KNOWLEDGE ORGANISER

Year 11
Half Term 3

UNITY
ACADEMY BLACKPOOL

Name:

Tutor Group:

Academic Year:
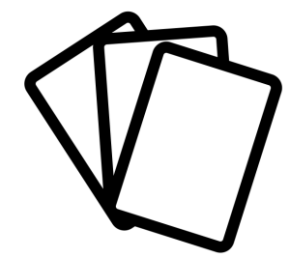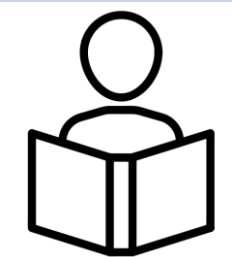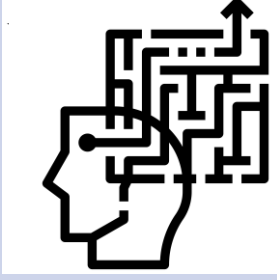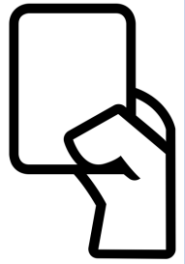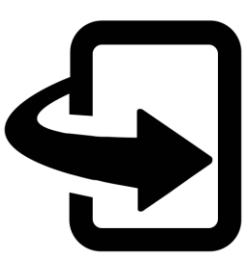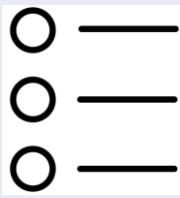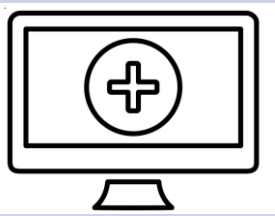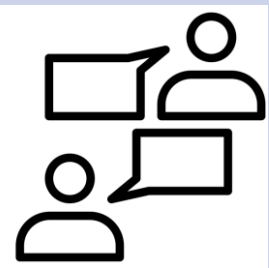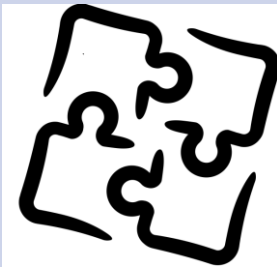
How to use your Knowledge Organiser

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

An Inspector Calls

Context

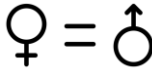|	
	Class system: society in 1912 was clearly structured into **upper class** (Lord and Ladies, royalty, people with **inherited wealth**); **middle class** ('white collar' workers: business owners, doctors, lawyers etc); and **working class** (manual labourers). Judgements about people's characters were often made based on their class: *"Girls of that class – " (Mrs Birling, hinting that working class women are wild and unpredictable, Act 2)*
	Capitalism: a **social system** that believes individual wealth is good for society. Business are owned by private individuals who can compete for *"lower costs and higher prices" (Mr Birling, Act 1).* Priestley hated Capitalism; he created Mr and Mrs Birling to show **Capitalist** ideas as outdated and selfish.
	Socialism: a social system that believes business and industries should be owned by everyone, so that all profit equally from their success. The Inspector is a **Socialist** voice; he believes *"We are members of one body. We are responsible for each other." (The Inspector, Act 3)*
	Women: Society in 1912 was **patriarchal**; women were at a significant disadvantage. They received lower wages than men, they were not able to vote and they were often looked down on. Women were not expected to voice opinions, which is why Mr Birling fires Eva: *"She had a lot to say - far too much - so she had to go" (Mr Birling, Act 1)*

Big Ideas

Generational differences	The older **generation** (Mr and Mrs Birling) are a symbol of Capitalism, so they do not change their ways and they are reluctant to accept **blame** for their role in Eva's demise. The younger generation, on the other hand (Sheila and Eric) become a symbol of Socialism as the play progresses. They accept blame and want to change; they change throughout the play, for the better.
Responsibility	The Inspector, as **Priestley's mouthpiece**, is a symbol of Socialism – he wants everyone to look after each other and to view **community** as very important. He is sent to uncover the family's wrongdoings and to make them see that they should take **responsibility** for others. Sheila and Eric realise this, but Mr and Mrs B do not.
Gender inequality	Priestley wanted to show his audience that there was a lot of **inequality** back in 1912 when it came to how women were treated. By making certain characters out to be sexist, he highlighted this problem and tried to shame audiences into changing their own views about **gender equality** too. This is perhaps why the **victim** of their actions is a woman, and why she is working class (working class women were at the bottom of the pile).

Key Quotes

' A man has to mind his own business and look after himself and his own-' Arthur Birling
'She was claiming elaborate fine feelings and scruples that were simply absurd in a girl in her position' – Sybil Birling
'I felt rotten about it at the time and now I feel a lot worse'- Sheila Birling
'I suppose it was inevitable. She was young and pretty and warm heart- and intensely grateful.- Gerald Croft
'You never understanding anything. You never did. You never even tried'- Eric Birling
'We don't live alone. We are members of one body. We are responsible for each other.' – Inspector Goole

Transferable knowledge

Morality Play	A play with a **moral** message (a message about right and wrong), traditionally where characters **personify** abstract qualities designed to educate or challenge the **audience**. For example, Mr Birling is a **symbol** of Capitalism; the Inspector is a **symbol** of Socialism. **Priestley** uses both these characters as a means of exploring these concepts.
Allegory	A story, poem, or picture that can be interpreted to reveal a hidden meaning, typically a moral or political one.
The text is a construct	Don't forget! **Nobody in the play is real:** every character has been *created* by JB Priestley in order to make a specific point or serve a purpose. For example, Eva Smith is a **symbol** of the working class: she has been created by Priestley to represent a larger group of people.

An Inspector Calls

Context

- When was 'An Inspector Calls' written?
- When was it set?
- Describe the British class system before the First World War.
- What is the difference between Socialism and Capitalism?
- Describe Priestley's political beliefs.
- Explain the significance of each icon around this box.

Big Ideas

Generational differences	• What is the difference between the responses of the old and young characters to the Inspector? Write a page of your reflection log for Eric and Sheila, then one for Mr and Mrs Birling, to show how they respond.
Responsibility	• Which members of the family accept responsibility? Which do not? • What is Priestley's message to his audience? • How are Priestley's ideas about socialism expressed through the responses of each character?
Gender inequality	• Why is Eva Smith's position in society 'weakened'? • How is the theme of social class introduced at the start of the play? • How does Mrs Birling refer to Eva Smith? • Why is Mr Birling dismissive of his factory workers? • Write a page of your reflection log to summarise your understanding of the role of women in the play.
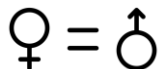
Key Quotes

- 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

Morality Play	• Describe the conventions of a Morality Play. Explain how 'An Inspector Calls' fits into this genre.
Allegory	• What is an allegory? How does this term apply to 'An Inspector Calls'?
The text is a *construct*	• Explain what is meant by this phrase. • For each character, explain why they have been constructed – what might Priestley have wanted to achieve through each one?

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 'An Inspector Calls'.

Extra research: Characters

- How is Arthur Birling described in the stage directions?
- How does Mr Birling view Sheila's engagement?
- Describe Mrs Birling's personality.
- What is Mrs Birling's primary concern?
- Describe the change in Shelia's attitude as the play progresses.
- How is Eric introduced? What are your first impressions of him?
- Why might Eric be most responsible for the family's downfall?
- Give a quotation that suggests Gerald may not have treated Eva fairly.
- Give a quotation that summarises the Inspector's attitude towards society

Our Galaxy

Our solar system is a small part of a galaxy called the Milky Way.
Our star (The Sun)
is just one of approximately
300 000 000 000 stars in
our galaxy.
There is thought to be a
massive black hole at the
Centre of the Milky Way.
The Universe is thought
to have formed about 13.7 billion years ago.
The solar system formed around 4.6 billion years ago.

Our Solar System

The **solar system** is any object that is bound by **gravity** to a **Sun**.
All objects in the solar system **orbit the Sun**.

PLANETS
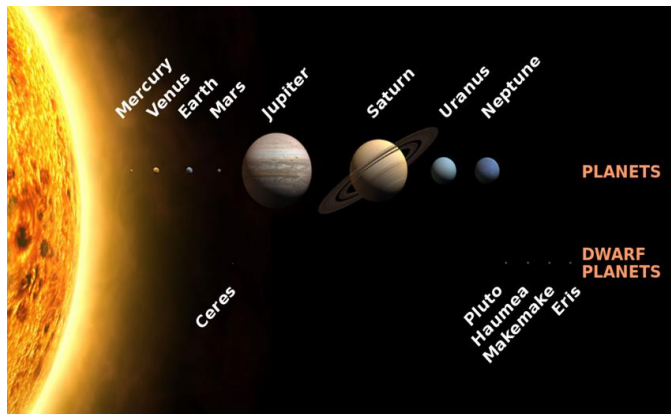
DWARF PLANETS

In our solar system there is: one star – the Sun, eight planets, dwarf planets & natural satellites called moons that orbit planets.
Other objects in The solar system include: Comets, Asteroids & Satellites. Dust, ice & rocks make up the remaining mass.

