

**Name:**

**Form:**

‘Knowledge is power. Information is liberating [freeing]. Education is the premise of progress, in every society, in every family.’

### **Kofi Annan**

Kofi Annan was a Ghanaian diplomat. This means he represented the African country of Ghana. He represented Ghana at the United Nations (UN) and received a joint Nobel Peace Prize in 2001 with the UN.

His important work has included setting up a Global Fund of money to fight viruses and diseases such as HIV, AIDS, tuberculosis and malaria in Africa, as well as working to stop conflict and war in Syria. He was also fluent in English, French and several African languages.



**Lees Brook  
Academy**

**Year 11 Knowledge Organiser:**

**Spring Term 1 – 2024**

8<sup>TH</sup> January – 17<sup>th</sup> February

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# Instructions for using your Knowledge Organiser



## Self-testing

You can use your KOs and book in a number of different ways but you **should not just copy** from the Knowledge Organiser into your book. Use the **'How to self-test with the Knowledge Organiser'** booklet to help you. It can also be found here: <https://www.leesbrook.co.uk/learning/knowledge-organisers/>

Below are some possible tasks you could do in your workbooks, **no matter which task you do you should always check and correct your work in a different coloured pen.**

- Ask someone to write questions for you
- Write your own challenging questions and then leave it overnight to answer them the next day
- Create mind maps
- Create flashcards
- Put the key words into new sentences
- Look, cover, write and check
- Mnemonics
- Draw a comic strip of a timeline

- Use the 'clock' template to divide the information into smaller sections. Then test yourself on different sections
- Give yourself spelling tests
- Definition tests
- Draw diagrams of processes
- Draw images and annotate/label them with extra information
- Create fact files
- Create flowcharts



Every school day you should be studying at least **1** section of your Knowledge Organiser (KO) for homework as part of your revision.

The timetable on the next page suggests which subjects you should be studying on which days (it doesn't matter if you have that subject on that day or not, you should follow the timetable).

These knowledge organisers will support you in your revision during Year 11.

Your knowledge and understanding from your revision will be tested in lessons through retrieval practice and in your application of your learning to tasks.

## How do I self-quiz to support my own revision?

<p><b>How to use...Flashcards</b></p> <ol style="list-style-type: none"><li>1. On one side of the flash card, write the word or question.</li><li>2. On the other side, write the definition for the word, or answer to the question.</li><li>3. Once you have completed your set of cards, put them in a pile. Then for each card, see if you can remember the definition or answer to the question. Tick or cross when you get it right or wrong.</li><li>4. When you get the card right, place it in the 'correct' pile. When you get it wrong, place it in the 'wrong' pile. Repeat until all cards are in the 'correct' pile.</li></ol> <p>You can also use the Leitner Method:</p> <p><a href="https://www.youtube.com/watch?v=C20EvKtdJwQ">https://www.youtube.com/watch?v=C20EvKtdJwQ</a></p>	<p><b>How to use... Look, Cover, Write, Check and Correct</b></p> <ol style="list-style-type: none"><li>1. Write your key words into the 'Look, Cover' column and then cover it.</li><li>2. Write out the meaning, definition or spelling in the 'Write' column.</li><li>3. Put a 'tick' or 'cross' in the 'Check' column depending on if you got the answer right.</li><li>4. If you got the answer incorrect, write the correct answer in the 'Correct' column.</li></ol> <table><tr><th>Look , Cover</th><th>Write</th><th>Check</th><th>Correct</th></tr><tr><td>Noun</td><td>A person, place or thing.</td><td></td><td></td></tr><tr><td>Algorithm</td><td>Algorithm</td><td>X</td><td>Algorithm</td></tr></table>	Look , Cover	Write	Check	Correct	Noun	A person, place or thing.			Algorithm	Algorithm	X	Algorithm	<p><b>How to use... Mind Maps</b></p> <ol style="list-style-type: none"><li>1. Write out your topic or idea in the centre. E.g. The First World War.</li><li>2. Off of the main bubble, write out important categories to organise your ideas. E.g. causes of WWI and events in WWI</li><li>3. Then add your knowledge off of these branches. You might even be able to make connections between them.</li><li>4. Once made, then redraw as many of the connections as possible from memory. Correct any errors.</li></ol> 
Look , Cover	Write	Check	Correct											
Noun	A person, place or thing.													
Algorithm	Algorithm	X	Algorithm											
<p><b>How to use... Explaining a process/ idea further</b></p> <p>Your teacher might ask you to explain a key idea, process or event from your learning. This could be the water cycle (Geography), photosynthesis (Science) or something else. In your answer, try to use the words <b>because</b>, <b>but</b>, and <b>so</b>. These will help you to:</p> <ol style="list-style-type: none"><li>1. <b>Because:</b> helps to explain a reason, cause or why something works.</li><li>2. <b>But:</b> helps to explain a limitation or problem.</li><li>3. <b>So:</b> helps to explain what happens next in a sequence, process or event.</li></ol> <p>Check your sentences to see if your explanations are right or wrong. Correct any errors.</p>	<p><b>How to... Summarise a process/idea</b></p> <p>Rather than expand or explain a process, your teacher might ask you to summarise it into its key parts. E.g. summarising the plot 'A Midsummer Night's Dream' in English.</p> <ol style="list-style-type: none"><li>1. Read through the relevant part of your knowledge organiser as directed by your teacher.</li><li>2. Write out the (up to) 5 most important parts in your KO book, leaving a two lines in-between.</li><li>3. For each part, add <b>one</b> main idea.</li><li>4. E.g. here, the 4 key characters are picked out, and the direction of love is shown through the arrows. Check and correct any errors.</li></ol>	<p><b>How to use... Subject Specific Tasks or Questions</b></p> <p>Your teacher might choose to set a task that is not outlined here, and which is specific to that topic or their subject.</p> <p>In this case, your teacher will outline specifically what it is you need to do, and how. This will still include you checking and correcting any errors.</p> <div><div><p><b>Act 1:</b> <b>Hermia</b> and <b>Lysander</b> love each other but are not allowed to marry so decide to run away to the forest to get married in secret. <b>Demetrius</b> wants to marry <b>Hermia</b>. <b>Helena</b> loves <b>Demetrius</b>. They follow <b>Hermia</b> and <b>Lysander</b> into the forest.</p></div><div></div></div>												

# Year 11 – English Literature – Macbeth – Spring 1 & 2



Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Dramatic Irony (n)	When an audience knows more than the characters.
Stage Directions (n)	Instructions given to actors to guide them how to act, stand, behave, speak etc.
Structure (n)	How a play and the events are organised.
Soliloquy (n)	One character speaking to the audience.
Iambic Pentameter (n)	A line of writing that consists of ten syllables in a specific pattern of an unstressed syllable followed by a stressed syllable, or a short syllable followed by a long syllable.
Blank Verse (n)	Poetry written with regular metrical but unrhymed lines, almost always in iambic pentameter.
Tragedy (n)	A play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character.
Tragic Hero (n)	A tragic hero is a literary character who makes a judgment error that inevitably leads to his/her own destruction.
Rhyming Couplets (n)	A rhyming pair of successive lines of verse
Dramatic Irony (n)	When an audience knows more than the characters.

Section B: Key Concepts/Ideas/Questions
<p><b>Big Questions:</b></p> <ol style="list-style-type: none"> <li>1. What is regicide and how does it oppose the Divine Right of Kings?</li> <li>2. Who was James I?</li> <li>3. How does the play explore the supernatural?</li> <li>4. How is symbolism used in the play?</li> <li>5. How is masculinity presented in the play?</li> <li>6. Who is Macbeth?</li> <li>7. Who is Lady Macbeth and does she represent a typical women of her time?</li> <li>8. Who is Banquo?</li> <li>9. What is a Machiavellian villain?</li> <li>10. Is Macbeth a tragic hero?</li> <li>11. What is Macbeth's hamartia?</li> <li>12. Who was Shakespeare?</li> </ol>
<p><b>How does Shakespeare present...</b></p> <p>How does Shakespeare present Macbeth as a powerful character?</p> <p>How does Shakespeare the issue of morality?</p> <p>How does Shakespeare present Lady Macbeth as a powerful woman?</p> <p>How does Shakespeare present the theme of morality?</p> <p>How does Shakespeare present the idea of the supernatural?</p> <p>How does Shakespeare present the theme of guilt?</p>

Section C: Subject Specific
<p><b>Key Themes</b></p> <p>Ambition Fate vs Freewill Guilt The Supernatural Power Gender Kingship Appearance vs Reality Order vs Chaos Loyalty</p>
<p><b>Concepts seen before: Soliloquy, Dramatic Irony, The Great Chain of Being, Kingship, Elizabethan context, Tragedy, Tragic Hero, Symbolism, Tyrant.</b></p>

# Year 11 – English Literature – Macbeth – Spring 1 & 2



Section A: Key vocabulary	
Tier 2 Vocabulary	Definition
Gender (n)	A social construction about how the sexes are supposed behave and act.
Usurper (n)	A person who takes a position of power or importance illegally or by force.
Guilt (n)	Responsibility for having done something wrong either against the law or morally.
Ambition (n)	A strong desire to do or achieve something.
Thane (n)	A Scottish lord.
Tyrant (n)	A cruel and oppressive ruler.
Manipulation (n)	The action of influencing that aims to change behaviour or perception of others through indirect, deceptive, or underhanded tactics.
Equivocation (n)	The use of ambiguous language to conceal the truth or to avoid committing oneself.
Symbolism (n)	The use of symbols to represent ideas or qualities.
Paradox (n)	Contradictory statements.
Semantic Field (n)	Words that can be grouped thematically or connected to a subject.
Imagery (n)	Visually descriptive or figurative language.
Repentant (n)	Feeling regret or remorse.
Kingship (n)	The state or position of being a king.

