doctors and hospitals • Only basic education available	• More well paid Jobs • Better quality / availability of education & healthcare • Higher standards of living • Friends and family already there

| Natural Increase | When the birth rate is greater than the death rate. |

In urban areas birth rates are rising and death rates are falling

- Migration often involves young adults (18-35). So a high percentage of population are of child-bearing age. As a result the **birth rate is high**.
- **Death rate falls** as life expectancy increases due to improving water supplies, living conditions, health care and diet.
- Improved medical facilities also help **lower infant mortality rates**.
- The smaller proportion of elderly people also means the **death falls.**

How does urbanisation vary around the world?

Rates of urbanisation are highest in LICs and NEEs. This is mostly because of the rapid economic growth, which people to the city for jobs.
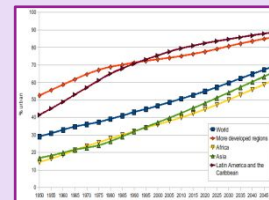
The distribution of the worlds urban population is changing . In the past Europe and North America accounted for over 50%, now Asia accounts for this on its own.
The largest future growth will take place in China, India and Nigeria.
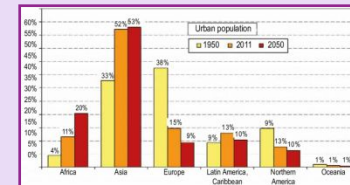
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Key individuals

Heinrich Himmler - Head of the SS.
Joseph Goebbels - Minister of Enlightenment and Propaganda.
Leni Riefenstahl - film maker Triumph of the Will.
August Landmesser - Jewish family, photographed refusing to do the Nazi salute.
Hans and Sophie Scholl - leaders of the White Rose resistance group. Executed in 1943.
Colonel Claus von Stauffenberg - part of the July Bomb Plot.

Key dates

1925	SS (Schutzstaffel) or black shirts set up
1936	Berlin Olympics used as propaganda
1943	Hans and Sophie Scholl executed
1944	Failed July Bomb Plot

Propaganda

From the word 'propagate' meaning to spread information and ideas. Joseph Goebbels was in charge of persuading Germans to believe Nazi ideas.
Key messages were repeated including
- blaming the Jews for problems
- criticising the Treaty of Versailles
- make Germany great again
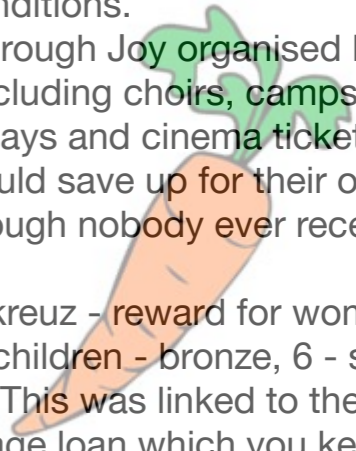
Methods Newspapers - only showed Nazis doing good things. Negative sources about Jews. Newspapers were censored and shut down.
Mass rallies - huge parades and rallies. Special arenas were built that could hold half a million people. They had choirs, bands and listened to speeches. Hitler was an engaging public speaker that could whip up an audience into a fenzy.
Films - were controlled with Nazis shown in a good way and their 'enemies' in a bad way. Leni Riefenstahl filmed the Olympics and made other films.
Radio - cheap radios were used to put across Nazi messages with loudspeakers in the streets.
Books - were censored and book burning rallies burnt Jewish, Communist and other unapproved authors.

Terror

The police state was organised and used terror to keep people in control. All police forces were under the control of Himmler as Head of the SS.
The SS - were originally Hitler's bodyguards and were the most feared organisation in the country. They included the Waffen SS and the Death's Head Units that ran the concentration and death camps.
The regular police and law courts - ignored crimes committed by the Nazis and they had all the top jobs. New laws meant the death penalty could be given for telling an anti-Hitler joke, having sex with a Jew or listening to foreign radio.
The Gestapo - the secret police. They spied on people they thought might be a threat tapping phones and opening mail. They could arrest, torture and imprison without a trial. They had a network of informers, encouraged children to inform on parents and teachers.

Rewards

The problem of unemployment was dealt with making many people happy.
Beauty of Labour movement - improved working conditions.
Strength Through Joy organised leisure activities including choirs, camps, cheap holidays and cinema tickets. Workers could save up for their own VW Beetle although nobody ever received one.
The Mutterkreuz - reward for women who had 4 children - bronze, 6 - silver or 8 - gold. This was linked to the 100 mark marriage loan which you kept 250 marks for each child you had.

Resistance and opposition

Many Germans were uncomfortable with what the Nazis were doing and moaned or grumbled but even this could be dangerous. Some used passive resistance refusing to do as they were told. Others were more openly defiant such as youth groups including the Swing Movement, Edelweiss Pirates and the White Rose. The Kreisau Circle also tried to eliminate Hitler. They failed and ever executed.

KEY VOCABULARY/ TERMS - Tier 3

Concentration camps, SS - Schutzstaffel, Gestapo, Propaganda, censorship, newspapers, radio, rallies, films, resistance, opposition, White Rose, Swing Movement, Edelweiss Pirates, assassinate.