Stability of the Sun
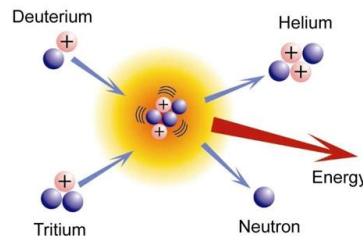
The Sun, like all stars, releases energy through nuclear fusion reactions in the core. Two isotopes of Hydrogen (Deuterium and Tritium) are forced together **under high temperature and pressure**. **Nuclear fusion occurs** to form Helium and a neutron. A tiny amount of **mass is converted** into a large amount of **energy**, which is why stars emit a lot of energy.

The heat produced in the fusion process makes the star expand through thermal pressure. Gravitational attraction is pulling the mass of the star inwards.
In a stable star, thermal expansion and gravitational attraction are equal so the star remains the same size.
This balance can change later in a star's life when a great increase in thermal pressure can cause it to expand.
Fusion processes in stars produce all of the naturally occurring elements.
Elements heavier than iron are produced in a supernova.
The explosion of a massive star (supernova) distributes the elements throughout the universe.

H → He Fusion

Pressure

Gravity

Mostly Hydrogen
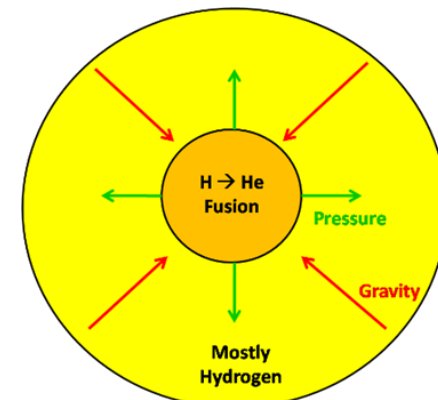
Life Cycle of a Star
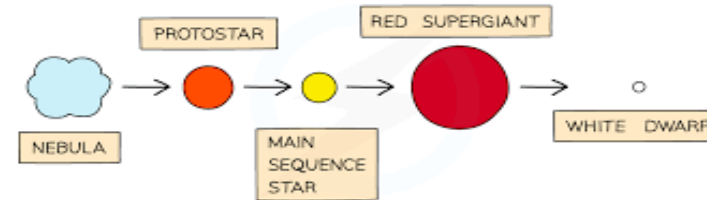
Stars go through a life cycle which is different for small stars and massive stars.
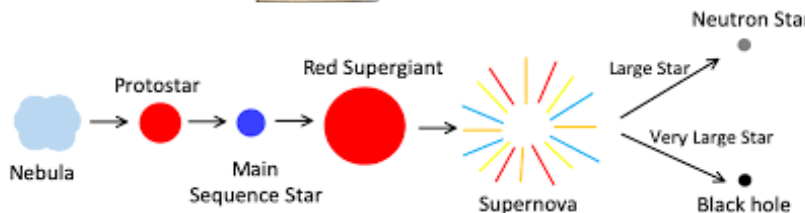
speed = m/s   Distance – m   Voltage – V

Physics Knowledge Organiser - Paper 2 Space

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

Our Galaxy:

1. **What is the name of our galaxy?**
2. **How many stars does it hold?**
3. **How old is the galaxy?**
4. **How old is the Solar System?**

Life Cycle of a Star:

1. **List types of stars.**
2. **Draw a flow chart for the life cycle of a small star (our Sun).**
3. **Draw a flow chart for a massive star (Betelgeuse).**

Our Solar System:

1. **What objects are in the solar system?**
2. **List the planets in order from the sun outwards.**

Further Opportunities:

Keep a sky diary by watching the sky each night at the same time and drawing, photographing and writing your observations down.

Visit an observatory and experience a lecture and observation of planets using a telescope.
http://www.star.uclan.ac.uk/observatories/alston-observatory-events/

Visit the NASA website and view photographs of celestial objects and research and write a report on current Space Missions.
https://spaceplace.nasa.gov/

Stability of the Sun:

1. **What is the starting element that makes up the sun?**
2. **What is the process called that gives out energy?**
3. **What element is created in this process?**
4. **What store of energy pushes outwards?**
5. **What store of energy balances this in our sun?**
6. **What happens if the forces created by these two energy sources is not equal?**
7. **Where are heavier elements created?**

Acceleration – m/s² · Time – s · Power – W · Energy – J · mass – kg

Current – A · Resistance - Ω · Charge – C · Force - N

$$\text{mass} - \text{kg}\quad \text{Energy} - \text{J}\quad \text{Power} - \text{W}\quad \text{Time} - \text{s}\quad \text{Acceleration} - \text{m/s}^2\quad \text{speed} = \text{m/s}$$

Red Shift
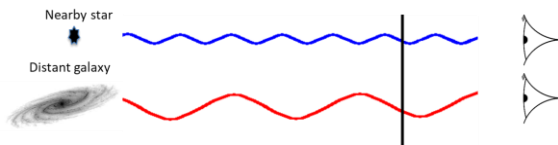
Light from a **nearby star** appears **white** as the wavelength of light emitted covers the **whole visible spectrum**.

The light we receive from a **distant galaxy** has had its **wavelength increased**.

As longer wavelengths of light are the red end of the spectrum, the light appears redder than from the nearby star – this is called **RED SHIFT**.
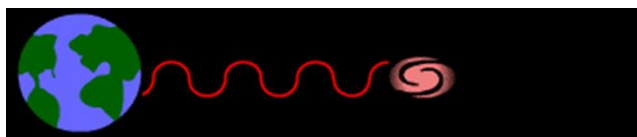
Red shift happens because the galaxy is moving away from us at high speed, causing the wavelengths of light to be stretched.

The further away the galaxies the faster they are moving and the bigger the increase in wavelength.

This observed red-shift provides evidence that the universe is expanding and supports the Big Bang theory

Big Bang Theory

Like a balloon expanding, all **galaxies** are **moving away from each other.** **This** has led to the **Big Bang theory** that the Universe expanded from a single point of matter around 13.7 billion years ago. **Current evidence suggests that the universe is expanding (red shift) and that matter and space expanded violently and rapidly from a very small initial point. i.e. the universe began with a big bang.**

Orbits & Speed

Gravity pulls the Earth (and other planets) towards the sun. The planet is effectively "falling" towards the sun but is travelling fast enough so that it constantly misses falling into the sun.
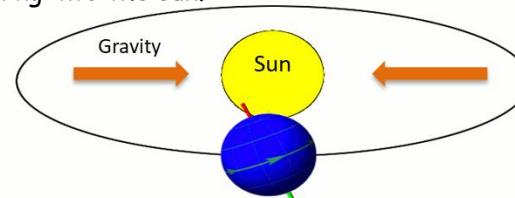
This is like a cannon firing a cannonball at just the right speed so it does not escape into space or fall down to Earth. This is how planets, moons and artificial satellites remain in orbit around larger objects in space
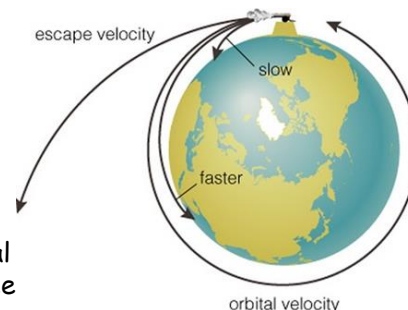
The force of **gravity increases** the **closer an object** orbits. To avoid being pulled into the sun, a planet must be travelling faster, the closer it is to the sun. This is why **Mercury's** orbit of the sun takes **3 Earth months** whereas it takes **Neptune 165 Earth years** to orbit the sun.

Orbits & Speed (Higher Tier)
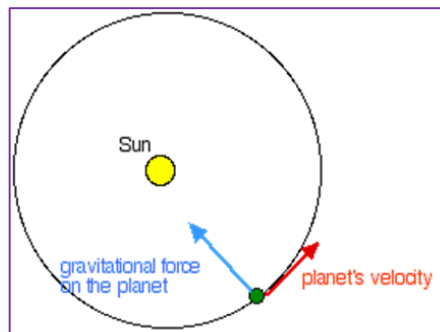
In a perfectly circular orbit, a body will travel at constant speed to maintain its orbital distance However, gravity is constantly changing the direction of the body. As velocity depends on speed and direction, the velocity is constantly changing even though speed remains the same. This applies to planets, moons and satellites.

speed = m/s   Acceleration – m/s² Time – s Power – W Energy – J mass – kg

Distance – m Voltage – V Current – A Resistance - Ω Charge – C Force - N

Physics Knowledge Organiser - Paper 2 Space

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

Red Shift:

1. **What happens to wavelengths from distant galaxies?**
2. **What is this phenomenon called?**
3. **What is it evidence for?**

Orbits and speed (HT):

1. **Describe the speed of an orbiting body in a perfectly circular orbit.**
2. **Describe the velocity of an orbiting body in a perfectly circular orbit.**

Big Bang Theory:

1. **What are galaxies all doing?**
2. **What is the Big Bang Theory?**

Orbits and speed:

1. **What is the force that keeps the Earth, and other planets orbiting the Sun?**
2. **Give examples of other orbiting bodies.**
3. **What happens to gravity if a body is closer in an orbit?**
4. **How does this affect the speed of the orbiting body?**
5. **Explain why Mercury takes 3 Earth Months to orbit the Sun and Neptune takes 165 Earth Years to orbit the Sun.**

Further Opportunities:

Keep a sky diary by watching the sky each night at the same time and drawing, photographing and writing your observations down.