## James I

James I had been James VI of Scotland before he succeeded to the English throne in 1603. In focusing on Macbeth, a figure from Scottish history, Shakespeare paid homage to his king's Scottish lineage. Additionally, the witches' prophecy that Banquo will found a line of kings is a clear nod to James' family's claim to have descended from the historical Banquo. King James believed in the Divine Right of Kings: the belief that God had chosen him to rule on Earth.

## The Supernatural

King James was terrified of witches in real life. He felt they had tried to kill him and his family and was a key part of witch hunts and trials, as it was against the law to be a witch. He later published *Daemonologie* in 1597. Charges of witchcraft continued in Great Britain, with Scotland in particular experiencing a number of witch hunt crazes throughout the 17th century.

## Jacobean Society



## Gender

Women were expected to be subservient, quiet and homebound, with their primary ambitions entirely confined to marriage, childbirth and homemaking; social status and economic class played into what degree these expectations manifested. Women during this time could also not perform on stage.

## Shakespeare

Shakespeare's dad was friends with one of the Gunpowder Plot conspirators; Shakespeare drank in the pub where the plot was hatched. He was very keen to show King James 1st that he was not part of the Gunpowder Plot.

## The Great Chain of Being

The Great Chain of Being is the belief in a social hierarchy, planned by God, as follows: God – Angels – Demons – Humans – Beasts – Plants – Rocks. The Great Chain of Being was seen as the natural order of society. Macbeth breaks this natural order when he kills Duncan.

## The Gunpowder Plot

In 1604, English Catholics attempted to assassinate King James in the famous Gunpowder Plot. The play is a piece of political propaganda, warning English audiences that regicide leads to eternal damnation.

The play 'Macbeth' is a tragedy that tells the story of a soldier whose overriding ambition and thirst for power cause him to abandon his morals and bring about the near destruction of the kingdom he seeks to rule. Shakespeare wrote the play during the reign of James I, in 1606, and acts as a political propaganda that warns about the dangers of trying to overthrow a king



## The Plot of Macbeth

<b>Act 1</b>	Macbeth and Banquo encounter three witches, after a battle, where the Thane of Cawdor was executed. The witches give both men predictions and then vanish. One of the predictions given to Macbeth comes true almost immediately. Macbeth writes a letter to his wife. She is excited by the news and summons evil spirits to give her the courage to commit murder. Macbeth arrives to announce that King Duncan is coming to spend the night at their castle.
<b>Act 2</b>	Macbeth agrees to kill Duncan but then sees a dagger as he is having second thoughts. However, he resolves to kill King Duncan, who is found dead at dawn by Macduff. The king's sons flee, fearing for their lives. In their absence, Macbeth is chosen to be king.
<b>Act 3</b>	Banquo suspects that Macbeth was involved in Duncan's murder. Macbeth fears Banquo and so plans to have Banquo and his son, Fleance, murdered away from the castle. Banquo is killed but Fleance escapes. The ghost of Banquo appears at a feast that only Macbeth can see. .
<b>Act 4</b>	Macbeth revisits the witches and is told more prophecies. Macbeth has Macduff's family killed and Macduff flees to England with Malcolm.
<b>Act 5</b>	Lady Macbeth sleep walks due to guilt. Malcolm returns to Scotland with Macduff and an army ready to overthrow Macbeth. Lady Macbeth commits suicide and Macbeth realises he has been tricked by the witches. Macduff kills Macbeth and Malcolm is made king.

## Characters

Macbeth  
Lady Macbeth  
Duncan  
Malcolm  
Donalbain  
Banquo  
Macduff  
Lady Macduff  
Fleance  
Three witches

Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Metaphor (n)	A word or a phrase used to describe something as if it were something else.
Simile (n)	Comparing two things using 'like' or 'as'.
Personification (n)	Giving an inanimate object human characteristics/qualities.
Alliteration (n)	Words that are close together start with the same letter or sound.
Sibilance (n)	The repetition of s or sh sounds.
Onomatopoeia (n)	Language that sounds like its meaning.
Irony (n)	language that says one thing but implies the opposite
Symbolism (n)	The use of symbols to represent ideas or qualities.
Oxymoron (n)	Contradictory words placed next to each other for effect.
Metaphor (n)	A word or a phrase used to describe something as if it were something else.
Tier 2 Vocabulary	Definition
Explores (v)	To analyse, examine and evaluate.
Connotes (v)	To imply or suggest.
Implies (v)	To suggest or indicate something.
Infers (v)	To examine and conclude.
Coneys (v)	To make an idea understandable.

## Section B: Key Concepts/Ideas/Questions

**When we analyse a text, we are looking at the following:**

- Word choices used by the author – what do the words mean? What do they make you think of (their connotations)? What word class do they belong to?
- Techniques/linguistic devices – identify them and consider their purpose, use and effect
- Punctuation and sentence structures – do they change the way you read the piece? Does it tell us about the tone in which something is communicated? Does it make us read the text faster or slower?

### Writing Success Criteria:

#### AO5:

##### Content:

- Register is convincing and compelling for audience
- Assuredly matched to purpose
- Extensive and ambitious vocabulary with sustained crafting of linguistic devices

##### Organisation:

- Varied and inventive use of structural features
- Writing is compelling, incorporating a range of convincing and complex ideas
- Fluently linked paragraphs with seamlessly integrated discourse markers.

#### AO6:

- Sentence demarcation s consistently secure and consistently accurate
- Wide range of punctuation is used with a high level of accuracy
- Uses a full range of appropriate sentence forms for effect
- Uses Standard English consistently and appropriately with secure control of complex grammatical structures
- High level of accuracy in spelling, including ambitious vocabulary
- Extensive and ambitious use of vocabulary

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;	“ ”
;	( )

Section C: Subject Specific
<p><b>Q1 - 5 mins – 4 marks.</b> Identify and interpret explicit and implicit information and ideas. Select and synthesise evidence from different texts.</p> <p><b>Q2 - 10 mins – 8 marks.</b> Explain, comment on and analyse how writers use language and structure to achieve effects and influence readers, using relevant subject terminology to support views.</p> <p><b>Q3 - 10 mins – 8 marks.</b> Explain, comment on and analyse how writers use language and structure to achieve effects and influence readers, using relevant subject terminology to support views.</p> <p><b>Q4 - 20 mins – 20 marks.</b> Evaluate texts critically and support this with appropriate textual references.</p> <p><b>Q5 - 45 mins – 40 (24+16) marks.</b> Communicate clearly, effectively and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences. Organise information and ideas, using structural and grammatical features.</p> <p>Range of vocabulary and sentence structure for clarity, purpose and effect, with accurate spelling and punctuation.</p>
<p><b>Concepts seen before:</b> Language analysis tasks in KS3 reading lessons, Writing tasks in KS3 writing lessons. Paper 1 skills lessons in Y10 lessons.</p>

# Year 11 – Mathematics (F) – Reasoning – Spring 1

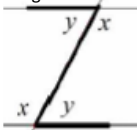


## Section A: Key vocabulary

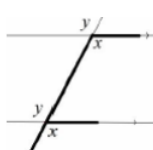
Tier 3 Vocabulary	Definition
Alternate angles (n)	When two parallel lines are crossed by another, the angles either side of the transversal and within the parallel lines are alternate angles and are equal in size
Angle (n)	The amount of turn between two lines and their common point.
Bearings (n)	The angle measure clockwise from north and should be three digits
Corresponding angles (n)	When two parallel lines are crossed by another line (a transversal) the angles in matching corners are called corresponding angles and are equal in size.
Co-interior angles (n)	When two parallel lines are crossed by another, the angles on one side of the transversal and within the parallel lines are called co-interior and add to $180^\circ$
Hypotenuse (n)	The side opposite the right angle in a right angle triangle. It's also the longest side.
Quadratic (n)	Where the highest exponent of the variable is squared, $x^2$
Simultaneous (adj)	Simultaneous equations that share variables
Vector (n)	A vector has magnitude (how long it is) and direction shown by arrow on line.
Tier 2 Vocabulary	Definition
Adjacent (adj)	Next to each other (beside)
Enlargement (n)	To resize either larger or smaller
Proportion (n)	Either direct or inverse
Expression (n)	Numbers, letters grouped together, there is no equal sign with an expression
Term (n)	An term is part of an expression or a equation such as $4x$ or $6$ or $x/3$

## Section B: Key Concepts/Ideas/Questions

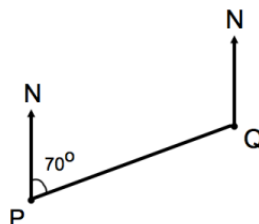
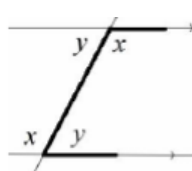
Alternate angles



Corresponding angles



Co-interior



Bearing of Q from P is  $070^\circ$

Bearing of P from Q is  $250^\circ$

$n$  is the number of sides or angles.