History Knowledge Organiser
Germany 1890 - 1945 Nazi control

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Quiz questions	
Who was the head of the SS?	
What was Joseph Goebbels' job?	
What was the name of the filmmaker who made Triumph of the Will?	
How was the 1936 olympics used by the Nazis?	
What is propaganda?	
What methods of propaganda did the Nazis use?	
What happened to books that were censored?	
What were the SS?	
What was the name of the secret police?	
What did the secret police do?	
Who did the police and law courts support?	
What was the Mutterkreuz?	
What was the Strength Through Joy organisation?	
Where were political opponents sent?	
Which resistance group included a brother and sister?	
Which army officer was involved in the July bomb plot?	
Name two other resistance groups.	
What colour shirts did the SS wear?	

History Knowledge Organiser
Germany 1890 - 1945 Life in Nazi Germany

Workers

Hitler had promised 'Arbeit und Brot' work and bread. The National Labour Service was set up for 18-25 year olds. Public Work Scheme built the autobahns, schools and hospitals. Rearmament also provided jobs and conscription for 18-25 year olds was introduced in 1935. Jews were sacked and women did not count in the figures. Hjalmar Schacht was given the job of getting Germany ready for war with the Four Year Plan. This created jobs in steel, textiles and shipbuilding. Farmers were seen as vital and were supported. The DAF replaced trade unions and ran the Beauty of Labour (SDA) to improve working conditions and the Strength through Joy (KDF)with rewards (including saving for a VW beetle) to control workers.

Young people

Schools were controlled by the Nazis. All teachers had to be Nazis and other were sacked. Textbooks and history were rewritten. They were indoctrinated (brainwashed) to think a certain way which included hatred of the Jews. Eugenics (race studies) was taught and there was a real emphasis on PE Outside school were youth groups that were compulsory to join. For boys the 'Little Fellows' 6-10, 'Young folk' 10-14 and then the Hitler Youth. This included how to march, fight and keep fit. Girls - 'Young girls 10-14 and League of German Girls 14-17 keeping fit, preparing for motherhood. 7,287,470 members. Some youth groups resisted including the White Rose, Swing Youth and Edelweiss Pirates.

Women

'The world of women is a smaller one. For her world is her husband, her family, her children and her house.' The Nazis had a clear idea of the role of women - Kinder, Kirche, Küche (children, church, cooking). They wanted to increase the population. and go back to traditional values e.g. wearing heels or trousers was 'unladylike'. Professional women were sacked but marriage loans were given to married couples of 1000 marks. For each child they kept 250 and this was linked to the Mutterkreuz (Mothercross). Bronze - 4 children silver - 6 and gold - 8. Lebensborn were also set up for women to give a child to the Reich - 8000 births came from here. Gertrud Scholtz-Klink was the figurehead of the Women's League which gave advice. The birth rate rose from 970, 000 in 1933 to 1, 413, 000 in 1939 however during the war the women were needed to help with the war effort.

Christians

There were 20 million Catholics and 40 million Protestants. Some Nazi ideas matched Christian ideas e.g. marriage, family, moral values and fear of Communism. In 1933 Hitler signed the Concordat with the Pope but Hitler soon broke this and the Catholics were harrassed. Archbishop Galen criticised Hitler and euthanasia, he was put under house arrest. Some Protestants supported Nazi ideas and Hitler appointed Ludwig Müller as Reich Bishop. Other Protestants formed the Confessional Church led by Pastor Martin Niemöller who criticised the Nazis. 800 pastors were arrested and he was sent to a camp.

Jews and undesirables

Hitler believed in a pure Aryan master race of strong tall, blond haired, blue eyed Germans. Jews, gypsies, homosexuals, disabled were classed as undesirable. As soon as Hitler came to power they began passing laws to drive out Jews including sacking lawyers and teachers. The Nuremberg Laws 1935 took away more rights and dissolved marriages. November 1938 - Kristallnacht (Night of Broken Glass) saw synagogues burned, shop windows smashed, Jews beaten, arrested and 100 killed. 20 000 were sent to concentration camps. Many Jews left but were in countries occupied by the Germans in WW2 including Holland. Once the war started the Nazis used ghettos, execution squads (Einsatzgruppen) and camps. At the Wannsee Conference a Final Solution was planned including 6 extermination camps including Auschwitz where 1.1 million died. There was an uprising in the Warsaw Ghetto and Treblinka in 1943 but both put down. Around 6 million Jews were killed.

WW2 1939 - 1945

The start of the war was positive with many victories and luxury goods from the conquered countries. This changed after they invaded the USSR in 1941 including battles like Stalingrad and by 1944 Germany was facing a defeat. By November 1939 there was food and clothing rationing e.g. one egg per week. There were many ersatz (substitute) products. Hot water was rationed to two days per week. 1942 - Total War, everything was focussed on making weapons and growing food for soldiers. Factories were open longer, women were brought in and 7 million foreign workers as slave labour. British bombing had a real impact from 1942 disrupting water, electric, transport and there were many unexploded bombs.