Visit an observatory and experience a lecture and observation of planets using a telescope.
http://www.star.uclan.ac.uk/observatories/alston-observatory-events/

Visit the NASA website and view photographs of celestial objects and research and write a report on current Space Missions.
https://spaceplace.nasa.gov/

Biology Knowledge Organiser
Year 11: Ecology

IN UNITY WE SUCCEED — ACADEMY BLACKPOOL

Ecology: eco- (Gk. OIKOS, house) + -logy (the study of)

KEY VOCAB

Adaptations – Features that enable organisms to survive. Functional, structural or behavioural.

Community - Group of interdependent organisms in an ecosystem.

Competition - The process by which organisms compete for resources e.g. food, light.

Extremophile - Organisms that can survive in extreme conditions.

Biomass – Mass of biological material in an organism.

Ecosystem – Interaction of living organisms with the non-living parts of the environ..

Carbon Cycle - cycling of carbon through the living and non living world.

Environment - surrounding air, water and soil where an organism lives.

Biodiversity - The variety of living things. The differences between individuals of the same species, or the number of different species in an ecosystem.

Population - Group of same species living in an area.

Decomposer - Organism that breaks down dead plant and animal material; nutrients are recycled.

Habitat – The place where an organism lives.

INTERDEPENDENCE - relationships between different organisms within a community

Food chains

Plant → Insect → Mouse → Owl

Producers produce their own food using the suns energy

Primary consumers eat producers (herbivores)

Secondary consumers eat primary consumers (carnivore/omnivore)

Tertiary consumers eat secondary consumers (carnivores)
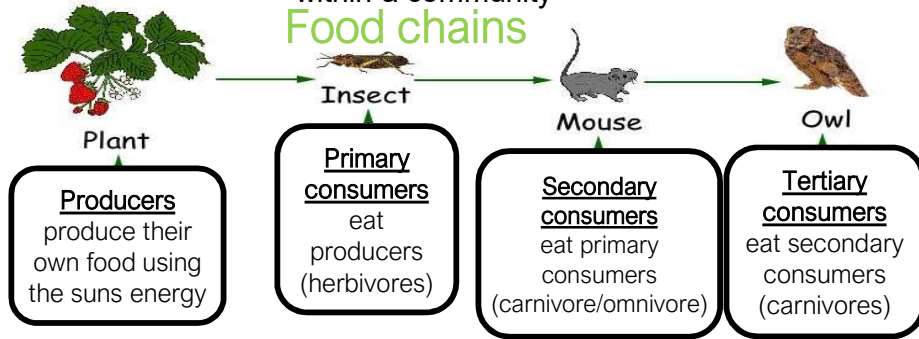
A food web is the interaction of multiple food chains within a habitat

Photosynthetic organisms are the producers of biomass for life on Earth

Biotic factors	(Living)	Abiotic factors	(Non-Living)
availability of food		• light intensity	
new predators arriving		• Temperature	
new pathogens		• moisture levels	

Pyramid of numbers		3 ladybirds 30 aphids 1 rose bush
Pyramid of biomass		Each bar shows the biomass at each level of the food chain
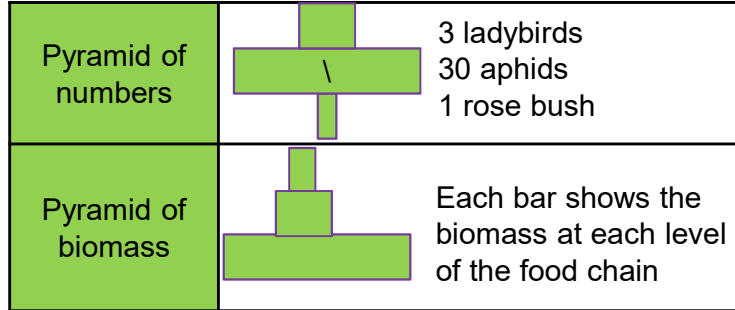
HUMAN IMPACT

Pollution type	Examples
Water	Sewage
	Fertilisers
	Toxic chemicals
Air	Smoke
	Acidic gases (SO_2)
Land	Landfill
	Toxic chemicals

Destruction of peat bogs	Reduction in biodiversity. Burning the peat releases CO_2
Deforestation for agriculture and biofuels	Reduction in biodiversity. Reduces ability to absorb CO_2
Global warming	Extreme weather. Famine

THE CARBON AND THE WATER CYCLE

Atmosphere Carbon dioxide (CO_2)

Burning — Fossil fuels

Photosynthesis

Respiration

Animals — Feeding — Plants

Dies — Decomposers — Dies

Cooling — Clouds — Precipitation

Condensation — Water vapour — Transpiration

Evaporation — Surface run-off — Percolation

Ocean

SAMPLING

Quadrats	Organisms are counted within a randomly placed square
Transects	Organisms are counted along a belt (transect) of the ecosystem.

Key vocabulary

1. **What is a community?**
2. **Name the three types of adaptations**
3. **What is an ecosystem?**
4. **Define extremophile**
5. **Give an example of what living organisms compete for.**

Interdependence

1. **Which type of organism is always at the start of a food chain?**
2. **What is the name given to an animal that eats producers?**
3. **What do secondary consumers eat?**
4. **What do the arrows in a food chain represent?**
5. **What is a food web?**
6. **List 4 abiotic factors**
7. **List 4 biotic factors**

The carbon and the water cycle

1. **What is the scientific name for rain, sleet, snow and hail?**
2. **Which process occurs in clouds?**
3. **Where does water evaporate from in the water cycle?**
4. **Name two processes, in the carbon cycle, that put carbon back into the atmosphere**
5. **Name the three fossil fuels**
6. **How do plants remove carbon from the atmosphere?**
7. **How does carbon from plants get into animals?**

Human impact

1. **What are the three types of pollution?**
2. **State the two effects of global warming**
3. **Give three examples of water pollution**

Sampling

1. **What is a quadrat?**
2. **What is a transect?**

Further opportunities
1. Visit Oak Academy and work through the Ecology lessons.https://classroom.thenational.academy/units/ecology-a6da
2. Describe how to use a quadrat to determine the abundance of a particular plant species in a large area Use the following link to help you:
https://www.youtube.com/watch?v=-PqLJZrsOqY
3. Choose 3 organisms and describe their structural, functional and behavioural adaptations. Explain how these adaptations enable them to survive in the habitat in which they live. This short video may help:
https://www.kayscience.com/vb16-functional.html

Pure substances

A pure substances is a single element or compound, not mixed with any other substance.

Pure substances melt and boil at specific temperatures.
Heating graphs can be used to distinguish pure substances from impure.
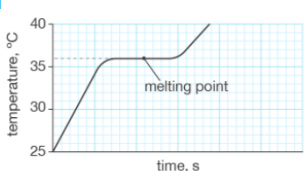
| *Melting point of a pure substance* | *Melting point of an impure substance* |

Gas Tests

Gas	Test	Positive result
Hydrogen	*Burning splint*	'Pop' sound.
Oxygen	*Glowing splint*	Re-lights the splint.
Chlorine	*Litmus paper (damp)*	Bleaches the paper white.
Carbon dioxide	*Limewater (Calcium hydroxide (aq)*	Goes cloudy (as a solid calcium carbonate forms).

Formulations

A formulation is a mixture that has been designed as a useful product.

Formulations are made by mixing chemicals that have a particular purpose in careful quantities

Examples of formulations: **Fuels, cleaning agents, paints, medicines and fertilisers**

Chromatography

Can be used to separate mixtures and help identify substances.

Involves a **mobile phase** (e.g. water or ethanol) and a **stationary phase** (e.g. chromatography paper).

R$_f$ *Values*= *The ratio of the distance moved by a compound to the distance moved by solvent.*

$$R_f = \frac{distance\ moved\ by\ substance}{distance\ moved\ by\ solvent}$$
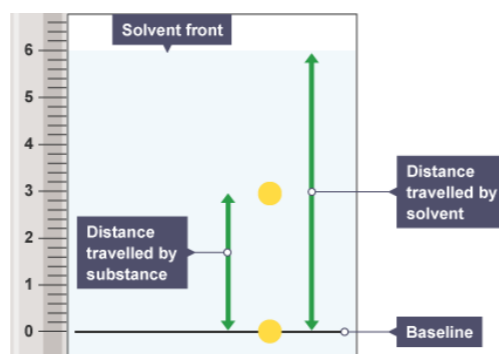
A pure substance will produce a single spot in all solvents whereas an impure substance will produce multiple spots.

Flame tests

Different metal **ions (cations)** produce different flame colours when they are heated strongly.

Metal ion	Colour flames
Lithium Li$^+$	*Crimson*
Sodium Na$^+$	*Yellow*
Potassium K$^+$	*Lilac*
Calcium Ca^{2+}	*Orange-red*
Copper Cu^{2+}	*Green*

If a mixture of ions is present, some of the flame colours may not be clearly visible. One colour tends to 'mask' the other(s).

Metal Hydroxides

Sodium hydroxide solution can be added to solutions to identify some metal ions (cations).
Insoluble metal hydroxide precipitates of different colours are formed.