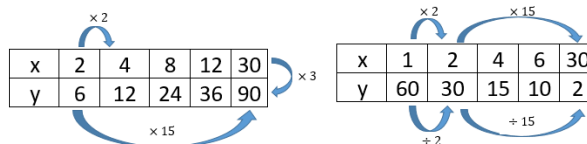
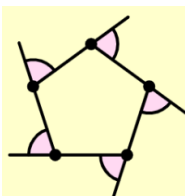
Exterior angle =  $\frac{360}{n}$

An Interior angle =  $180 - \text{exterior angle}$

Or

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

An interior angle =  $\frac{180(n - 2)}{n}$

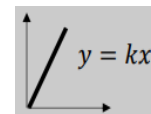


**Geometric** sequence; 2, 6, 18, 54, 162, ... Here the common ratio is 3 meaning we multiply the previous term by 3.

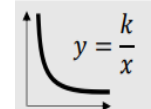
**Arithmetic** sequence; 3, 7, 11, 15, 19, ... Here the sequence goes up by the same amount each time, in this case by adding 4 each time.

**Fibonacci** sequence; 1, 4, 5, 9, 14, 23, ... Here we are adding the previous two terms to find the next term in the sequence.

## Section C: Subject Specific



When one variable increases as another increases their proportionality is referred to as **direct**.



When one variable decreases as another increases their proportionality is referred to as **inverse**.

**Simultaneous equations**

$$2x + 3y = 16$$

$$2x + y = 8$$

$$2y = 8$$

$$y = 4$$

$$\text{So } 2x + 4 = 8$$

$$2x = 4$$

$$x = 2$$

$$2x + y = 9$$

$$5x - y = 5$$

$$7x = 14$$

$$x = 2$$

$$\text{So } 4 + y = 9$$

$$y = 5$$

**Subtract** one from the other

Solve for one of the values

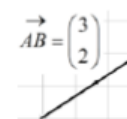
Substitute back into one of the equations and solve for other value

This time

**addition**

of the two equations eliminates  $y$  so that you can work out  $x$

This is a column vector



It means 3 right and 2 up

If it was  $-3$  and  $-2$

then we would move 3 left and 2 down

You can multiply a column vector If  $a = \begin{pmatrix} 2 \\ -3 \end{pmatrix}$  then  $3a = \begin{pmatrix} 6 \\ -9 \end{pmatrix}$

You can add/subtract column vectors:  $\begin{pmatrix} 3 \\ -3 \end{pmatrix} + \begin{pmatrix} -1 \\ 2 \end{pmatrix} = \begin{pmatrix} 2 \\ -1 \end{pmatrix}$

**Concepts seen before:**

Angle rules in parallel lines

Simultaneous equations

# Year 11 Higher – Mathematics – Reasoning – Spring 1



Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Geometric sequence (n)	A sequence made by multiplying by the same amount each time.
Varies directly (n)	When x increases, y increases by the same factor.
Varies inversely (n)	When x increases, y decreases by the same factor.
Constant of proportionality (n)	The constant value (often written k) of the ratio between two proportional quantities.
Tier 2 Vocabulary	Definition
Bearings (n)	The angle measure clockwise from north and should be three digits
Satisfy (v)	A value (or values) that solve an equation.
Bisect (v)	To divide into two equal parts.
Tangent (n)	A line that just touches a curve at a point, matching the curve's slope there.
Justify (v)	Use appropriate mathematical language to give reasons for the particular approach used to solve a problem.
Proof (n)	Logical mathematical arguments used to show the truth of a mathematical statement.

### Section B: Key Concepts/Ideas/Questions

**Directly Proportional**

$$y \propto x$$

$$y = kx \text{ for a constant } k$$

**Inversely Proportional**

$$y \propto \frac{1}{x}$$

$$y = \frac{k}{x} \text{ for a constant } k$$

The exterior angles of ANY polygon add up to  $360^\circ$

Interior + Exterior =  $180^\circ$   
angle                      angle

6 sides  
6 angles

3 sides, 1 triangle,  $180^\circ$

4 sides, 2 triangles,  $360^\circ$

5 sides, 3 triangles,  $540^\circ$

(Number of sides – 2)  $\times 180 =$  the sum of the interior angles

The nth term of Quadratic Sequences

1st diff                      2nd diff

5                      3                      9                      19                      33                      51

$2n^2$                       2                      8                      18                      32                      50

$5 - 2n^2$                       1                      1                      1                      1                      1

$2n^2 + 1$

### Section C: Subject Specific

#### Density

The angle between a tangent and a radius is  $90^\circ$

Opposite angles in a cyclic quadrilateral add to  $180^\circ$

The angle from a diameter is  $90^\circ$

#### Pressure

The angle between a tangent and a chord is equal to the angle in the alternate segment.

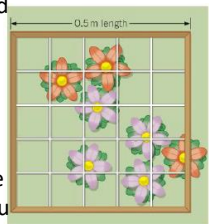
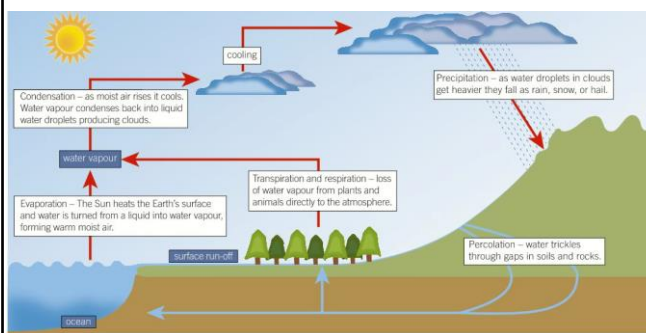
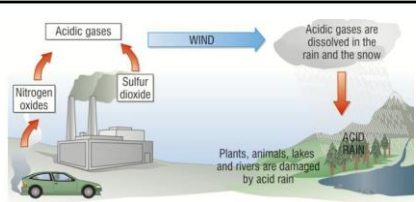
The angle at the centre is twice the angle at the circumference.

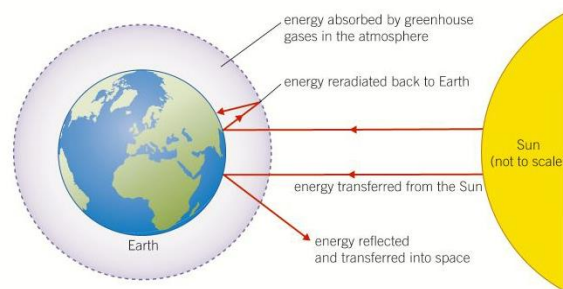
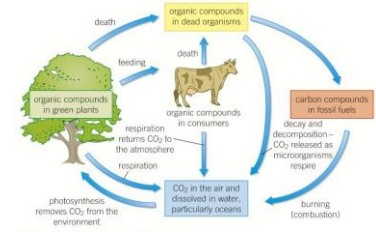
Angles in the same segment are equal.

**Concepts seen before:** Direct and inverse proportion, ratio, compound units, enlargements, scale factor, similar shapes, angles, circle theorems, Pythagoras' Theorem and nth term.

# Year 11 – Combined Science – Ecology – Spring 1

Section A: Key Vocabulary	
Tier 3	Definition
Abiotic factors (a)	The non-living aspects of an ecosystem e.g. temperature, light intensity, moisture.
Biodiversity (n)	The variety of living organisms in an ecosystem.
Biotic factors (a)	The living components of an ecosystem e.g. food availability, pathogens, predators and other species.
Deforestation (n)	The removal of trees from land which is subsequently used to grow crops or provide space for cattle.
Ecosystem (n)	The community of organisms (biotic) and non-living (abiotic) components of an area and their interactions.
Global warming (n)	The gradual rise in the average temperature of the Earth due to increasing atmospheric levels of carbon dioxide and methane gas.
Interdependence (n)	The dependence of different organisms on each other for survival.
Population (n)	All organisms of the same species living with one another in a habitat.
Predators (n)	Consumers that prey on and eat other animals. Prey: Animals that are eaten by predators.
Producers (n)	Photosynthetic organisms (e.g. green plant or alga) at the start of the food chain that provide biomass for all living things.
Tier 2	Definition
Adaptation(n)	A feature of an organism that increases its chance of survival in its environment. Such features may be behavioural, structural or functional.
Community (n)	All of the populations of different species living together in a habitat.
Competition (n)	When different organisms compete for the same resources (e.g. light, water, mates, territory) in an ecosystem. This limits population sizes and stimulates evolutionary change.
Pollution (n)	Contamination or destruction of the natural environment due to human intervention.