KEY VOCABULARY/ TERMS - Tier 3

Anti-Semitism (discrimination against Jews), rearmament, conscription, Four Year Plan, self-sufficient, DAF, SDA, KDF, Volkswagen, rationed, Total War, refugee, indoctrinate, eugenics, Swing Youth, Edelweiss Pirates, Kinder, Kirche, Küche, Lebensborn, Mutterkreuz, euthanasia, pacifist, persecute, Aryan, master race, death camp, ghetto, Nuremberg Laws, Kristallnacht, Final Solution, Einsatzgruppen, Holocaust.

Quiz questions

Question	
What was 'Arbeit und Brot'?	
What types of jobs were provided to deal with the unemployment problem?	
What did the Nazis do for people in work to encourage them?	
How did the school curriculum change?	
What were the different youth groups the children had to join and at what age in each?	
Name three youth groups that resisted the Nazis.	
What was Gertrud Scholtz-klink the figurehead of?	
How were women encouraged to stay home and have children?	
What was K,K,K?	
What was the religious structure of Germany?	
What was the 1933 Concordat?	
Which religious men opposed the Nazis and what happened to them?	
What was an Aryan?	
What were the Nuremberg Laws?	
What happened on Kristallnacht in November 1938?	
How were the Jews treated after the outbreak of war in 1939?	
What was in like on the home front in Germany in the early part of the war?	
What was it like in Germany after the invasion of the USSR?	

INNOVATION

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ASSESSMENT OBJECTIVES

These are the 4 objectives used to assess your folder of work, with suggestions of what you should do for each one.
Each objective is worth 24 marks
Remember that the objectives cover all of the work in each project, from initial sketches and notes to the final image.

A01 EXPLORE **DEVELOP** **DEVELOP IDEAS** INVESTIGATE & RESEARCH OTHER ARTISTS WORK **ANALYSE** **ANNOTATE**	I have researched the work of artists and photographers I have worked in the style of an artist or photographer. I have written about photographers and how they have influenced my work.
A02 REVIEW **REFINE** **EXPERIMENT** EXPLORE DIFFERENT IDEAS AND MEDIA A RANGE OF TECHNIQUES & PROCESSESS **SELECT** IMPROVE	I have experimented with a range of materials and techniques - some digital. My folder shows how I have developed my idea from an initial start to a final conclusion. My work has been completed with care and thought.
A03 EVIDENCE **RECORD** **PRESENT IDEAS** PRIMARY OBSERVATION DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY... **ANNOTATE** DIFFERENT MEDIA	I have drawn images from observation and taken photographs in a range of styles. I have taken relevant photographic images. I have used annotation to explain the development of and my thoughts about my work.
A04 OUTCOME **PRESENT** **FINAL IDEAS** DEVELOPED AS PLANNED CLEARLY RESPONDS TO ARTISTS EXPLORED **CONNECTION** CONCLUSION	I have produced my own final piece of work using the camera and photoshop. My work shows a clear connection to the work of my chosen photographer. I have thought carefully about the presentation of my work throughout the project.

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Write definitions for each Assessment Objective

A01	
A02	
A03	
A04	

BTEC Performing arts
Year 11: Preparation for component 3

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Component content

In this final unit you will be required to respond to a brief. The brief will be set by the exam board and we will have 12 weeks in which to respond. The aim is to create a short performance for a live setting. Through workshops and research activities you will present your ideas through a research log and a performance.

Responding to a brief

To respond well to a brief we can do the following:
Make sure we have read it thoroughly and have an understanding of what is required of us
Assign roles to people to ensure all activities are being managed and completed
Research several ideas and themes and keep notes
Communicate throughout the project
Commit to the rehearsal process and respond to feedback

Possible briefs

Venue- You may have to create a performance for a specific location e.g. a theatre, an outdoor space such as a park, a school, an historical building, on a mode of transport.
Themes-there is a wide variety of themes that we may be given e.g. anti bullying, racism, war and peace, LGBTQ awareness, mental health, poverty, drug and alcohol abuse, conflict, unity.
Target audience- you will be given a target audience such as young children, adults, the elderly and community groups.

Marking criteria

To achieve a level 2 pass learners are able to make an appropriate contribution to activities and tasks. They are able to respond to competently to the brief. Learners contribute appropriate ideas in discussions and workshops. They can apply relevant skills and techniques for the style or genre of the work and demonstrate appropriate skills in practical tasks. Learners are able to reflect on and review the process and outcome adequately.

Marking criteria

To achieve a level 2 distinction learners are able to initiate imaginative and appropriate activity. They are able to respond fully to all of the requirements of the brief. They are able to take the initiative and support others in the group. They consistently contribute valid ideas to discussions and practical exploration activities. Learners are able to reflect on and review the process and outcome with awareness and insight.

KEY VOCABULARY/TERMS

Correctly spell and define each key term/phrase.
These will be covered in class.
Genre- a style or category of art, music, or literature
Themes an idea that recurs in or pervades a work of art or literature.
Contribution- the part played by a person or thing in bringing about a result or helping something to advance.

Performing arts
Year 10: Putting it into practice

Questions

1. Looking at the marking criteria what can you do to achieve either grade? Can you prepare or do anything in advance?

2. Reflecting on the skills you improved on in unit 2 how can you use these again and how will it help the group project?

3. What personal skills can you contribute to the group project?

Explore

Time to have a go!

Choose a theme for a live performance. Tell me about how you would present this? Consider narrative, characters, style of dance or style of acting. What would the overall piece look like?