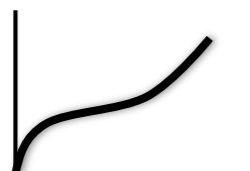| White precipitates	**Aluminium, calcium and magnesium ions** form this with sodium hydroxide solution. **If you continue to add sodium hydroxide until it is *in excess* the aluminium re-dissolves to form a colourless solution.**
Coloured precipitates	**Copper (II) = blue** **Iron (II) = green** **Iron (III) = brown**

Instrumental techniques

Elements and compounds can be detected and identified using instrumental methods.

Instrumental methods are
• **Accurate**
• **Rapid**
• **Sensitive**

Flame emission spectroscopy is an example of an instrumental method used to analyse metal ions.

Testing for anions- Carbonates, sulfates, halides

Carbonate Ions (CO$_3^{2-}$)	React with dilute acids to form carbon dioxide, which turns limewater cloudy.
Halide ions (Cl$^-$,Br$^-$, I$^-$)	• Add a couple of drops of dilute nitric acid. • Follow with a couple of drops of silver nitrate solution. • Chloride = white precipitate • Bromide= Cream precipitate • Iodide = Yellow precipitate.
Sulfate ions	• Add a couple of drops of dilute hydrochloric acid. • Add a couple of drops of barium sulfate solution. • A white precipitate will form if sulfate ions are present.

KS4 Chemistry – Topic 8 -Chemical Analysis

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

Pure substances

1. What is meant by a pure substance?
2. Describe the melting and boiling point of a pure substance.
3. Sketch a graph to show the melting point of a pure substance. Extension: Describe what is happening.
4. Sketch a graph to show the melting point of an impure substance

Formulations

1. Define the term formulation.
2. How are formulations made?
3. Give 3 examples of formulations.

Flame tests

1. What colour flame do lithium ions produce?
2. What colour flame do sodium ions produce?
3. What colour flame do potassium ions produce?
4. What colour flame do calcium ions produce?
5. What colour flame do copper ions produce?
6. What happens if a mixture of ions are present?

Instrumental techniques

1. What are instrumental methods used for?
2. Give 3 words that describe instrumental methods.
3. Give an example of an instrumental method and what is used for.

Gas Tests

1. Describe the test and positive result for hydrogen gas.
2. Describe the test and positive result for oxygen gas.
3. Describe the test and positive result for carbon dioxide gas.
4. Describe the test and positive result for chlorine gas

Chromatography

What is chromatography used for?
How can we calculate the Rf value of a substance?
How many spots will a pure substance produce?
What are the names of the 2 phases involved in chromatography?
Give an example of each of the above phases.

Carbonates, sulfates, halides

1. Which solution can be used to identify some metal ion?
2. Solutions of which ions form white precipitates when sodium hydroxide solution is added?
3. Which ion redissolves when excess sodium hydroxide is added?
4. Give the colour of the precipitate formed with Copper (II) ions.
5. Give the colour of the precipitate formed with Iron (II) ions
6. Give the colour of the precipitate formed with Iron (III) ions

Testing for anions- Carbonates, sulfates, halides

1. What do carbonates react with and what do they form?
2. How can we test for carbon dioxide?
3. Describe how to test for halide ions.
4. What colour precipitate do chloride ions form?
5. What colour precipitate do bromide ions form?
6. What colour precipitate do iodide ions form?
7. Describe how to test for sulfate ions and give the colour of the precipitate produced.

Further Opportunities

1. Complete Oak Academy lessons- https://classroom.thenational.academy/units/chemical-analysis-cf8d

2. Research how flame emission spectroscopy works.

3. Complete Seneca for this topic – C8 Chemical Analysis.

Algebra

Topic/Skill	Definition/Tips	Example
1. Expression	A mathematical statement written using **symbols**, **numbers** or **letters**,	3x + 2 or 5y²
2. Equation	A statement showing that **two expressions are equal**	2y – 17 = 15
3. Identity	An equation that is **true for all values** of the variables An identity uses the symbol: ≡	$2x \equiv x+x$
4. Formula	Shows the **relationship** between **two or more variables**	Area of a rectangle = length x width or A= l x w
5. Simplifying Expressions	**Collect 'like terms'** Be careful with negatives. x^2 and x are not like terms.	$2x + 3y + 4x - 5y + 3 = 6x - 2y + 3$ $3x + 4 - x^2 + 2x - 1 = 5x - x^2 + 3$
6. x times x	The answer is x^2 not $2x$.	Squaring is multiplying by itself, not by 2.
7. $p \times p \times p$	The answer is p^3 not $3p$	If p=2, then p^3=2x2x2=8, not 2x3=6
8. $p + p + p$	The answer is 3p not p^3	If p=2, then 2+2+2=6, not $2^3 = 8$
9. Expand	To expand a bracket, **multiply** each term **in the bracket** by the expression **outside** the bracket.	$3(m + 7) = 3x + 21$
10. Factorise	The **reverse** of **expanding**. Factorising is writing an expression as a product of terms by **'taking out' a common factor**.	$6x - 15 = 3(2x - 5)$, where 3 is the common factor.

Topic: Algebra

Topic/Skill	Question
1. Expression	Which of the following is an expression? $5x + 2 = 7$ $5y$ $3x + 5y$
2. Equation	Solve the following equations: 4x + 4 = 24 10x - 12 = -7
3. Identity	Are the following identities? $5x + 3x \equiv 6x + 2x$ $5y - y \equiv 6y$ $p + p + p \equiv 2p + p$
4. Formula	What is the formula for the area of a triangle?
5. Simplifying Expressions	Simplify the following: $5p - 3p + p$ $m^3 + m^3$ $10 + 3c + 5d - 7c + d$
6. Multiplying terms	Simplify: t x t 4a x 3a
7. Multiplying terms	Simplify: r x r x r f x f x f x f 5g x 3g x 2g
9. Expand	Expand the following: $5(x + 2)$ 8(2x + 7) 9(9x - 5)
10. Factorise	Factorise the following: $6x + 12$ $20 - 5x$ $24x + 36$

EBACC

French Knowledge Organiser
GCSE core information

Year 11/Theme 2
LOCAL, NATIONAL, INERNATIONAL AND GLOBAL AREAS OF INTEREST

UNITY
ACADEMY BLACKPOOL

Prior Knowledge

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.

J'aimerais aider les autres à être bien dans leur peau

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

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.

Les bénévoles

Emphatic pronouns

Emphatic pronouns are used after prepositions like *pour* (for), *avec* (with) and *chez* (at …'s house).

emphatic pronouns	
moi	nous
toi	vous
lui/elle	eux/elles

Pour **moi**, c'est important d'aider les autres.
For **me**, it's important to help others.

Pourquoi ne pas discuter avec **eux**?
Why not talk to **them**?

Indirect object pronouns

Indirect object pronouns mean 'to me', 'to him', etc. They replace nouns that are used after the preposition *à*, e.g. after the verbs *dire à* (to say to) and *offrir/donner à* (to offer/give to). The word 'to' is not always used in English.

Indirect object pronouns go in front of the verb.

	indirect object pronoun
(to) me	**me** or **m'**
(to) you	**te** or **t'**
(to) him/her	**lui**
(to) us	**nous**
(to) you	**vous**
(to) them	**leur**

Je **lui** donne le bras. I give **him/her** my arm.
Je **leur** rends visite. I visit **them**.

Notre planète

The simple future tense

When you use the **simple future tense** to talk about the weather, you are mostly using the third person singular (*il* form) of *faire*, *avoir* and *être*. The *il* form ending is -*a*.

Il **fera** frais.   It will be chilly.
Il y **aura** du vent.   There will be wind./It will be windy.
Le temps **sera** orageux. The weather will be stormy.

How does it work?

● The future tense is formed with the future stem of the verb + the future tense endings.

future tense stem		future tense endings
-er/-ir verbs	use the infinitive	je travaillerai
-re verbs	remove the final -e from the infinitive	tu travailleras
avoir	aur-	il/elle/on travaillera
être	ser-	nous travaillerons
aller	ir-	vous travaillerez
faire	fer-	ils/elles travailleront

L'environnement

How do modal verbs and il faut work?

● Modal verbs and *il faut* are almost always followed by the infinitive.
  Je dois travailler. I must work.
● Here is the present tense of these three modal verbs and *il faut*:

pouvoir (to be able to)	devoir (to have to)	vouloir (to want to)	il faut (it is necessary to)
je peux (I can)	je dois (I must)	je veux (I want)	
tu peux	tu dois	tu veux	
il/elle/on peut	il/elle/on doit	il/elle/on veut	il faut
nous pouvons	nous devons	nous voulons	
vous pouvez	vous devez	vous voulez	
ils/elles peuvent	ils/elles doivent	ils/elles veulent	

● To make a modal verb negative, put *ne … pas* around the modal.
  Je ne veux pas aller à Paris. I don't want to go to Paris.

Use *pouvoir* and *devoir* in the conditional, followed by the infinitive of another verb, to mean 'could' or 'should'.

Add the usual endings for the conditional to the stem of the verb, which is irregular in each case:

pouvoir: je **pourr**ais   tu **pourr**ais   il/elle/on **pourr**ait
               (I could)   (you could)   (he/she/one could)
devoir: je **devr**ais   tu **devr**ais   il/elle/on **devr**ait
               (I should)   (you should)   (he/she/one should)

Je pourrais aller au collège à vélo. **I could** go to school by bike.
On devrait utiliser les transports en commun. **We should** use public transport.