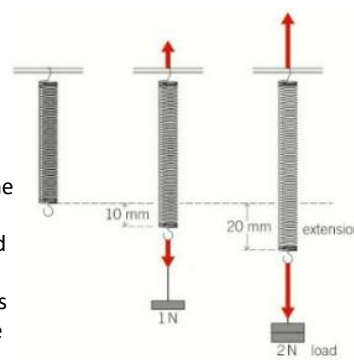
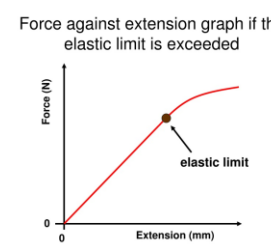
Section B: Important Ideas / Concepts / Questions
Sampling
<p>Quadrat - A square grid of known area used in sampling to determine the abundance and distribution of organisms in an ecosystem.</p> <p>It doesn't matter if organisms partly covered by a quadrat are counted as in or out, as long as you decide and do the same each time. In this diagram of a quadrat, you have six or seven plants per 0.25m<sup>2</sup>.</p>  <p>Transects are used to measure the distribution of organisms. Stretch a tape between two points and sample along at regular intervals using a quadrat. This is done where you suspect a change linked to an abiotic factor.</p>
Water cycle

Pollution



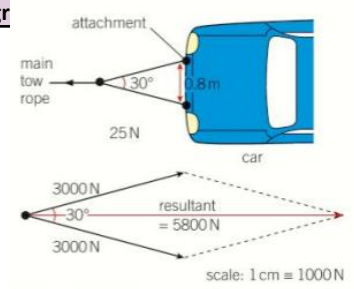
Section C: Subject Specific
Global warming
 <p><b>Figure 2</b> <i>The greenhouse effect – vital for life on Earth</i></p>
Carbon cycle

Food chains
<p>Grass → Grass hopper → bird → fox</p> <p>Producer → primary consumer → secondary consumer → tertiary consumer</p>
<p><b>Concepts you have seen before:</b>  <b>Food chains and food webs</b>  <b>Sampling methods</b></p>

# Year 11 – Combined Science - P5: Forces and Motion – Spring Term 1



Section A: Key Vocabulary	
Tier 3	Definition
Force (n)	A force (in newtons, N) can change the motion of an object
Free body diagram (n)	A diagram that shows all the forces on an object without showing any other objects or forces
Line of action	The line along which a force acts
Magnitude	Size or amount of a physical property
Scalar	A quantity that only has a magnitude (size) e.g. distance and speed
Vector	A quantity that has a magnitude and a direction e.g. displacement and velocity
Tier 2	Definition
Effort (n)	The force applied to a device to lift or move an object
Load (n)	The force applied by a device when it is used to move an object
Weight (n)	The force of gravity on an object (newtons N)
Moment (n)	The turning effect of a force (newton meters, Nm)
<b>Concepts you have seen before:</b> <b>Forces, spring constant (elastic potential), energy, implementing equations</b>	


Section B: Important Ideas / Concepts / Questions
Force and extension
<p><b>Investigating springs</b>  Wearing eye protection:  A. Set up apparatus with the spring at zero on the ruler  B. Add a 1N weight and measure the extension of the spring  C. Repeat until you have added 10N of force  D. Repeat for additional springs  E. Use your results to calculate the spring constants</p>  <p>A spring will extend linearly with force applied until it reaches the elastic limit  The spring constant is the force needed to extend a spring by 1m</p> $\text{force (N)} = \text{spring constant (N/m)} \times \text{extension (m)}$
<p><b>Spring constant and Hooke's Law</b>  Hooke's Law: the extension of force applied to the object. This only up to a certain point, beyond this limit of proportionality the object becomes permanently deformed and can no longer return to its original shape. On the graph, where the line begins to plateau is where the elastic limit has been reached.</p> 

Section C: force diagrams
Contact and non-contact forces
<p>Forces either push or pull on an object. This is a result of its interaction with another object.</p> <p>Forces are categorised into two groups:  Contact forces – the objects are touching e.g. friction, air resistance, tension and contact force.</p> <p>Non-contact forces – the objects are not touching e.g. gravitational, electrostatic and magnetic forces.</p> <p>Forces are calculated by the equation:  Force (N) = mass (Kg) x acceleration (m/s<sup>2</sup>)</p> <p>Forces are another example of a vector quantity and so they can also be represented by an arrow. The direction represented by where the arrow points and the magnitude being the size of the arrow</p> 
<p><b>Parallelogram</b></p> 

# History—Historical Environment—Drake's circumnavigation—Spring 1



Section A: Key Vocabulary	
Tier 3 vocabulary	Definition
Cartography (n)	The science and art of mapmaking and map design
Celestial Navigation (ver)	Navigation using celestial bodies, like stars, for guidance.
Seafaring (adaj):	The skill and activity of traveling by sea
Circumnavigation (n)	The complete navigation around a whole, usually the Earth.
Tier 2 vocabulary	Definition
Navigation (n)	The process of planning and directing a course
Exploration (n)	The act of traveling in search of new information.
Endeavor (ver)	A determined and conscientious effort towards a goal.
Expedition (n)	A journey or voyage, often for exploration or research.

Section B: Key Information
<p><b>Who was Francis Drake?:</b> The eldest of 12 sons born to a Protestant farmer. From a young age lived with his relatives, the Hawkins family in Plymouth – they were merchants, seafarers and occasional pirates. Began his sailing career early, sailing under John Hawkins. Involved in the early slave trade and piracy with Hawkins. Gained respect for escaping the Spanish at San Juan de Ulua. During the 1570s completed many voyages to the Americas</p>  <p><b>Why did Drake circumnavigate the Globe?</b></p> <p><b>Conquest of new land/trade</b> – Areas like Brazil and Peru were relatively unexplored.</p> <p><b>The encouragement of Elizabeth I</b> - After 1573 she part-financed (secretly) Drake's to South America.</p> <p><b>Acquisition of wealth</b> – Hawkins made large sums from the slave trade and brought goods like sugar, spice back to trade.</p> <p><b>Finding the Strait of Anian</b> – Drake was convinced there was a Northwest sea passage that linked the Atlantic and the Pacific Oceans.</p> <p><b>Hawkin's influence</b> - Drake had grown up and sailed with Hawkins on several slave trading missions, leading to Drake captaining the Judith, in Hawkins 1568 mission to the Americas.</p> <p><b>Revenge on the Spanish</b> - In 1568 at San Juan de Ulua, the Spanish attacked Hawkins' fleet. Only Drake and Hawkins' ship escape.</p>

Section C: Key events
<ol style="list-style-type: none"> <li>1. Set sail November 1577 – financed by Hawkins, Privy Council and Elizabeth</li> <li>2. Fleet scattered crossing the Atlantic – crew relations strained – July 1578 Drake executes co-commander Thomas Doughty for treason</li> <li>3. Discovery of 'Drake's Passage' between Cape Horn and Antarctica</li> <li>4. Captures Spanish ship Nuestra Senora de la Concepcion - £480million in treasure gained</li> <li>5. Met Miwok people and claimed land in modern California. Drake named it 'New Albion'</li> <li>6. Via the Pacific-route home, trades with the Maluku people – opens up trade in competition with Portuguese</li> <li>7. 26 September 1580 – sails into Plymouth with 59 remaining crew and treasure and spices</li> </ol> <p><b>Benefits of Voyages:</b></p> <p>Improved geographical understanding, Increase in wealth/trading power of England, Individual glory (sailors), New trends (potatoes, tobacco, exploration)</p> <p><b>Negatives of Voyage:</b></p> <p>Strained relations with Spanish and Portuguese, Involvement in slave trade, Weather and ship conditions, Jealousy of courtiers towards Drake</p> <p><b>Concepts seen before:</b> empire, colonies, role of Elizabeth, divide and rule, patronage, Great Chain of Being.</p>