Extend

Design and draw a bubble map of the possible themes we could create a piece about. Why do you think that would be effective? Who would your target audience be? What venues would you consider?

Better together

In class this term we will be exploring themes.

Watch some clips on you tube of community theatre groups and the types of work they have created. What was successful about them? Was there anything unique that caught your eye?

Reflect

As we begin to workshop and take part in practical sessions try to write some thoughts each week in your reflection log on what went well and what we achieved. How did we do this?

You can watch the following links to help.
National theatre, Curious Incident of the dog in the night
Frantic assembly

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ASSESSMENT OBJECTIVES

These are the 4 objectives used to assess your folder of work, with suggestions of what you should do for each one.
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Remember that the objectives cover all of the work in each project, from initial sketches and notes to the final image.

A01 EXPLORE **DEVELOP** DEVELOP IDEAS INVESTIGATE & RESEARCH OTHER ARTISTS WORK **ANALYSE** **ANNOTATE**	I have researched the work of artists. I have worked in the style of an artist. I have written about the artists and how they have influenced my work.
A02 REVIEW **REFINE** EXPERIMENT EXPLORE DIFFERENT IDEAS AND MEDIA A RANGE OF TECHNIQUES & PROCESSESS **SELECT** IMPROVE	I have experimented with a range of materials and techniques. My folder shows how I have developed my idea from an initial start to a final conclusion. My work has been completed with care and thought.
A03 EVIDENCE **RECORD** PRESENT IDEAS PRIMARY OBSERVATION DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY... **ANNOTATE** DIFFERENT MEDIA	I have drawn images from observation. I have worked from relevant photographic images. I have used annotation to explain the development of and my thoughts about my work.
A04 OUTCOME **PRESENT** FINAL IDEAS DEVELOPED AS PLANNED CLEARLY RESPONDS TO ARTISTS EXPLORED **CONNECTION** CONCLUSION	I have produced my own imaginative final piece of work. My work shows a clear connection to the work of my chosen artist. I have thought carefully about the presentation of my work throughout the project.

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Write definitions for each Assessment Objective and give an example of what you have done to cover each objective.

AO1	
AO2	

AO3	
AO4	

R184 | CONTEMPORARY ISSUES IN SPORT

TOPIC AREA 1

Understand the issues which affect participation in sport

User Groups

User groups facing particular barriers:

Gender
The characteristics of males, female, boys and girls that are socially constructed.

People from different ethnic groups
A group within a community which has different national or cultural traditions from the main population.

Retired people/people over 60
A retired person is an older person who has left his or her job and has usually stopped working completely.

Families with children
Adults with dependent children under eighteen, including pregnant and parenting teens.

Carers
A family member or paid helper who regularly looks after a child or a sick, elderly, or disabled person.

People with family commitments
A person who has responsibilities of looking after a family.

Young Children
A young human being below the age of puberty or below the legal age of majority.

Teenagers
A person aged between 13 and 19 years.

People with disabilities
A person having a physical or mental condition that limits their movements, senses, or activities.

Parents (Singles or Couples)
a person(s) bringing up a child or children.

People who work
A person(s) having a paid job.

Unemployed/economically disadvantaged
Without a paid job but available to work. Or someone hasn't got a lot of money.

Barriers

The possible **barriers** which affect participation in sport

Employment and unemployment
Employed people may have a lack of time to take part in physical activity or sport. On the other hand, unemployed people may have a lack of disposable income to take part in sport.

Family commitments
People with family commitments may have a lack of time to take part in sport or physical activity for many reasons.

Lack of disposable income
Sports can be expensive to play. For example, golf memberships can really expensive so some people may not be able to play.

Lack of transport
Some people may find it difficult to take part in sport due to the access to sporting facilities.

Lack of positive sporting role models
People may not be inspired to take part in sport due to the lack of role models in a particular sport.

Lack of positive family role models or family support
If a person has a negative family role model, they are less likely to take part in sport.

Provision of activities
If an activity is not available or provided for a certain group or sport, people may find it difficult to take part.

Awareness of activity provision
If a particular group of people are not aware of what sports/physical activity that is available then they won't be able to participate.

Portrayal of gender issues by the media
The media may portray that certain sports are only played by males, or stereotyping particular ethnicities for certain sports.

Possible barrier solutions

The **solutions** to barriers which affect participation in sport, i.e.

Provision
Programming sessions for use by different user groups (e.g. sessions for wheelchair sports).

Providing appropriate sessions options for the demands of specific user groups (e.g. different age groups want different options).

Providing appropriate activity having appropriate activities for different user groups e.g. Walking football for over 60s

Planning of times to suit different user groups (e.g. for parents with young children, midmorning after the school run).

Promotion
Targeted promotion (e.g. by advertising in appropriate places to increase visibility to different user groups)

Using role models to encourage participation among different user groups

Initiatives aimed at promoting participation and inclusion (e.g. free swimming for under16s and over-60s)

Access
Access to facilities (e.g. ramps for wheelchair access to buildings)

Access to equipment (e.g. a hoist for swimming pool access)

Sensible pricing/concessions (e.g. reduction of charges for unemployed people or young children)

Popularity

Factors
The factors which can impact upon the popularity of sport in the UK, i.e.