Mes responsabilités

The passive

The passive is used to talk about things that **are done** (or **have been done**, **will be done**, etc.). To form it, use *être* in the appropriate tense, followed by a past participle. The past participle must agree with the subject.

present	Le coton **est cultivé**. Les balles de coton **sont transportées**.	Cotton **is grown**. The cotton balls **are transported.**
perfect	Le tissu **a été fabriqué**.	The fabric **has been made/was made.**
future	Ton tee-shirt **sera vendu**.	Your T-shirt **will be sold.**

Foundation Tier

HigherTier

Foundation Tier

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.

Want more practice? CGP French workbook. Page 46 & 47.

Translate these sentences into English.

1 La lettre est écrite par ma mère.
2 Les animaux ne sont pas admis.
3 Mon gâteau est ruiné!

4 L'émission est regardée par des millions de téléspectateurs.
5 Cet uniforme est porté par les pilotes.
6 L'idée est proposée par le Premier ministre.

Want more practice? CGP French workbook. Page 54 & 55.

Choose the correct verb from the box to complete the translation of each sentence in brackets.

voulons	dois	devez	veux	peux	doit	peuvent	voulez

1 Je ____ attendre ici.   (I must wait here.)
2 Je ____ aller en ville.   (I want to go to town.)
3 Je ____ sortir ce soir.   (I can go out tonight.)
4 Il ____ être fatigué.   (He must be tired.)

Want more practice? Studio Text book Page 212 & 213

HigherTier

Translate this article about the future into English.

Dans le futur, il y aura beaucoup de robots. Ces robots parleront et penseront comme nous, les humains. Un robot type sera très pratique: il aidera à faire le ménage, préparera nos repas et s'occupera de nos enfants. Le robot fera les devoirs et rangera la chambre des enfants. Mais il ne nous aimera pas!

Want more practice? CGP French workbook. Page 46 & 47.

Translate these sentences into English.

1 La lettre est écrite par ma mère.
2 Les animaux ne sont pas admis.
3 Mon gâteau est ruiné!

4 L'émission est regardée par des millions de téléspectateurs.
5 Cet uniforme est porté par les pilotes.
6 L'idée est proposée par le Premier ministre.

Want more practice? CGP French workbook. Page 54 & 55.

Translate these sentences into French.

1 I can take the bus.
2 We will have to take the bus.
3 She had to take the bus.
4 My friends wanted to take the bus.
5 Alex will be able to take the bus.
6 They ought to take the bus.
7 You (vous) could (= would be able to) take the bus.
8 We couldn't (= were not able to) take the bus.
9 I didn't want to take the bus.
10 You (tu) should take the bus!

Want more practice? Studio Text book Page 220 & 221

UNITY WE SUCCEED

Variables and constants are used to store values in algorithms and programs. Variables and constants are defined as ' **a named memory location**'.

Variables' values can change while a program is running.

Constants' values must not change while a program is running.

Rules for naming variables/constants:
• Identifiers are the name of the variable or constant.
• They should 'describe' the data being stored.
• Short identifiers are quick/easy to write.
• Long identifiers are more descriptive.
• Identifiers cannot contain spaces must be consistent throughout the program.
    CamelCaseUsesUpperAndLowerCaseLetters
  Snake_case_links_all_the_words_with_an_underscore.

Operators are special characters that perform certain functions.

The **assignment operator is =**
It is used to assign values to constants or variables.

Comparison operators compare the value or expression on their left hand side to the value or expression on the right hand side and produce a Boolean value (True or False)

INPUT: Data that is put into the algorithm or program by the user.

OUTPUT:
• Data that is taken out of the program or algorithm and displayed to the user.
• This is usually done using a print statement.

SEQUENCE: Instructions are followed, one after the other in the order they are written.

SELECTION: Used in algorithms or programs to choose between two or more options.
Selection usually uses a combination of IF, ELSE and ELSE-IF statements.

IF/ ELSE statements are used when there are only 2 options.
• IF = QUESTION, followed by what to do if the answer is true.
• ELSE, what to do if the answer is False
• If there are more than 2 options, ELSE-IF is used.

Switch-case statements can also be used in selection;
• They are used when you want to perform different actions based on the value of ONE variable's value.

ITERATION: The process of repeating a set of instructions for a fixed number of times OR until there is a desired outcome. Iteration is carried out using a programming construct called 'loops'.

COUNT CONTROLLED loops repeat code a fixed number of times.
The number of iterations is known before the loop is started.

CONDITION CONTROLLED: loops are used when the number of iterations needed is not known.
The code is iterated while or until a condition is met.

DATA TYPE: A category or classification of data.
Used to make programs more robust and memory efficient.

• INTEGER: A negative or positive WHOLE number.
• REAL: A negative or positive decimal number.
• CHARACTER: A SINGLE number, letter or symbol.
• STRING: A collection of characters enclosed in speech marks.
• BOOLEAN: True or False

CASTING: A function which converts an item of data into a different data type.

int()	Converts to an integer
float()	Converts into a real number
bool()	Converts into Boolean
str()	Converts to a string
ASC()	Converts into ASCII code
CHR()	Converts into ASCII character

```
INT johnvote = 0, suevote = 0, alanvote = 0
STRING vote
vote = INPUT("Please cast your vote")
SWITCH vote:
    CASE "John":
        johnvote = johnvote + 1
        print("You've voted for John.")
    CASE "Sue":
        suevote = suevote + 1
        print("You've voted for Sue.")
    CASE "Alan":
        alanvote = alanvote + 1
        print("You've voted for Alan.")
ENDSWITCH
```

```
IF usertype == "Teacher" THEN
    Allow unrestricted access.
ELSEIF usertype == "Parent" THEN
    Allow level 1 restricted access.
ELSEIF usertype == "Pupil" THEN
    Allow level 2 restricted access.
ELSE
    Deny all access.
ENDIF
```

Arithmetic operators: Characters that perform arithmetic functions.

+	Addition
-	Subtraction
*	Multiplication
/	Division (decimal answer)
**	To the power of…
// DIV	Division (integer answer)
% MOD	Divides and returns the remainder.

WE SUCCEED

IN UNITY ACADEMY BLACKPOOL

What I need to know:

State how variables and constants are used in programming.

Define variable.

Define constant.

Outline the rules for naming constants/variables.

State what is meant by an operator

State what the assignment operator is used for in programming.

State the function of comparison operators.

Define the terms input / output.

Define the term sequence.

Outline what selection is used for in programming.

Define the term 'iteration'.

Describe the difference between count-controlled and condition controlled iteration.

Define the term data type.

Outline the 5 main data types.

Define the term casting.

Outline the function of the 6 main casting commands.

Define the term arithmetic operator.

List the 7 main arithmetic operators and their mathematic function.

REPEAT Loop:

```
INT total = 0
INT cost, coin, change
cost = total cost in pence
REPEAT
  coin = INPUT("Value of coin")
  total = total + coin
UNTIL total ≥ cost
change = total - cost
OUTPUT change
```

The loop starts at REPEAT and ends when the UNTIL condition is true — when the total is greater than or equal to the cost.

WHILE Loop:

```
INT total = 0
INT cost, coin, change
cost = total cost in pence
WHILE total < cost
  coin = INPUT("Value of coin")
  total = total + coin
ENDWHILE
change = total - cost
OUTPUT change
```

The loop starts by checking the WHILE condition is true and keeps repeating until it is false — when the total is greater than or equal to the cost.

DO WHILE Loop:

```
INT total = 0
INT cost, coin, change
cost = total cost in pence
DO
  coin = INPUT("Value of coin")
  total = total + coin
WHILE total < cost
change = total - cost
OUTPUT change
```

The loop starts at DO and repeats until the WHILE condition is false — when the total is greater than or equal to the cost.

Describe the differences between **repeat**, **while** and **do while** iteration.

An electric heater has four temperature settings (0, 1, 2 and 3).
The code below controls the temperature of the heater.

```
INT setting, temperature
SWITCH setting:
    CASE 3:
        temperature = 50
    CASE 2:
        temperature = 30
    CASE 1:
        temperature = 20
    CASE 0:
        temperature = 0
ENDSWITCH
```

a) Rewrite this program using a different selection statement.

Warm-Up Put each of these statements into the correct box below.

REPEAT-UNTIL   IF-THEN-ELSE   SWITCH-CASE   DO-UNTIL   IF-ELSEIF   WHILE

Selection Statements	Iteration Statements

Jasminda has written the following program to convert minutes into hours and minutes.

```
INT minutes, hours, mins
minutes = INPUT("Enter a number of minutes")
hours = minutes DIV 60
mins = minutes MOD 60
print(str(hours) + " hours and " + str(mins) + " minutes")
```

a) Is this an example of a sequence, selection or iteration? Tick the correct box.

Sequence ☐   Selection ☐   Iteration ☐   [1]

b) What would the program print if the input was 150?

.... [1]

State what the code will do in each of the following:

a) int("76423")

....

b) ASC("T")

....

c) 12 MOD 5

Boolean operators are used to combine **STATEMENTS** and **OPERANDS** which can all be evaluated as True or False.

They allow programs to make decisions and use selection.