# Year 11 - Geography—Water Management — Spring 1



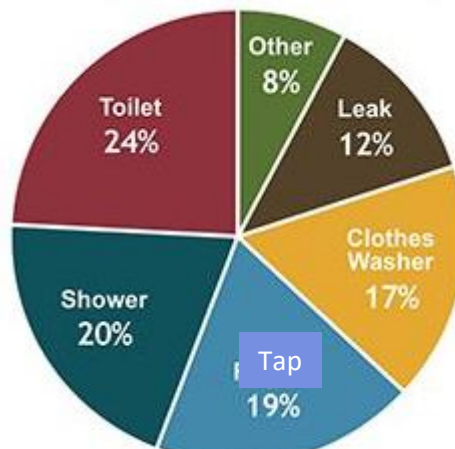
## Section A: Key Vocabulary

Tier 2 vocabulary	Definition
Deficit (n)	Having a shortage or not enough
Food miles (n)	The distance covered supplying food to consumers
Malnourishment (n)	Lack of nutrition; not having enough to eat
Organic produce (n)	Food produced using natural farming methods, which does not use chemical fertilisers or feed additives
Surplus (n)	Having too much of something; an excess
Tier 3 vocabulary	Definition
Agribusiness (n)	Large scale commercial farming
Geopolitics (n)	Political issues related to geographical issues and their use or regulation
Local food sourcing (n)	A method of good production and distribution that is local
Water scarcity(n)	Lack of sufficient or safe water
Water footprint (n)	The amount of water used by each person everyday
Water transfer (n)	Moving water across long distances to places with water shortages

## Section B: Key learning

### Water use patterns:

- Changes in demand for water due to increasing wealth, sanitation, population, industry.
- There has been a 70% increase in use in UK homes since 1970
- Water quality is managed by legislation, education campaigns, water treatment plants
- Supply and demand: highest population is in south east (area of deficit) and highest rainfall is in north and west (water surplus)
- 80% of southern England relies on groundwater; 50% of country are impacted by water quality
- Government proposed water grid to transfer water between areas of surplus and deficit. This would provide people with reliable supply, however it displaces local communities and involves constructing dams.



### How much water do we use?

The average person in the UK uses 152 litres of water per day.

### Concepts you have seen before:

Drought (Y7 Weather), Social and economic impacts (Y8), Resource management (Y8 energy), Social development – Health (Y9 Development)

## Section C: Example Water Transfer

### Should the GERD have been built?

The GERD was built in Ethiopia to help the country by providing them with renewable energy. This project was controversial as it angered Sudan and Egypt downstream who were concerned about their reduction in water supplies. The scheme was expensive and large amounts of water were used to fill the reservoir – this water is normally used by Egypt for irrigation and industry.

### South – North Water transfer scheme

The South-North Water Transfer Project aims to transfer significant quantities of water from China's humid south to the arid north. The US\$62 billion scheme, designed to move 12 trillion gallons of water over more than 1000 kilometres, was launched in 2002.

#### Benefits include:

- Food security improving as more water is available for irrigation
- Health benefits from improved water quality
- Improved water supply for industry
- Less water is being taken from groundwater reserves

#### However:

- About 330 000 people have been displaced
- Historical sites and artefacts have been lost

# Year 11 – French – Au collège – Spring Term 1



Section A: Key vocabulary	
Tier 1 Vocabulary	Definition
le dessin	art
le français	French
être à l'heure	to be on time
faire ses devoirs	to do your homework
manquer les cours	to skip lessons
mâcher du chewing-gum	to chew gum
éviter le stress	to avoid stress
être en pleine forme	to be on top form
Tout le monde se ressemble	Everyone looks the same
C'est pratique et confortable	It's practical and comfortable
je faisais	I used to do
je jouais	I used to play
je participais	I used to take part
dans la chorale	in the choir
à cache-cache	hide and seek
Tier 3 Vocabulary	Definition
Direct object pronouns	A direct object pronoun replaces a noun in a sentence. Eg She loves "it"
Il faut	Il faut means "it is necessary" It is an impersonal verb and the subject is always "il"

Tier 2 – core text		
Ma matière préférée, c'est l'EPS.	1	My favourite subject is PE.
J'aime aussi la biologie parce que	2	I also like biology because
le prof est marrant.	3	The teacher is funny.
Cependant, je suis faible en maths.	4	However, I am weak in maths.
Ma prof s'appelle Madame Arnaud et je la déteste.	5	My teacher is called Mrs Arnaud and I hate her.
Il faut porter un uniforme scolaire.	6	You have to wear a school uniform.
Tout le monde porte un pantalon noir et une chemise blanche.	7	Everyone wears black trousers and a white shirt.
C'est vraiment démodé.	8	It's really old-fashioned.
Il est interdit de porter des bijoux ce qui m'énerve.	9	It is forbidden to wear jewellery, which annoys me.
Pour me préparer pour les examens je vais manger sainement	10	To prepare for my exams I am going to eat healthily
au moins cinq portions de fruit et légumes par jour.	11	At least five portions of fruit and vegetables per day.
Je vais aussi jouer au foot pour me détendre.	12	I am also going to play football to relax.
Quand j'étais à l'école primaire je faisais de la natation avec ma classe.	13	When I was at primary school, I used to go swimming with my class.
C'était extra !	14	It was superb !

Concepts seen before: adjective agreements, connectives, infinitives, near future tense, imperfect tense, present tense.

# Year 11 – German– Die Arbeit – Spring Term1



Section A: Key vocabulary	
Tier 1 Vocabulary	Definition
der/die Anwalt/Anwältin	lawyer
der/die Klempner(in)	plumber
Beim Arbeitspraktikum musste ich	for my work experience I had to
Ich bekomme gute Noten	I get good grades
Ich hoffe auf eine Karriere in	I am hoping for a career in
Sie arbeitet bei einer Firma	She works for a company
Er kann gut kommunizieren	He can communicate well
Ich möchte als ...arbeiten	I would like to work as a
Ich würde gern ...machen	I would like to do
Formulare ausfüllen	to fill out forms
Tier 3 Vocabulary	Definition
um...zu clauses	This means in order to and is always used with an infinitive verb regardless of the tense in the preceding clause. "Ich habe Deutsch gelernt, um in Deutschland zu arbeiten."
Masculine and feminine nouns	It is not just der that changes to die for jobs. Most feminine jobs end in "-in"

Tier 2 – Core text		
Als Kind wollte ich Tierarzt werden, weil ich Tiere liebe,	1	As child wanted I vet become, because I animals love,
aber dafür muss man sieben Jahre bei der Uni studieren.	2	but forthat must one seven years at the uni study.
Jetzt möchte ich eine Lehre machen	3	Now wouldlike I an apprenticeship do
um Journalist zu werden.	4	inorder journalist to become.
Ich interessiere mich sehr für Politik,	5	I interest myself very for politics,
Und ich hoffe, viel im Ausland zu arbeiten.	6	and I hope, lots in abroad to work.
Deswegen versuche ich meine Sprachkenntnisse zu verbessern.	7	Therefore, try I my knowledgeoflanguages to improve.
Im Moment habe ich einen Teilzeitjob.	8	Inthe moment have I a part time job.
Ich arbeite als Kellner in einem Restaurant,	9	I work as waiter in a restaurant,
wo ich Kunden bediene muss.	10	where I customers serve must.
Leider muss ich auch abwaschen. Wie langweilig!	11	Unfortunately, must I also washup. How boring!
Ich verdiene €10 pro Stunde,	12	I earn €10 per hour,
und ich bekomme auch oft Trinkgeld.	13	and I receive also often tips.
Meine Mutter ist Ärztin und arbeitet in einem Krankenhaus.	14	My mother is doctor and works in a hospital.
Sie verdient gutes Gehalt,	15	She earns good salary,
aber sie hat auch viel Stress.	16	but she has also much stress.

Concepts seen before: um..zu clauses, modal verbs, verb inversion, family members

# Year 11 –Drama– Devising– Spring Term1



Section A: Key vocabulary	
Tier 3	Definition
<b>Stimulus</b>	The 'starting point' to provide inspiration and ideas for devising
<b>Explorative strategies</b>	A technique to explore and deepen understanding of the drama you create.
<b>Plot development</b>	The organisation or building of the action in a play.
<b>Visualisation</b>	A technique which allows performers to slow down and focus individually on an issue. The performers, sitting quietly with eyes closed, allow pictures to form in their minds. These images may be motivated by bits of narration, music, sounds, smells, etc.
<b>Mime</b>	Acting without words.
<b>Role playing</b>	Improvising movement and dialogue to put oneself in another's place in a particular situation, often to examine the person(s) and/or situation(s) being improvised.
<b>Aims and objectives</b>	Why are you creating your drama? What effect do you want it to have on the audience?
<b>Improvisation</b>	Live theatre in which the plot, characters and dialogue of a game, scene or story are made up in the moment.
<b>Tableaux</b>	Another term for a Freeze Frame or Still Image
<b>Hot seating</b>	Asking an actor questions while they are 'in character'.
<b>Scales</b>	Different states of feeling or emotion.
<b>Role on wall</b>	Ideas on a 'gingerbread man'
Tier 2	Definition
<b>Resolution (n)</b>	the action of solving a problem or contentious matter.
<b>Discord (n)</b>	disagreement between people
<b>Impending (adj)</b>	(of an event regarded as threatening or significant) about to happen; forthcoming.