Participation (e.g. football has widespread mass participation due to strong infrastructure being in place).

Provision (e.g. tennis lacks easily accessible courts impacting on base level participation).

Environment/climate (e.g. snow sports may be a problem in some countries).

Live s**pectator opportunities** (e.g. live professional rugby matches readily accessible).

The amount and range of Media coverage (e.g. BBC1 has sole coverage of Wimbledon, The Ashes not on free to air TV).

Success for both teams and individuals (e.g. Sir Chris Hoy's success at the Olympics has increased participation in cycling).

The number and range of positive role models available (e.g. If the number of role models in a particular sport increase then so will the participation).

Social acceptability (e.g. boxing may seem not acceptable).

Trends
Current trends in the popularity of different sports in the UK (e.g. studies and statistics in recent years have suggested that recreational walking, fishing/angling, cycling and swimming are the most popular sports in the UK in terms of numbers participating).

New/Emerging sports
Growth of new/emerging sports and activities in the UK (e.g. There has been a rise in netball since England won the commonwealth gold in 2018. Footgolf is also another emerging sport with new courses being built in the UK).

Key Terms

Disposable income - the amount of money that a person or household has to spend or save after income taxes are deducted.

Accessibility - being easy to obtain or use.

Role model - a person looked to by others as an example to be imitated.

Provision - the action of providing or supplying something for use.

Awareness - knowledge or perception of a situation or fact.

Promotion - the publicising of a something to raise public awareness.

Trends - a general direction in which something is developing or changing.

Emerging/New sport - Refers to non-tradition sports.

10 KEY QUESTIONS

R184 | Issues which affect participation in sport | Topic Area 1

1 Name all the user groups who participate in sport.

2 Name all the barriers in sport.

3 Link the most likely barrier for each user group.

4 Name all the possible barriers solutions.

5 Name all the user groups and identify 2 barriers for each.

6 Name 2 user groups, identify 2 barriers and come up with 1 solution for each.

7 What are all the factors that impact the popularity of sport in the UK.

8 How can the factors have a positive and negative impact on the sport?

9 What are the current trends of sport in the UK?

10 Name 2 emerging sports.

Answer all the above question without using your knowledge organiser first. Then, turn to your knowledge organisers and look at the answers

BTEC Performing arts
Year 11: CREATING DANCES

The importance of choreography

In this unit you will learn about:
The process of creating dances (choreography)

Exploring and communicating ideas in dance

Creating, selecting and organising dance material

Shaping and structuring dances

Your final choreography for a solo or group provides you with an opportunity to say what you want in the way that you want it through the powerful medium of movement.

Look at this description of a top mark piece of choreography and think about how you may also achieve this:
'The candidate shows an inspired and original response to the stimulus or starting point. The selection of action, dynamic, spatial and where appropriate, relationships content, is original, well-realised and varied, adding significance and interest to the dance idea and enhancing artistic intent.

The candidate makes highly effective use of a range of choreographic devices and principles and the choice of aural setting is highly appropriate and insightful.

STIMULUS

A stimulus is something that inspires you to create dances. It provides a starting point for you to explore movement ideas.
Using different stimuli will help you find new ways of moving and it will also help you appreciate dances you watch.
You can use a stimulus by allowing it to inspire you to play around with ideas and movement. You can stick closely to the original ideas or let it steer you to other ideas.

TYPES OF STIMULUS

These can be grouped:
visual (sight), auditory (sound), kinaesthetic (feeling), tactile (touch), ideational (the brain).
Words, poem, piece of text
Photograph, art
Prop
Feature of the natural world
Piece of music
Event (topical/history)
Thoughts/feelings

HOW TO USE A STIMULUS

Research-provides facts and allows you to see what others have done
Mind maps/brainstorms- what ideas come to mind?
Talk to others- what do they "see/think/feel?
Key words-what other words are associated with the stimulus?
Descriptive words- what words can you use to describe it?

MOTIF DEVELOPMENT

A motif is a movement or phrase of movements that embodies the style and content of the dance. It can be manipulated and developed in many ways. A motif usually consists of actions and has a dynamic quality and spatial design. It can be as simple as a spiral-then with arms-then travelled-then as group shape.

WAYS TO DEVELOP

Use different body parts- arms, hands, legs, joints
Change order- add or take away
Change dynamics- speed, weight, flow, energy
Change space- shape, level, direction
Add actions- roll, turn, jump, leap, travel, stillness

KEY VOCABULARY/TERMS

Actions: what a dancer does, for example leap, spin, balance.   Aural setting: audible accompaniment to the dance such as words, music, song.
Choreography: the art of creating dance. Choreographic form: giving the dance shape and structure.   Composition: a dance
Motifs: patterns or designs of action content that can be repeated and developed through the dance.
Pure dance: a dance that is concerned with the movement itself and has no other stimulus.

Extension: Choose a stimulus and create a mind map/brainstorm ideas on where this stimulus could take you.

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What is the process of creating dances?
What does a top grade dance look like?
What is a stimulus?
How will using different stimuli help you?
How can you use a stimulus?
What types of stimulus are there?
What is a motif?
How can you develop a motif?

Describe an action and then how you would develop it.