AND	Using the AND operator ensures that the overall statement is TRUE only if ALL of the individual statements are True. **8 == 8 AND 4>2**
OR	Using the OR operator ensures that the overall statement is True if ANY of the individual statements are True. **7 != 2 OR 5==4**
NOT	The NOT operator REVERSES the logical state of the other operators. **NOT (3>2 AND 3!=3)** *Remember the brackets means the equations inside must be evaluated first, then REVERSED using the NOT operator.*

```
01 myList = openRead("ToDoList.txt")
02 print(myList.readLine())
03 myList.close()
```

```
myList = openWrite("ToDoList.txt")
myList.writeLine("4. Make lunch for parents.")
myList.close()
```

String manipulation: performing operations on string data**.**

.upper	Changes all characters into UPPER CASE.
.lower	Changes all characters into lower case.
Concatenation (+)	Joins two or more strings together to form a new string.
.length	Returns the number of characters in a string.
Extracting characters using index positions	Extracts single characters from a string using their index numbers. **String[i]**
Substrings	Extracts a portion of the full string the first number is the string index, the second number is the amount of characters to extract. **.substring(a, b)**
String traversal	Moving through a string one character at a time; can be used to see if a string contains certain characters.

File handling is all about how a program can access data and change data stored in an external file.

Open	Before you can do anything with a file, you have to open it. This is done using an open command, and assigning the file to a variable. There are two modes in which you can open a file: • Open to READ / Open to WRITE Once a file is opened the program will start reading or writing from the beginning. As you read from or write to a file, the program keeps its place in the file (think of it like a cursor)
OpenRead	File=openRead("FileName.txt") Opens the file called FileName.txt in READ MODE and allows you to 'read' (fetch) the data into your program.
OpenWrite	File=openWrite("FileName.txt") Opens the file called FileName.txt in WRITE MODE and allows you to 'write' (add) data from your program into the file.

- You can read lines from a file using the readLine() command.
- You can write lines of text to a file using writeLine().
- ** If the file already contains some text then writeLine() will **overwrite** what is currently there.*
- endOfFile()returns TRUE when the cursor is at the end of the file. Its main use is to signify when a program should stop reading a file.
- When you finish reading or writing to a file, close it using the File.close() command.

What I need to know:

Describe what Boolean operators are used for in programming.
Explain, with examples, how the 3 main Boolean operators work.
State the purpose of string manipulation.
Outline the 7 main string manipulation commands and their function.
State what is meant by 'file handling'
Outline how the open command works.
Describe the difference between the openRead and openWrite file handling command.
Describe the function of readline(), writeline() and endoffile() commands.
State which command should be used when you have finished using a file.

Warm-Up

Circle all of the Boolean expressions that are true.

12 > 4 AND 5 == 5   12 <= 4 OR 10 != 5   7 >= 3 AND 91 > 99

NOT(11 == 3)   9 == 8 OR 2 > 16   NOT(9 > 4 AND 5 < 2)

A garden centre has a climate monitoring system that gives warnings if the temperature and humidity aren't at suitable levels. The climate monitoring system contains this algorithm.

```
IF humidity == 50 AND (temperature > 16 AND temperature < 25) THEN
    print("Humidity and temperature at acceptable levels.")
ELSEIF temperature <= 16 OR temperature >= 25 THEN
    print("Warning – Please alter the temperature.")
ELSE
    print("Warning – Please alter the humidity.")
ENDIF
```

a) What will the output be if humidity = 30 and temperature = 16?

....

[1]

b) What will the output be if humidity = 30 and temperature = 20?

....

[1]

Frances has written a list of jobs she has to do and stored it in the ToDoList.txt file shown on the right.

1. Clean my room.
2. Computer Science homework.
3. Organise my stamp collection.

a) Describe what each line of the code below does.

```
01 myList = openRead("ToDoList.txt")
02 print(myList.readLine())
03 myList.close()
```

Line 01 ....

Line 02 ....

Line 03 ....

[3]

b) Explain why the code Frances has written will not work as intended.

Frances writes the following code to add an extra job to the bottom of her list.

```
myList = openWrite("ToDoList.txt")
myList.writeLine("4. Make lunch for parents.")
myList.close()
```

[2]

Array	An array is a data structure that stores multiple items of data, called elements, which are all of the same data type, under one name (an identifier) *** Arrays are like lists.**
Element	Each piece of data in an array is called an element – each element can be accessed using its position (or index) in the array.
Creating & working with an array	ARRAY subjects [2] subjects [0] = "Computer Science" subjects [1] = " Maths" print(subjects[0]) subjects [2] = "Science"

EXAMPLE: The numbers below are stored in an array called scores[]. Write an algorithm that will add 3 to each number of the scores[] array.

| 4 | 12 | 32 | 18 | 21 | 11 | 9 | 14 | 24 |

```
FOR k = 0 to 8          Adds 3 to the
    scores[k] = scores[k] + 3   element in position
NEXT k                   k of the array.
```
For loop will run on each element of the array.

Databases	A data structure where data is held in tables made up of fields (columns) and records (rows). Databases can be flat file (one table for every piece of data) or relational (different tables holding data about specific items) Relational databases have tables which are linked together by key fields.
Field	Used to store a category of data e.g. name, age, address. All data in the same field must be the SAME data type.
Record	A record stores particular data about a particular item. Data in the same record can be DIFFERENT data types.
Primary key	Each record in a database should have a primary key. A primary key is a unique piece of data per record. This makes it easier to search for and distinguish between data records.

Sub program	Sub programs are a self contained sequence of code, which perform a specific task. • They used to save time and simplify code & avoid repeating code. • They make testing a program easier & give your code more structure.
Procedure	Procedures are sets of instructions stored under one name. When you want your program to do the whole set of instructions you need to 'call' the name of the procedure.
Function	Functions are similar to procedures, but the main difference is a FUNCTION ALWAYS RETURNS A VALUE.
Parameter	Parameters are special variables used to pass values into a subprogram.
Argument	Arguments are the actual **values**, stored in the parameters.

Variables can be local or global

1) All variables have a scope (either local or global) — the scope of a variable tells you which parts of the program the variable can be used in.

   All variables have local scope to the sub program.

   Local variables can only be used within the structure they're declared in — they have a local scope. Global variables can be used any time after their declaration — they have a global scope.

2) Variables declared inside a sub program are local variables. They are invisible to the rest of the program — this means that they can't be used outside the function.

SQL	A set of commands that can be used to create, update and query (search) databases.
SELECT FROM	**SELECT** : Used to tell the database what information you want to retrieve. **FROM** : Tells the database which tables to look in for the data you are searching for. *SELECT * FROM hotels* *SELECT hotel_name FROM hotels* *SELECT rooms, price_in_pounds FROM hotels*
WHERE	Used to filter the results. The **WHERE** statement specifies conditions that must be met before data is retrieved. *SELECT * FROM hotels WHERE hotel_rating >=4.1*
AND / OR LIKE %	SELECT hotel_name FROM hotels WHERE bathroom = "En-suite" **AND** price_in_pounds < 45 SELECT hotel_name, price_in_pounds WHERE hotel_name **LIKE** "%Hotel"

Table: hotels

ID	hotel_name	hotel_rating	rooms	bathroom	price_in_pounds
1	Water Lodge	2.3	50	En-suite	42
2	Fire Inn	4.2	64	Shared	42
3	Earthen House	4.4	215	En-suite	39
4	Windy Hotel	3.5	150		57
5	River Hotel	3.8	180	Shared	46

What I need to know:

Describe what is meant by a 'database'.

Define the term 'field'.

Define the term 'record'

State what is meant by a primary key.

Describe what SQL is used for.

State the function of the SELECT command.

State the function of the FROM command

Outline the function of the command 'SELECT *'

Describe what the WHERE command is used for

State the function of the % wildcard .

Define the term 'array'.

Define the term 'element'

Write the code required to create an array, add 3 elements and then print out the first element.

Describe what is meant by a sub program.

Outline the benefits of using sub-programs.

Define the terms 'function' and 'procedure' and state the main difference between the two.

Define the term 'parameter'.

Define the term 'argument'

Describe what is meant by the scope of a variable.

State the difference between a local and global variable.

The `cars` table below shows some data on the used cars that a car dealership has in stock.

CarID	Registration	Make	Type	Price	Engine_size
1	NF09 APY	Stanton	Hatchback	2500	1.4
2	SZ15 LUY	Fenwick	Saloon	4800	1.8
3	FQ55 ALW	Stanton	Hatchback	1700	2.1
4	SQ57 TTW	Fenwick	Estate	2300	2.8
5	NZ12 MBE	Stanton	Saloon	5200	1.8

a) How many records does this table have?

.... [1]

b) Explain the difference between a record and a field.

....
....
.... [2]

A comic book store keeps information about each of its comics in a database.
The table below shows the first two entries from the `comics` table.

ID Number	Title	Publication date	Length	Genre	Rating
0001	Hike of hope	04-05-2015	82	Adventure	5
0002	Voyage of Destiny	05-09-2015	65	Science Fiction	4

a) i) Identify a suitable field in the table above to use as a primary key.

.... [1]

ii) Explain why database tables use primary keys.

....
.... [2]

Write an SQL query to return:
i) the titles of all Science Fiction comics.

.... [2]

ii) the titles and lengths of all the comics that have fewer than 50 pages and a rating of 3.

.... [2]

iii) all the fields for comics with titles that begin with the letter H.

.... [2]

Kerry wants to change the cherry cupcake for a raspberry one. Write a line of code to do this. [1]

Write a line of code to output the first item in the list. [1]

a) Write some code that will create a one-dimensional array called cupcakes which displays this list of cupcakes in the order they appear above.

Kerry owns a cupcake shop which sells the following flavours of cupcake:

Vanilla   Banana   Strawberry   Cherry   Caramel

History Knowledge Organiser
From war to peace and back again 3. Causes of WW2.

IN UNITY WE SUCCEED — ACADEMY BLACKPOOL

Hitler was to blame

In Mein Kampf Hitler vowed to overturn Versailles and take Lebensraum (living space). This was the basis of his foreign policy and meant he would have to invade countries. This could start a war. He also vowed to make Germany strong again.

Hitler hated Communism and wanted to stop it by invading Russia which would start a war.

Appeasement

The policy of appeasement aimed to prevent another war and is linked particularly with Chamberlain. Many believe he made a mistake by trusting Hitler. Britain and France could have stopped Germany. Opportunities such as the Rhineland were missed and Chamberlain even worked with Hitler in Munich to give him the Sudetenland. This prompted the Nazi Soviet Pact.

The failure of the League

Its structure and organisation made the League weak. Its lack of army meant it could not force nations to comply. Membership - countries could leave, the USA never joined and USSR and Germany were not allowed to join at first. Manchuria showed that the League was weak and would not deal with a member of the council. Abyssinia showed Britain and France undermine it.

The Nazi Soviet Pact

Stalin felt alienated by the Munich Agreement and this encouraged him to sign the pact even though he and Hitler hated each other. It was a truce to agree to share Poland. This would help Hitler avoid a war on two fronts and give him back up from the USSR. This made him more confident about invading Poland even though Britain and France had promised to protect them.

The Depression

The Wall Street Crash and subsequent depression made countries around the world look inwards and desperate to sort their own problems. This meant there was less international cooperation. Desperate people turned to extremist parties and Leaders including Hitler and Mussolini. The League also could not afford to put effective economic sanctions on aggressors.

Treaty of Versailles

By the 1930's many people believed that Germany had been treated too harshly including Britain. As a result they didn't stop the Anschluss. Germany had lost land to create new countries like Poland (also the USSR who wanted the land back) and Czechoslovakia. Hitler has promised to overturn the Treaty of Versailles and reunite all German speaking peoples in a greater Germany.

Key dates

1933	Hitler leaves League of Nations disarmament conference
1935	Rearmament Rally
7/3/1936	Remilitarisation of the Rhineland
October 1936	Rome-Berlin Axis
12/3/1938	Anschluss with Austria
Sep 1938	Munich Agreement
15/3/ 1939	Hitler invades Czechoslovakia
1939	Nazi Soviet Pact
1/9/1939	Germany invaded Poland
3/9/1939	Britain declares war on Germany

Key people

Mussolini
Lord Lytton
Emperor
Haile Selassie
Pierre Laval
Samuel Hoare

KEY VOCABULARY/TERMS

Tier 2 - significant, conclude, imply, attitude, contrast, overall, cooperate, furthermore, infer, bias, widespread, trigger

Tier 3 - Communism, Mein Kampf, Lebensraum, Treaty of Versailles, Manchuria, Abyssinia, Depression, aggressors, economic sanctions, international cooperation, appeasement, Nazi-Soviet Pact, Anschluss, dictators, extremist.

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

Questions		Answers
1	What was the name of the book Hitler wrote?	
2	What was Lebensraum?	
3	What was Hitler's opinion of Communism?	
4	What made the League of nations weak?	
5	What had Manchuria shown us about the League?	
6	What had Abyssinia demonstrated about the League?	
7	What did the Wall Street Crash lead to?	
8	What types of political parties did people turn to?	
9	Did the Wall Street Crash help or hinder international cooperation?	
10	What was the policy of appeasement?	
11	When was the Anschluss with Austria?	
12	When was the Munich Agreement?	
13	When was the Nazi Soviet Pact?	
14	Why was this pact surprising?	
15	How had people's attitudes to the Treaty of Versailles changed?	
16	Who was the leader of Abyssinia (Ethiopia) who asked the League for help?	
17	Who was the dictator of Italy?	
18	Who was the leader of the USSR?	
19	Who wrote a report about the Manchurian crisis?	
20	Which two men tried to complete a secret deal over Abyssinia?	

History Knowledge Organiser
Conflict and tension 1918 - 1939 The League of Nations

In UNITY WE SUCCEED — ACADEMY BLACKPOOL

1920's

1920 Vilna - capital city of Lithuania. The majority of people were Polish and a Polish army took control. Lithuania asked the League for help and they told Poland to leave. They refused and kept Vilna

1921 Upper Silesia - on the border of Germany and Poland. Both countries wanted it for its iron and steel. A plebiscite was held and 60% voted for Germany. However the rural areas were given to Germany and Poland the industrial areas. Neither side was happy but had to accept it.

1921 Åaland Islands - Both Sweden and Finland claimed the islands and were threatening war. The League investigated and gave it to Finland but no forts were allowed. Sweden agreed.

1923 Corfu - An Italian surveyor Tellini and his team were murdered on the border between Greece and Albania. Mussolini blamed Greece, demanded compensation and invaded Corfu. The League made Greece apologise and pay Italy compensation.

1925 Bulgaria - Greek soldiers were killed on the Bulgarian border. Greece invaded but the League condemned them, made them withdraw and pay compensation to Bulgaria.

1929 Wall Street Crash - The American Stock Market crashed. The US had lent money to many countries around the world and wanted the money back. This led to a global depression.

1930's Manchuria

Japan was suffering the effects of the depression, much of its trade had been in luxury goods. So it looked to Manchuria in China, that had natural resources. The army generals dominated the Japanese government and wanted land. On 18th September 1931 the was an explosion on the South Manchurian Railway, owned by Japan. They blamed China and invaded Manchuria which they renamed Manchuko in 1932. China went to the League and Lord Lytton was sent to investigate and write a report. The report was published in October 1932 and said Japan should not have invaded. Japan ignored the report, left the League and then continued their invasion of China. By 1938 most major Chinese cities were controlled by Japan's army.

FAIL

Key people

Mussolini

Lord Lytton

Emperor

Haile Selassie

Pierre Laval

Samuel Hoare

1930's Abyssinia

Mussolini wanted an empire in the sun for Italy and they had previously tried to invade Abyssinia unsuccessfully in 1896. After signing the Stresa Front with Britain and France he did not think they would stand in his way. In December 1934 Italian and Abyssinian troops clashed at Wal Wal. Emperor Haile Selassie addressed the League on 30th June 1935 asking for help. Despite moral condemnation from the League Italian troops entered Abyssinia on 3rd October 1935 using the latest weapons including chemical. In December the British and French Foreign Ministers secretly agreed to give half of Abyssinia to Italy. This was leaked to the press with both men resigning. Still the League failed to act and did nothing when on 5th May 1936 Italian troops took the capital Addis Ababa. They could have stopped Italy using the Suez Canal or impose trade sanctions on oil, steel, iron and coal but it did nothing.

FAIL

Key dates

1921 - 1922	**Washington Treaty** **Japan, USA, Britain** **Limited size of Japanese Navy to USA and Britain 5 boats for every 3 Japan had. made the League look weak and unnecessary.**
1922	**Treaty of Rapallo** **Germany and USSR Agreed to stay friends and secretly agreed to trade weapons and military information. Against Treaty of Versailles and very damaging for the League.**
1925	**Locarno Treaty** **France, Britain, Belgium, Italy and Germany.** **Germany, France and Belgium agreed to keep to the borders set in the Treaty of Versailles. Germany was now a member and the League stronger.**
1928	**Kellogg-Briand Pact** **65 countries agreed not to use war to solve disputes. Looked promising but made the League look weak as it was not set up by them.**

KEY VOCABULARY/ TERMS

Assembly, unanimous, veto, Secretariat, civil service, Council, Geneva, collective security, Permanent Court of International Justice, Covenant, mitigation, moral condemnation, economic sanctions, plebiscite, border,

History Knowledge Organiser
Conflict and tension 1918 - 1939 The League of Nations

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

Quiz questions

1	Which two countries wanted Vilna in 1920?	
2	Which area had a plebiscite in 1921 to decide between Poland and Germany?	
3	Which islands were in dispute between Finland and Sweden in 1921?	
4	Which land was invaded by Italy in a dispute over murdered surveyors?	
5	In what year did Bulgaria and Greece come into conflict?	
6	When was the Wall Street Crash?	
7	What was the Washington Treaty of 1921 - 22 about?	
8	Who was the 1922 Treaty of Rapallo between?	
9	What was decided at the Locarno Treaty of 1923?	
10	What did the 1928 Kellogg-Briand Pact agree?	
11	When was the Manchurian Crisis?	
12	Which countries were involved in the Manchurian Crisis?	
13	Who was sent to write a report about the incident?	
14	What was the results of the Manchurian Crisis?	
15	When was the Abyssinian Crisis?	
16	Who were the key people involved?	
17	What did the League do and not do?	
18	What was the result of the Abyssinian Crisis?	