Section B: Research, Style & Form	
<b>B. Researching your stimulus</b> It is crucial for you to take ownership of the material you are developing. When you understand that the material is exciting and interesting then it is more likely to engage your audience. This will only be achieved when research and practical exploration run concurrently. There are various sources when carrying out research: <ul style="list-style-type: none"> <li>• Internet</li> <li>• Library</li> <li>• Departments and teachers within the school</li> <li>• Art and photography books</li> <li>• Music</li> <li>• News – print, television, internet</li> <li>• Theatre programmes, images, recordings.</li> </ul>	
C. Genre	Style and Form
Tragedy Comedy Tragi-comedy Farce Documentary theatre Morality play Melodrama Episodic drama	Mask Mime Promenade Naturalism Symbolism Agitprop Grand Guignol Site-specific theatre Verbatim theatre Physical theatre

Section D & E: Develop and Refine
<b>D. Developing a role and characterisation</b> Individual and group work on character is vital for effective devising, whether you end up being a single character or playing multiple roles. A good way of determining whether a character has been fully explored is to establish their given circumstances; for instance: <ol style="list-style-type: none"> <li>1 Who am I?</li> <li>2 Where am I?</li> <li>3 When is it?</li> <li>4 Where have I just come from?</li> <li>5 What do I want? (Objectives)</li> <li>6 How will I get what I want?</li> </ol>
<b>E. Refining the Performance</b> Whatever choices have been made about content, style, form and structure, it is important to give enough time to refining the performance. <b>Rehearsing the performance</b> Time must be given to repeating the final performance. This should be focused on honing the performance, rather than making major changes to the piece. Clarity – make sure decisions of content, style and character are clear for the audience. Energy – engage fully with each moment of the performance and be precise. Pace – the pace of the performance must reflect what and how you want to communicate with your audience.

**Concepts you have seen before: Devising, Genre, style and form, research, stimulus, developing character**

# Y11 Computer Science – Spring 1 – Revision

Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
<b>Subroutine (n)</b>	A section of code that is coded out of sequence that can be called at any time.
<b>Function (n)</b>	A subroutine that returns data back to the global pool of variables.
<b>Procedure (n)</b>	A subroutine that does not return any data to the global pool of variables.
<b>Parameter (n)</b>	The data that is passed into a subroutine (both functions and procedures can have parameters).
<b>Array (n)</b>	A list of data stored as a single variable. Data can be; added to it, deleted from it, sorted in order, edited and extracted.
<b>Index (n)</b>	The position of data stored in a list. Indexing starts at 0.
<b>Logical operators (n)</b>	Mathematical symbols used in conditions. >, <, >=, <=, ==, !=
<b>Boolean operators (n)</b>	Keywords used in conditions which result in a True or False response. AND, OR, NOT
<b>Global variable (n)</b>	Variables that can be accessed any where in the program and are declared at the start of a program.
<b>Local variable (n)</b>	Variables that are declared in a subroutine and can only be used in that subroutine.
<b>Return (n)</b>	The command that returns data from a function to a global variable.

Section B: Robust programming
<b>Program structure</b> <p>As programs may be read by different people in the development and redevelopment stages it is essential to make the program Robust. To do this you just need to follow these simple steps in order (add to these sections as you create the code keeping your code organised):</p> <ol style="list-style-type: none"> <li>1. Import libraries/modules</li> <li>2. Declare global variable</li> <li>3. Create subroutines</li> <li>4. Create the main program</li> </ol> <b>Comments</b> <p>All sections should have suitable comments using either the # for short comments or """ for extended comments""".</p> <b>Validation</b> <p>When ever data is inputted by a user this should be checked for validity to stop human error. For example if you are expecting 'Yes' or 'No' the program should only accept 'Yes' or 'No'. We usually use while loops with Boolean and logical operators to complete this.</p>

Section C: Programming Commands	
Subroutine procedure	<pre>def procedureName(parameters):     code in the procedure</pre> <p>Example:</p> <pre>name = "Joe" def outputName (name):     print(name)</pre> <p>#calling procedure</p> <pre>outputName (name)</pre>
Subroutine function	<pre>def functionName(parameters):     code in the procedure     return parameter/s</pre> <p>Example:</p> <pre>name = 0 firstname = "Joe" surname = "Bloggs" def Name (firstname, surname):     name = firstname + surname     return name</pre> <p>#calling function</p> <pre>name = Name (firstname, surname)</pre>
Array	<pre>letters = ["a", "b", "c", "d"]  print(letters) print(letters[1]) print(letters[0:2])</pre>
<p>Useful website for more examples:  <a href="http://www.w3schools.com/python/">www.w3schools.com/python/</a></p>	

# Y11 Computer Science – Spring 1 – Revision

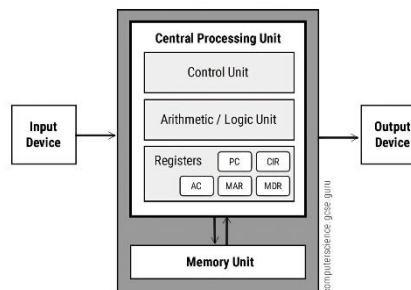


## Section A: Key vocabulary

Tier 3 Vocabulary	Definition
<b>Von Neumann architecture (n)</b>	Basic structure of a computer system that includes: <b>CPU, memory, inputs and outputs.</b>
<b>CPU (n)</b>	Central Processing Unit. Fetches, decodes and executes instructions using the <b>ALU, CU and registers.</b>
<b>Memory (n)</b>	This is the volatile storage that is used for data currently being used by the computer system. There are 3 categories you need to know: <b>RAM, Cache and Registers.</b>
<b>Hard Drive (n)</b>	This is usually the main storage on a desktop and laptop computer. It has a disk that can be magnetically changed to represent 0 and 1.
<b>Solid State Drive (n)</b>	This is another type of storage which is mainly used in portable types of computers as it has no moving parts.
<b>Optical storage (n)</b>	This is another type of storage which uses <b>CDs DVD and Blu-ray</b> to store data.
<b>ROM (n)</b>	This is a special memory that is non volatile that stores the boot up program.
<b>Volatile (n)</b>	This is the term given to memory that <b>does not remember data</b> when there is no power.
<b>Non-volatile (n)</b>	This is the term given to memory and storage that <b>remembers data</b> when there is no power.
<b>Clock (n)</b>	The time keeper in a CPU which synchronizes all processes.

## Section B: CPU

The CPU is at the heart of the Von Neumann Architecture as it is the part of a computing device that handles all data.



The CPU uses the Fetch Decode execute cycle with each instruction. CPU has a clock to synchronize this process. Some CPU have multiple cores meaning they have multiple CPU and therefore can handle more instructions at the same time.

## Section C: Storage

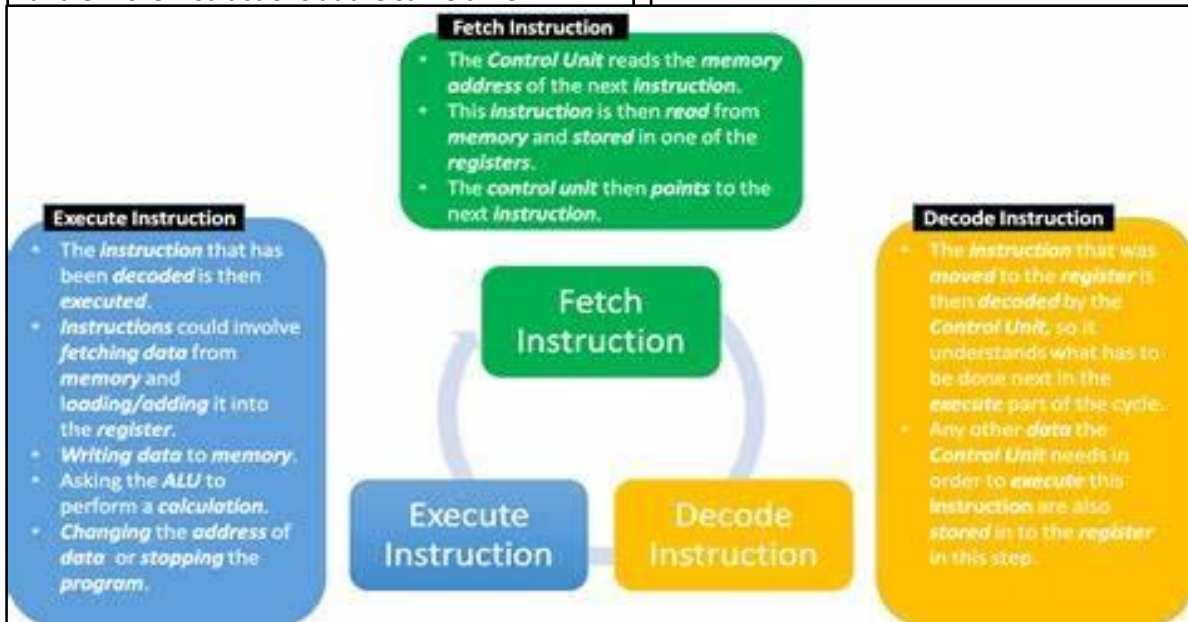
Computers need secondary storage to enable the user to permanently (when the computer is off) keep files for later use.