What ideas come to mind for a dance when given the stimulus "love"

Study tips

The choreography task carries the most marks out of all the practical tasks so you will need plenty of time to be successful.

Rather than use a big theme such as water, focus on a more specific idea such as a river journey

Do not worry about what music you are going to use. It is often better to work the idea first and then find the music later
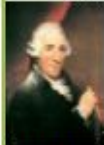
Always have an audience in mind when you choreograph a dance. This will help you be clear about what it is you want to communicate

Classical Solo Concerto

During the CLASSICAL PERIOD, the Baroque Concerto Grosso went "out of fashion" and Classical composers continued to write SOLO CONCERTOS for a single solo instrument with more difficult and technically demanding solo parts (VIRTUOSIC), accompanied by a now, much larger and more developed, orchestra.

1750-1820

Harmony & Tonality

SIMPLE HARMONY making use of mainly PRIMARY CHORDS – I, IV and V. DIATONIC harmony in either clear MAJOR or MINOR tonalities. MODULATIONS to RELATED KEYS (relative major/minor, subdominant major and minor and dominant major/minor).

Venue

Performance spaces were becoming larger than in the Baroque period due to size of orchestras. Recital and Concert Halls and Opera Houses were popular venues for performing Concertos.

Form & Structure

THREE MOVEMENTS – contrasted by TEMPO and style/mood. RONDO form now popular (ABACADA…) where

1st Movement	Sonata Form	Brisk and purposeful
2nd Movement	Ternary or Variation Form	Slow, lyrical and song-like
3rd Movement	Rondo, Variation Form or Sonata Form	Fast and Cheerful

A is the recurring THEME between contrasting EPISODES (B, C, D..) and SONATA FORM (EXPOSITION, DEVELOPMENT, RECAPITULATION, CODA) now popular. Classical Solo Concertos often have long orchestral sections before the soloist enters – "delayed entry of the soloist". Movements longer than Baroque.

Rhythm, Tempo & Metre

The three movements of a Classical Solo Concerto were contrasted in TEMPO – Fast-Slow-Fast and style/mood. Some changes of TEMPO for effect/expression.

Texture

Busy Baroque Polyphonic Textures now replaced with clearer HOMOPHONIC (MELODY AND ACCOMPANIMENT) textures.

Dynamics

Wider range of Dynamics – *pp, ff, mp, mf* CRESCENDOS and DECRESCENDOS or DIMINUENDOS now used showing an increasing range of dynamics and more emphasis on expression in the music.

Melody

The melodies in Classical Solo Concertos were LIGHT, SIMPLE and ELEGANT and continue to use SEQUENCES and ORNAMENTS (although not as much as in the Baroque period). Musical phrases are BALANCED and EVEN (e.g. 4 or 8 bars) maybe with some QUESTION AND ANSWER phrases.

Soloist

CADENZA – became integral to the end of the 1st movement (and sometimes last movement) – very difficult and VIRTUOSIC unaccompanied sections allowing the soloist to show off their technical skill often containing lots of fast scale passages, broken chords and decorated and ornamented melodies. Often cadenza sections end with a long, held TRILL to signal to the orchestra to enter again for the final CODA section. Cadenzas were improvised by the soloists during performance, however, composers such as Beethoven wrote cadenzas out on the score. The soloist's part was more technically demanding and VIRTUOSIC than in Baroque Concertos.

Soloist vs. Orchestral Accompaniment

Sometimes the soloist and orchestra perform sections in DIALOGUE with each other. The conductor follows the soloist and the orchestra follow the conductor depending on the soloist's INTERPRETATION of the piece (which requires rehearsal).

Classical Solo Concerto Composers

Haydn
Solo Trumpet, Flute, Oboe, Bassoon, Violin, Cello and Piano Concertos

Mozart
27 Solo Piano Concertos and Concertos for Solo Violin, Clarinet, Horn and Flute.

Beethoven
Solo Concertos for Piano and Violin. Early style was "Classical".
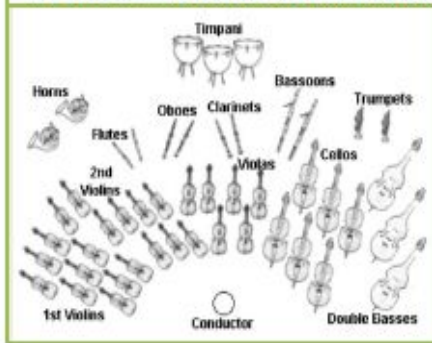
Instrumentation – Typical Instruments, Timbres and Sonorities

As the Harpsichord declined in popularity, Classical composers no longer added CONTINUO parts to the orchestral accompaniment and a CONDUCTOR was now established to lead the orchestra. The CLASSICAL ORCHESTRA grew in size and new instruments such as the Clarinet were added. The CLASSICAL ORCHESTRA typically numbered between 30-60 players. The STRINGS *(1st and 2nd Violins, Violas, Cellos and Double Basses)* continued to be the 'main section' playing most of the 'main melody' and contained more players than in Baroque orchestras. The WOODWIND now typically featured 2 x METAL Flues, 2 x Oboes, 2 x Bassoons, and 2 x (newly invented) Clarinets. BRASS continued to consist of 2 x Horns and 2 (now valved) Trumpets and the PERCUSSION continued to feature only the TIMPANI. Classical composers wrote Solo Concertos for instruments including the PIANO (newly invented and replacing the Baroque Harpsichord), VIOLIN, CELLO, FLUTE, OBOE, CLARINET (also newly invented), BASSOON and FRENCH HORN.

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KEYFACTS

Copy the following into your book-
1. What do we call chords I, IV and V?
2. How many bars are in a balanced phrase?
3. What instruments were added to the Classical Orchestra?
4. What was the popular type of texture at this time?
5. Where would you expect to here a solo concerto?
6. What is the structure of a sonata form?

COMPOSE

Compose a balanced, stepwise melody.

ELEMENTS OF MUSIC

Give **three of your own** examples of pieces of music that have a soloist with orchestra accompaniment.

EXAM STYLE QUESTIONS

Write six exam style questions for a peer.
You may choose to use a variety of multiple choice, one word answer or extended writing.

SYMBOLS

Term	Sign	Meaning
piano	*p*	quiet
mezzo piano	*mp*	moderately quiet
pianissimo	*pp*	very quiet
forte	*f*	loud
mezzo forte	*mf*	moderately loud
fortissimo	*ff*	very loud
subito forte	*sf*	suddenly loud
subito forte piano	*sfp*	suddenly loud and soft
sforzando	*sfz*	forceful sudden accent

Listening Tasks

Research and listen to three pieces of music by the composers Haydn, Mozart and Beethoven.

KEY VOCABULARY - INSTRUMENTATION

Learn the spelling of key words by using the look, cover, write, check method.

BAROQUE CONTINUO HARPSICHORD CELLO BASSOON ACCICCATURA APPOGGIATURA TRILL MORDENT TURN
CONTRAPUNTAL HOMOPHONIC MELODY WITH ACCOMPANIMENT OBOE CLARINET

GCSE Photography Knowledge Organiser

'A picture is worth a thousand words...'

Name:

Group:

Assessment Objectives – How we mark your work
AO1 Artist Research and links with your own photos
AO2 Experimentation and Editing
AO3 Own Photos and Drawings
AO4 Personal Response and overall quality

The Exposure Triangle is the relationship between the ISO, shutter speed and aperture. These three areas work together to create an actual exposure or photograph. It is referred to as the Exposure Triangle because when you adjust one element, another element MUST change to capture the same exposure.

APERTURE

F1.4 SHALLOW
F2
F2.8
F4
F5.6
F8
F11
F16
F22
F32 DEEP

DEPTH OF FIELD

Aperture
Similar to your eye. How much light is allowed to come through to the sensor.

Shutter Speed
How long the shutter opens for and lets light to the sensor i.e. 1/2 = 0.5 seconds.

Exposure Triangle

LENS OPENING (APERTURE)
WIDER 1/1 1/1.4 1/2 1/2.8 1/4 1/5.6 1/8 1/11 1/16 1/22 1/32 SMALLER

EXPOSURE TIME (SHUTTER SPEED)
1/1000 1/500 1/250 1/125 1/60 1/30 1/15 1/8 1/4 1/2 1 2
GOOD RANGE FOR MOTION BLUR

SENSOR SENSITIVITY (ISO)
100   200   400   800   1600   3200

LOWER ——— IMAGE NOISE ——— HIGHER
ISO
ISO 50 ISO 100 ISO 200 ISO 400 ISO 800 ISO 1600 ISO 3200 ISO 6400 ISO 12800 ISO 25600

SHUTTER SPEED
FREEZE 1/1000 1/500 1/250 1/125 1/60 1/30 1/15 1/8 1/4 1/2 MOVEMENT BLUR

ISO
How sensitive the sensor is to light. The lower the ISO the less sensitive. Use a higher setting in low light conditions. This can create graininess (noise).

Shutter Speed is measured in fractions of a second or whole seconds. For example 1/100 (One hundredth of a second)
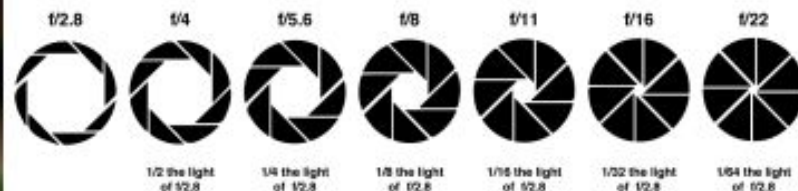
Shutter speed: 1/250   Shutter speed: 1/100   Shutter speed: 1/50   Shutter speed: 1/8

Shutter Speed
How long the shutter opens for and lets light to the sensor i.e. 1/2 = 0.5 seconds.

Fast Shutter Speed   Slow Shutter Speed

Aperture controls the size of the hole that allows light into the camera when taking a photograph. Often called F/Stop.

Aperture
Similar to Your eye. How much light is allowed to come through to the sensor.

f/2.8   f/4   f/5.6   f/8   f/11   f/16   f/22

1/2 the light of f/2.8   1/4 the light of f/2.8   1/8 the light of f/2.8   1/16 the light of f/2.8   1/32 the light of f/2.8   1/64 the light of f/2.8

Large Aperture (f/1.4 to f4)   Small Aperture f/11 to f/32

ISO is a camera setting that can brighten or darken a photograph. This works by increasing or decreasing the sensor sensitivity.
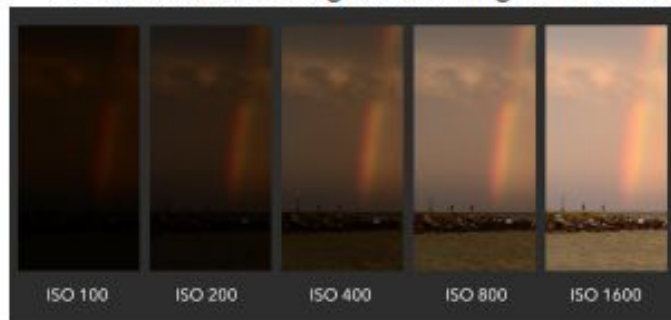
Increasing the ISO can help the camera take photos in low light conditions.

However a high ISO will add noise/graininess to the photo.

ISO 100   ISO 200   ISO 400   ISO 800   ISO 1600

CLEAN IMAGE   NOISY IMAGE

Graphic Design Knowledge Organiser
Year 11 (Advertising) : Term 1:1

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Inspiration – Advertising

Saul Bass – 1920-1996
Saul Bass was most famous for creating simplistic but effective movie posters for directors like Alfred Hitchcock, Stanley Kubrick and Martin Scorsese.

Hattie Stewart
Hattie Stewart is an artist and illustrator who is famous for her 'doodle bombing" magazine covers her work has now become so successful she provides illustrations to help advertise Adidas and the iTunes festival.

Shepard Fairey – 1970
Street artist, graphic designer, illustrator and founder of Obey clothing. One of his most famous pieces of graphic design is his advertisement supporting Barak Obama's presidential electoral push.

Graphic Design components

Composition - is the area of graphic design where all the separate elements come together to form a whole. When all of your type, your images, your graphics and colours, come together to form one cohesive design.
A successful composition means that you have arranged, distributed, aligned and compiled your design in a way that not only looks good but is also highly functional and effective.

Imagery - Using images to communicate ideas is essential to achieve successful graphic designs. Imagery is very common throughout the majority of graphic design areas:-
- **Logos and branding**
- **Packaging**
- **Advertising**
- **Web and app design**
- **Publication graphic design (books, newspapers, magazines)**
- **Motion graphics**
- **Environmental graphic design** (signage, wall murals, window graphics)
- **Art and illustration graphics** (t-shirt design, book illustration and covers, video games, album art etc.)

Imagery is a great tool in communication world wide as it can express feeling in information without using a language.

ASSESSMENT CRITERIA

Competence - How you complete and improve your work using the project activities.

Technical ability – How yow have used the Graphic design components to creatively produce a successful outcome.

KEY VOCABULARY

Composition, Imagery, Alignment, Colour

Graphic Design Knowledge Organiser
Year 11 : Term 1:1

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Advertising designers

How do you think Saul Bass created his posters?
....
....
....

What stands out about the work Hattie Stewart?
....
....
....

How does Shepard Fairey use tone in his work?
....
....
....

What must you consider when creating a graphic design with successful composition?
....
....
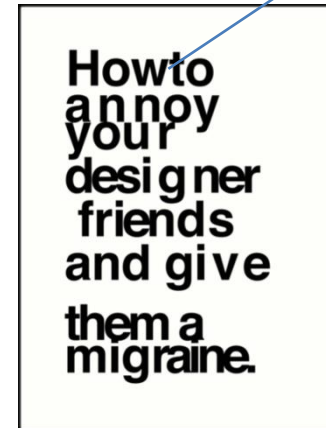..

Name five areas of graphic design where imagery is essential.
•
•
•
•

Add an arrow to the composition mistakes in the poster below. There are seven mistakes. The first is done for you.

No space between the words.

Howto annoy your designer friends and give them a migraine.

What is meant by alignment in Graphic design?
....
....
....

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Artists		Themes	Techniques	Vocabulary	Explained
	Sandra Meech	Trees	Painting and collage	Composition	The arrangement of a piece of work or the 'layout'.
	Rosie James	Figures	Stencil printing	Linear drawing	A drawing created with lines.
	Cas Holmes	Found Objects	Mixed-media collage	Mixed-media	Work that combines various visual **art media**—for example, one that combines paint, ink, and collage.
	Naomi Renouf	Coast	Fabric pastels	Tonal	The degree of lightness or darkness of an area. Tone varies from the bright white of a light source through shades of grey to the deepest black shadows.
	Tilleke Schwarz	Doodles	Hand stitching	Narrative	A spoken or written account of connected events; a story.
	Gwen Hedley	Abstraction	Wax resist	Abstract	Not representing reality, but exploring shape, colour and textures.
	Nicola Henley	Birds	Mixed-media paintings	Expressive	Conveying thought or feeling in the work.

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Answer the following questions in your reflection log.

What does the word 'composition' mean?

What does the word 'mixed-media' mean?

Which artist uses figures as one of her main themes? What techniques does she use?

What word could you use to describe showing thought or feeling in the work?

Naomi Renouf likes to work using pastels. What theme inspires her work?

Choose two artists from the page and create some research about them.

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