INNOVATION

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

ART Knowledge Organiser
Year 11 : Term 2:1

FCAT
The best we can be

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. 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 sketchbook 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.

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

FCAT
The best we can be

Write definitions for each Assessment Objective

AO1	
AO3	

AO2	
AO4	

Hazard – something with the potential to cause harm- for example bricks scattered on the floor

Risk – Includes physical injury, and mental ill health. For example risk of tripping and falling and breaking your leg or twisting your ankle.

Control measure – what can be done to stop the accident. Example would be to stack up the bricks neatly that would reduce the risk and control the hazard.

Risk Assessment – This is examining what could cause harm to people and weighing up whether enough is being done to prevent harm. This should be done for all work being carried out and on machines and work areas to minimise and evaluate potential accidents.

WHAT IS A RISK ASSESSMENT?

The Law states that employers must guarantee the safety of their employees, as far as it is possible.

An employer must assess the risks of injury, related to the work their employees carry out.

A **risk assessment** is a written document that identifies hazards / dangers to employees, when they work on machines / equipment and other types of work. It clearly states how the risk of accidents and injuries can be minimised / prevented, by employees following '**control measures**' (following safety instructions).

HASAWA

Health
And
Safety
At
Work
Act

WHAT IS A 'HAZARD' AND A 'RISK'?

A **hazard** is an activity that is potentially dangerous.

Once an hazard has been identified in the workplace, the **risk** (or possibility) of an employee being harmed by the hazard, is worked out.

The risk is recorded as **low risk**, **medium risk** or **high risk**.

KNO HT3 Construction -RISK ASSESSMENT
Unit 1- Y10- Safety

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

FCAT
The best we can be

Use the following questions to check your knowledge.

What law states employees, public and employers must remain safe?

What is a risk assessment and why is it important?

Give five examples of a hazard

Now next to each hazard state the risk

How can each risk you have identified be minimised (controlled)

Who needs to carry out the risk assessment ?

Who needs to read the risk assessment and why?

Under what law does Risk assessments come under?

KEY VOCABULARY

Control- stop it happening. Putting something in place to avoid the risk of injury/damage/accident
Hazard- something dangerous.

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

FCAT
The best we can be

Characteristics

Illustrations are;
*Decorative and stylised
*Accompaniments to literary work
*Created from scratch on paper or technology
*Unique and suited to a purpose
*Usually coloured or shaded
*Not usually found with text in them

Definition

The use of images and design to convey certain ideas and information is called illustration. Illustrations are used to highlight a particular point; to advertise on packaging for example.

Purpose

Illustrations are used to help a person understand the content of the work they are reading or listening to. They introduce an involvement and physical representation of what the artist or creator wants you to think, feel or do when looking at the art. Therefore, illustrations can be professional, childish or creative depending on what the creator's goal is.

Illustration

Designers

Some successful illustrators are;
*Gail Armstrong (paper sculpture)
*Stan Lee (Marvel Comics)
*Saul Bass (book/film covers)
*Shepard Fairey (posters/art)
*Ralph Steadman (art)
*Quentin Blake (children book illustrations)

Process

Illustration deeply depends on having a clear idea or objective in the person's mind from which they brainstorm sketches from. These ideas can be outlined and edited physically (on paper) or drawn out digitally and worked on that way. Illustrators experiment with colours and the textures they can create with these to produce a final piece of art for their specific purpose.
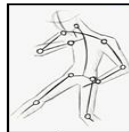
Types

Illustration can be presented as;
*hand-drawn or digital art-
*packaging and advertisements-
*children's books-
*book and magazine covers-
*comic book or manga pages-
*album covers-

ASSESSMENT CRITERIA

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

Technical ability – Using one area of graphic design develop a successful graphic design for Unit 2.

KEY VOCABULARY

Definition, Characteristics, Purpose, Process

Graphic design Knowledge Organiser
Year 11 : Term 2:1

IN **UNITY** WE SUCCEED
ACADEMY BLACKPOOL

FCAT
The best we can be

Components of graphic design

What are three characteristics of Illustration?
•
•
•

What is the purpose of Illustration?
………………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………

Name three areas of graphic design that Illustration can be used?
•
•
•

Explain the definition of Illustration. (answer in your own words)
………………………………………………………………………………
……………………………………………………………………………..

Name four successful Illustrators
•
•
•
•

Research your favourite Illustrator.

What is the name of your favourite Illustrator?
…………………………………………………………………

When were they active?
…………………………………………………………………

What style did they use? (realism, abstract, childish)
…………………………………………………………………

What different areas did they work in? (Book covers, posters/ advertising, album artwork.)
…………………………………………………………………
…………………………………………………………………

What medias did they use? (paint, ink, digital art, collage ect.)
…………………………………………………………………

Give three examples of their work
•
•
•

Steampunk recap:

- *It is modern technology—powered by steam and set in the 1800's*

- A genre of science fiction that has a historical setting and typically features steam-powered machinery rather than advanced technology.

- A style of design and fashion that combines historical elements with technological features inspired by science fiction.

Cyrus Kabiru: An artist who sculpts artistic eyewear from found objects + recycled materials.

Born in 1984 in Eastlands Nairobi, he was one of six children living in a two-bedroom home opposite a refuse dump. Inspired by this view from his window, and a story his father told about how he accidentally broke his own glasses as a boy, he started making eyewear out of discarded cutlery and bottle tops. He was disinterested in school and got his friends to do his homework in exchange for specs. His father wanted him to study electronic engineering at university but he insisted on pursuing life as a self-taught artist instead.

ASSESSMENT CRITERIA

ASSESSMENT OBJECTIVE 1 - Develop ideas through investigations, demonstrating critical understanding of sources.

ASSESSMENT OBJECTIVE 2 - Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

ASSESSMENT OBJECTIVE 3 - Record ideas, observations and insights relevant to intentions as work progresses.

ASSESSMENT OBJECTIVE 4 - Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

FCAT
The best we can be

Use the information and prompt questions to help you complete some artist research in your reflection log.

What does Cyrus Kabiru use to create his artistic eyewear?
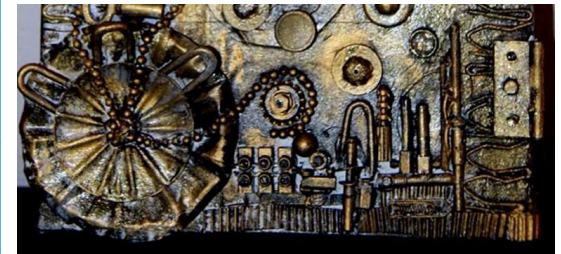
Where is Cyrus from?

What is Steampunk?

How does the work of the artist fit with the theme of Steampunk?

What do you like about his work?

What do you dislike about his work?

What objects or materials could you use to create your own eyewear?

Create some designs for your own version of Steampunk inspired eyewear and label the materials you would use.

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

Photography Knowledge Organiser
Year 11

FCAT
The best we can be

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.

Photography Knowledge Organiser
Year 11

FCAT
The best we can be

Write definitions for each Assessment Objective

AO1	
AO2	

AO3	
AO4	

Knowledge Organiser

Here's all the key information you need to know for **Topic Areas 1 and 2** of the **exam unit (R184)**, beautifully arranged for you on two pages.

12 User Groups

1) Different genders, e.g. female
2) People from different ethnic groups
3) Retired people/people over 60
4) Families with children
5) Carers
6) People with family commitments
7) Young children (age 0-11)
8) Teenagers / secondary education age
9) People with disabilities
10) Parents (singles or couples)
11) People who work
12) Unemployed/economically disadvantaged people

Barriers to Participation

1) Employment and unemployment
2) Family commitments
3) Lack of disposable income
4) Lack of transport
5) Lack of sporting role models
6) Lack of family role models/support
7) Lack of appropriate provision
8) Lack of awareness of provision
9) Unequal media coverage for different genders/ethnic groups

Solutions to Barriers

Appropriate provision:
Suitable programmes, sessions and activities at a range of times for different user groups.

Promotion strategies:
- targeted promotion
- role models
- initiatives, e.g. taster sessions

Pricing:
- concessions
- taster sessions
- free/low-cost equipment

Transport, facilities and equipment:
- increased availability
- must be appropriate for all user groups

Improved access:
To meet the needs of all user groups, e.g. pool hoists, hearing loops, braille signage.

Popularity of Sport

- Number of participants
- Live spectator opportunities
- Environment/climate conditions
- Facility provision
- **Factors impacting popularity**
- Social acceptability
- Amount/range of media coverage
- Number/range of positive role models
- High-level success of individuals/teams

Emerging/new sports

A sport that is growing in popularity in a region.
- new sports can be created, e.g. quadball.
- older sports can gain popularity, e.g. lacrosse.

Sporting Initiatives and Campaigns

- These aim to solve a problem or be a solution to a barrier within sport.
- They can be local, regional or national.
- E.g. Kick It Out, Chance to Shine and Rainbow Laces are national initiatives/campaigns.

7 Sporting Values

1 Team spirit
2 Fair play
3 Citizenship
4 Tolerance and respect
5 Inclusion
6 National pride
7 Excellence

IN UNITY WE SUCCEED

ACADEMY BLACKPOOL

FCAT

The best we can be