Common types of storage include:

- Optical (CD, DVD, Blu-ray)
- Magnetic (hard drives - spinning disk)
- Solid state (no moving parts stored in circuits)

When choosing storage we need to consider all of these factors against use:

- Capacity
- Speed
- Portability
- Durability
- Reliability
- Cost



# Y11 Computer Science – Spring 1 – Revision



## Section A: Key vocabulary

Tier 3 Vocabulary	Definition
<b>Base (n)</b>	The number of characters used in a number system.
<b>Decimal (n)</b>	0 to 9 number system humans use.
<b>Binary (n)</b>	Number system used by computers, 0 and 1 simulates on and off (machine code).
<b>Hexadecimal (n)</b>	Number system that uses 0-9 then A-F. Has 16 values in total (uses nibbles of data).
<b>Bit pattern (n)</b>	The combination of 0 and 1s that represent data e.g. 01110001.
<b>Bit (n)</b>	A single 0 or 1.
<b>Byte (n)</b>	8 bits.
<b>Nibble (n)</b>	4 bits.
<b>Conversion (v)</b>	Changing from one form to another.
<b>Binary shift (v, n)</b>	Moving data in columns left or right resulting in multiplying or dividing by multiples of 2.
<b>Character set (n)</b>	A list of values assigned to binary, ASCII and UNICODE are 2 character sets.

Place values for binary this bit pattern is 93 in decimal.

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

## Section B: Images and sound

To calculate the file size of images made of pixels, you will need the **dimensions (height and width in pixels)** of the image and the **colour depth**. Colour depth is the number of colours that a pixel can be, usually in bits. For example an image with 8 colour options in a pixel would have a colour depth of 3 bits per pixel.

To calculate file size you multiply the dimensions by the colour depth and this is the file size in bits.

Image 20 pixels by 20 pixels with 8 colour depth would be  $20 \times 20 \times 8 = 3200$  bits

**File size = resolution x colour depth**

To calculate the file size of a sound clip, you need to know the **sample rate, sample resolution and length** of the sound clip in seconds. Sounds are recorded by taking a value of the amplitude every set time interval (thousands of times a second) this is called the sample rate. The sample resolution is the number of different amplitudes that can be recorded in bits.

To calculate the file size you multiply sample rate by sample resolution by length. Sound clip recorded at 1000 samples a second with a sample resolution of 4 bits (16 options) and 10 seconds long would be  $1000 \times 4 \times 10 = 40000$  bits.

**File size = sample rate x sample resolution x time**

## Section C:

### Compression

Compression is the process of reducing file sizes to take up less storage space.

Compression can be **lossy** or **lossless**. Lossy compression techniques lose quality as part of the compression. Lossless compression does not lose any quality as part of the compression.

### Scales

Bit (single 0 or 1)  
 Nibble (4 bits)  
 Byte (8 bits)  
 Kilobyte (1,000 bytes or 1 KB)  
 Megabyte (1,000 KB)  
 Gigabyte (1,000 MB)  
 Terabyte (1,000 GB)  
 Petabyte (1,000 TB)

Dec	Hex	Char
65	41	A
66	42	B
67	43	C
68	44	D
69	45	E
70	46	F
71	47	G
72	48	H
73	49	I
74	4A	J
75	4B	K
76	4C	L
77	4D	M
78	4E	N
79	4F	O
80	50	P
81	51	Q
82	52	R
83	53	S
84	54	T
85	55	U
86	56	V
87	57	W
88	58	X
89	59	Y
90	5A	Z

### Character sets

Character sets are tables of characters stored against a value of binary or hexadecimal. For example 95 is A.

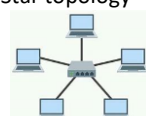
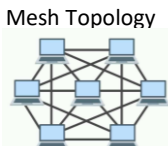
**ASCII and Unicode** are 2 character sets. ASCII includes English only where as Unicode includes all languages but takes up more storage space.

# Y11 Computer Science – Spring 1 – Revision



Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Protocol (n)	Set of rules that computing devices use to communicate.
Network (n)	Two or more devices connected together.
Defragmentation (v)	Defragmentation is the process of rearranging the data on a storage medium, such as a hard disk drive, for efficient storage and access.
Compression(v)	Compression is a technique that reduces file size.
Malware (n)	Malicious software – programs that will damage a computing device or its data.
Peripheral (n)	A device that plugs into a computing device to give greater functionality.
Tier 2 Vocabulary	Definition
Interception (v)	The action receiving electronic transmissions before they reach the intended recipient.
Penetration (v)	Entering or making your way through something.
Ethical (n)	Doing the right thing.
Legal (n)	Doing something within the rules of law.
Cultural (n)	The ideas, customs, and social behaviour of a society.
Environmental (n)	The impact of human activity on the natural world.
Privacy (n)	Protecting information about an entity (person).
Management (v)	The process of dealing with or controlling things.

Section B: Key Concepts
<p>Forms of attack:</p> <ul style="list-style-type: none"> <li>• Malware</li> <li>• Social engineering, e.g. phishing, people as the 'weak point'</li> <li>• Brute-force attacks</li> <li>• Denial of service attacks</li> <li>• Data interception and theft</li> <li>• SQL injection</li> </ul> <p>Common prevention methods:</p> <ul style="list-style-type: none"> <li>• Penetration testing</li> <li>• Anti-malware software</li> <li>• Firewalls</li> <li>• User access levels</li> <li>• Passwords</li> <li>• Encryption</li> <li>• Physical security</li> </ul> <p>The purpose and functionality of operating systems:</p> <ul style="list-style-type: none"> <li>• User interface</li> <li>• Memory management and multitasking</li> <li>• Peripheral management and drivers</li> <li>• User management (Allocation of an account, Access rights, Security)</li> <li>• File management (Naming, Allocating to folders, Moving files, Saving.</li> </ul> <p>The purpose and functionality of utility software:</p> <ul style="list-style-type: none"> <li>• Encryption software</li> <li>• Defragmentation</li> <li>• Data compression</li> </ul> <p>Impacts of digital technology on wider society including:</p> <ul style="list-style-type: none"> <li>• Ethical issues</li> <li>• Legal issues</li> <li>• Cultural issues</li> <li>• Environmental issues</li> <li>• Privacy issues</li> </ul> <p>Legislation relevant to Computer Science:</p> <ul style="list-style-type: none"> <li>• The Data Protection Act 2018</li> <li>• Computer Misuse Act 1990</li> <li>• Copyright Designs and Patents Act 1988</li> <li>• Software licences (open source and proprietary)</li> </ul>

Section C: Networks
<p><b>LAN</b> – Local Area Network cover relatively small geographical areas. Often owned and controlled/managed by a single person or organisation.</p> <p><b>WAN</b> – Wide Area Network usually cover a wide geographic area. The Internet is the biggest example of a WAN. Often under collective or distributed ownership.</p> <p>The number of devices connected to a system and the bandwidth effect the performance of a network.</p> <p>The hardware needed to connect stand-alone computers into a Local Area Network:</p> <ul style="list-style-type: none"> <li>• Wireless access points</li> <li>• Routers</li> <li>• Switches</li> <li>• NIC (Network Interface Controller/Card)</li> <li>• Transmission media</li> </ul> <p>Modes of connection:</p> <ul style="list-style-type: none"> <li>• Wired - Ethernet</li> <li>• Wireless - Wi-Fi, Bluetooth</li> </ul> <p>Star topology</p>  <p>Mesh Topology</p>  <p>The Internet is a worldwide collection of computer networks which includes:</p> <ul style="list-style-type: none"> <li>• DNS (Domain Name Server)</li> <li>• Hosting</li> <li>• The Cloud</li> <li>• Web servers and clients</li> </ul> <p>Common <b>protocols</b>:</p> <ul style="list-style-type: none"> <li>• TCP/IP (Transmission Control Protocol/Internet Protocol)</li> <li>• HTTP (Hyper Text Transfer Protocol)</li> <li>• HTTPS (Hyper Text Transfer Protocol Secure)</li> <li>• FTP (File Transfer Protocol)</li> <li>• POP (Post Office Protocol)</li> <li>• IMAP (Internet Message Access Protocol)</li> <li>• SMTP (Simple Mail Transfer Protocol)</li> </ul>
<p><b>Concepts seen before:</b></p> <p>Basics of networking devices, passwords</p>

Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Gender (n)	Gender identity is how a person feels
Ethnic group (n)	A community or population made up of people who share a common cultural background or descent.
Retired (n)	Someone who has left one's job and ceased to work.
Families with Children (n)	Families with children influence what, how and why people participate
Carers (n)	People who look after adults or children may struggle to participate fully in Sport.
Family commitments (n)	This can be a family agreement to do something to help family members or others to be more active
Young children (n)	By law, anyone under the age of 18 years old is classed as a child whilst 13 and over is deemed a teenager
Disabilities (n)	Someone with a long term physical or mental disability.
Tier 2 Vocabulary	Definition
Describe (v)	to give a written report of how something is done or of what someone or something is like
Identify (v)	to find and be able to describe someone or something
State (v)	to say or write something, especially clearly and carefully
Discuss (v)	to talk about a subject with someone and tell each other your ideas or opinions

Section B: Key Concepts/Ideas/Questions	
Section B: Barriers to Participation	
Lack of Disposable Income	Not having enough money after bills and essential items results in a lack of participation in sport
Balanced Media Coverage	The media can portray negative images of certain user groups
Appropriate Activity Provision	This relates to the amount of Sporting provision available to the community.
Lack of Awareness	Many people are unaware of what sports provision they can use in their area
Lack of Positive Role Models	In some circumstances, there is a lack of positive role models such as coaches, family members or adults to motivate people
Lack of Transport	Many people struggle to get to a certain sporting event or facility so therefore will not participate

Section C: Subject Specific	
Solutions to Barriers to Participation	
Improved Provision	If the amount of sporting opportunities is increased then participation rates will increase.
Environment and culture	The climate that we are in will determine the level of participation. E.g. for snow sports it is essential to have a cold environment.
Facilities	With a good level of facilities, participation rates will increase and more people will be active.
Pricing	By the price of sporting activities being affordable, larger number of people will become engaged.
Initiatives	Actions or programmes to sporting campaigns increases interest and participation. i.e This Girl Can

**Concepts seen before:**  
**Promotion and advertising in sport media**

## Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Environment (N)	The surroundings or conditions in which a person, animal, or plant lives or operates.
Sustainable (N)	Able to be maintained at a certain rate or level.
Technologies (N)	The branch of knowledge dealing with engineering or applied sciences.
Specifications (N)	A detailed description of the design and materials used to make something.
Regulations (N)	A rule or directive made and maintained by an authority.
Sequenced (N)	A particular order in which related things follow each other.
Characteristics (N)	A feature or quality belonging typically to a person, place, or thing and serving to identify them.
Calculating (N)	Acting in a scheming and ruthlessly determined way.
Tier 2 Vocabulary	Definition
Materials (N)	The matter from which a thing is or can be made.
Demolition (N)	The science and engineering in safely and efficiently tearing down of buildings and other artificial structures
Structures (V)	A building or other object constructed from several parts.
Trades (N)	A job requiring manual skills and special training.
Manufacturing (N)	The making of articles on a large scale using machinery; industrial production.
Sector(N)	<b>The economic sector comprising all companies involved in construction</b>
Drawings(N)	Construction drawing is the general term used for <b>drawings that form part of the production information that is incorporated into tender documentation and then the contract documents for the construction works</b>
Personal protective equipment (N)	Clothing and equipment that is worn or used in order to provide protection against hazardous substances or environments.

## Section B: Important Ideas / Concepts/ Questions

Learners should be aware of the following facilities and systems: • roads • railways • bridges • tunnels • water supply and sewerage systems • electrical grids • telecommunications.

Learners should be aware of the function of the following services in buildings: • mechanical services, including escalators and lifts, heating, ventilation, air conditioning • electrical services, including energy supply, lighting and low voltage (LV) systems, communication lines, telephones and IT networks, fire detection and protection, security and alarm systems • services that support public health, including plumbing for water supply, and domestic hot water, drainage of wastewater (sewage) and stormwater drainage.

Learners should know the following professional roles and be aware of the responsibilities of each (listed below) regarding the design and construction of a project through to its completion and handover: • designer/architect • civil/structural engineering • contracts manager and site manager • surveyor • quantity surveyor.

Learners should be aware of the professional associations such as CIOB, RICS, RIBA3 , and the benefits of membership.

Learners should know that the following industries extract raw materials: • oil and gas • forestry • quarrying • mining.

Learners should know and understand the following forms of construction activities: • new buildings and structures and the assembly on site of prefabricated elements • alteration, conversion, and renovation of existing buildings and structures • civil engineering works such as roads and bridges • mass concrete foundations and large diameter drainage schemes • installation of mechanical, electrical, gas and communication services

Learners should be aware of the function of the following services in buildings: • mechanical services, including escalators and lifts, heating, ventilation, air conditioning • electrical services, including energy supply, lighting and low voltage (LV) systems, communication lines, telephones and IT networks, fire detection and protection, security and alarm systems • services that support public health, including plumbing for water supply, and domestic hot water, drainage of wastewater (sewage) and stormwater drainage.

## Section C: Subject Specific



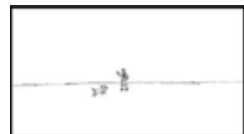

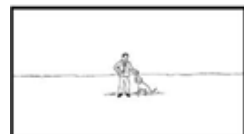






Concepts seen before: Popular TV programmes such as Grand designs, DIY SOS, Skill Builder  
[https://www.youtube.com/watch?v=49sf\\_LNF0z0](https://www.youtube.com/watch?v=49sf_LNF0z0)  
[https://www.youtube.com/watch?v=49sf\\_LNF0z0](https://www.youtube.com/watch?v=49sf_LNF0z0)

# Year 11 – Film Studies – Film Form – Spring Term 1



Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
<b>Narrative</b> (noun)	An account of connected events- a story.
<b>Plot</b> (noun)	The sequence of events in a film .
<b>Camera Movement</b> (noun)	How the camera moves.
<b>Camera Shots</b> (noun)	How much space the audience sees in a frame.
<b>Mise-en-scene</b> (noun)	The arrangement of everything in shot.
<b>Setting</b> (noun)	Where the film takes place.
<b>Costume</b> (noun)	What a character is wearing.
<b>Cinematography</b> (noun)	Camerawork in a film
Tier 2 Vocabulary	Definition
<b>Analyse</b> (verb)	Examine something and explain the decisions made around it.
<b>Connotations</b> (noun)	An idea a word/item invokes
<b>Summarise</b> (verb)	statement of the main points.
<b>Represents</b> (verb)	Shows or stand for.
<b>Symbolises</b> (verb)	To represent something through an item.

Section B: Key Concepts/Ideas/Questions
<b>BIG QUESTIONS:</b> <ol style="list-style-type: none"> <li>1. What are the key conventions in film?</li> <li>2. How are aesthetics used in film?</li> <li>3. What is representation?</li> <li>4. What is narrative theory?</li> <li>5. What are the conventions of the horror genre?</li> <li>6. What is the language of genre?</li> <li>7. What is the sci-fi genre?</li> <li>8. How do films reflect the contexts of their time?</li> <li>9. How are film openings structured?</li> <li>10. How do audiences respond to films?</li> <li>11. How are films comparable?</li> </ol>
<b>WHAT IS MISE-En-SCENE?</b> <b>Mise en scène</b> is the arrangement of scenery and stage properties in a play. Translated from French, it means "setting the stage" but, in film analysis, the term mise en scene refers to everything in front of the camera, including the set design, lighting, and actors. Mise en scene in film is the overall effect of how it all comes together for the audience.
<b>WHAT IS CINEMATOGRAPHY?</b> Cinematography is the art of motion picture photography. Cinematographers use a lens to focus reflected light from objects into a real image that is transferred to some image sensor or light-sensitive material inside a movie camera

Section C: Subject Specific
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">  <p>Extreme Long Shot : XLS / ELS</p> </div> <div style="width: 50%;">  <p>Medium Shot : MS</p> </div> <div style="width: 50%;">  <p>Very Long Shot : VLS</p> </div> <div style="width: 50%;">  <p>Medium Close-Up : MCU</p> </div> <div style="width: 50%;">  <p>Long Shot : LS</p> </div> <div style="width: 50%;">  <p>Close-Up : CU</p> </div> <div style="width: 50%;">  <p>Medium Long Shot : MLS</p> </div> <div style="width: 50%;">  <p>Big Close-Up : BCU</p> </div> <div style="width: 100%;">  <p>Extreme Close-Up : XCU / ECU</p> </div> </div>
<b>Concepts seen before:</b> This unit builds upon the analysis skills you already use in English! Film Studies is a GCSE option subject we offer at Lees Brook and could lead to future careers within the media industry.

## Notes page



**Notes page**



Your equipment you need for learning every day:

