



**Frank Field**  
Education Trust

*“Knowledge is power.  
Information is liberating.  
Education is the premise  
of progress, in every  
society, in every family”*

- Kofi Annan



**Year 11 Knowledge Organiser**

Learning Programme 2

Pupil Name:

Form Group:

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# Instructions

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

The timetable on the page 5 tells you 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).

You are to use your exercise book to show the work you have done. Each evening you should start a new page and put the date clearly at the top.

You need to bring your KO and exercise book with you EVERYDAY to the academy.

Your parents should tick off your homework every evening using the grid in your KO on page 4.

Your KO and exercise book will be checked regularly in form time, failure to show homework for ALL FIVE days of the week will result in an after school detention that day.

You will also be tested in your lessons on knowledge from the organisers.

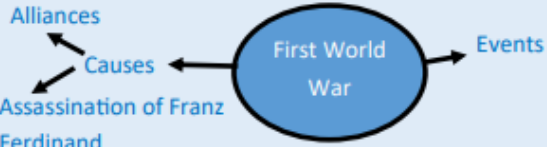
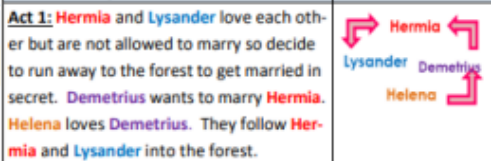
## Self-testing

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.

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

# How do I self quiz?

<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: <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 border="1" data-bbox="835 635 1408 871"> <thead> <tr> <th>Look , Cover</th> <th>Write</th> <th>Check</th> <th>Correct</th> </tr> </thead> <tbody> <tr> <td>Noun</td> <td>A person, place or</td> <td>✓</td> <td></td> </tr> <tr> <td>Algorithm</td> <td>Algorithm</td> <td>X</td> <td>Algorithm</td> </tr> </tbody> </table>	Look , Cover	Write	Check	Correct	Noun	A person, place or	✓		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	✓												
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 or 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> 												

# Homework diary

Week	Date	Subject	Task
LP2.1	Monday 21 <sup>st</sup> October	Maths	Create a mind map of percentages calculations (non-calculator) including percentage of an amount, percentage increase and decrease and percentage change.
	Tuesday 22 <sup>nd</sup> October	English	Plan a narrative entitled 'a memorable day'.
	Wednesday 23 <sup>rd</sup> October	Science	Sketch a velocity time graph for a car which accelerates, moves at a constant speed and finally decelerates to a stop. Label each phase of the motion.
	Thursday 24 <sup>th</sup> October	Option W	Complete homework task 1 from the option block homework tasks
	Friday 25 <sup>th</sup> October	Option X	Complete homework task 1 from the option block homework tasks

Week	Date	Subject	Task
LP2.2	Monday 4 <sup>th</sup> November	Option Y	Complete homework task 1 from the option block homework tasks
	Tuesday 5 <sup>th</sup> November	Option Z	Complete homework task 1 from the option block homework tasks
	Wednesday 6 <sup>th</sup> November	Maths	Make a revision card to show the difference between simple interest and compound interest.
	Thursday 7 <sup>th</sup> November	English	Plan a narrative entitled 'the day that changed everything'.
	Friday 8 <sup>th</sup> November	Science	Draw three free body diagrams for the three stages of acceleration during a sky dive. Explain how terminal velocity is an object in equilibrium.

Week	Date	Subject	Task
Review learning week	Monday 11 <sup>th</sup> November	ALL	This week is an opportunity to work on knowledge that has been identified during lessons as key areas for development. This could be additional revision and recall tasks from the knowledge organisers or it could be specific tasks set by classroom teacher.
	Tuesday 12 <sup>th</sup> November		
	Wednesday 13 <sup>th</sup> November		
	Thursday 14 <sup>th</sup> November		
	Friday 15 <sup>th</sup> November		

<b>Week</b>	<b>Date</b>	<b>Subject</b>	<b>Task</b>
LP2.3	Monday 18 <sup>th</sup> November	Option W	Complete homework task 2 from the option block homework tasks
	Tuesday 19 <sup>th</sup> November	Option X	Complete homework task 2 from the option block homework tasks
	Wednesday 20 <sup>th</sup> November	Option Y	Complete homework task 2 from the option block homework tasks
	Thursday 21 <sup>st</sup> November	Option Z	Complete homework task 2 from the option block homework tasks
	Friday 22 <sup>nd</sup> November	Maths	Create a mind map of percentages calculations (calculator) including percentage of an amount, percentage increase and decrease and percentage change.

<b>Week</b>	<b>Date</b>	<b>Subject</b>	<b>Task</b>
LP2.4	Monday 25 <sup>th</sup> November	English	Bullet Point the points you would make in a speech to fellow Yr11s about the importance of revision.
	Tuesday 26 <sup>th</sup> November	Science	Write out the equation for Kinetic Energy. Calculate the Kinetic Energy of an object which has a mass of 300kg and is travelling at 5 m/s.
	Wednesday 27 <sup>th</sup> November	Option W	Complete homework task 3 from the option block homework tasks
	Thursday 28 <sup>th</sup> November	Option X	Complete homework task 3 from the option block homework tasks
	Friday 29 <sup>th</sup> November	Option Y	Complete homework task 3 from the option block homework tasks

<b>Week</b>	<b>Date</b>	<b>Subject</b>	<b>Task</b>
LP2.5	Monday 2 <sup>nd</sup> December	Option Z	Complete homework task 3 from the option block homework tasks
	Tuesday 3 <sup>rd</sup> December	Maths	Create a set of instructions on how to convert between ordinary form and standard form.
	Wednesday 4 <sup>th</sup> December	English	Write a diary extract - for any day of your life so far!
	Thursday 5 <sup>th</sup> December	Science	Find the relationship which links Voltage, Current and Resistance. Write out the three ways the equation can be re-arranged. Calculate the resistance of a Filament Lamp with a Voltage of 230V and a current of 15amps travelling through it.
	Friday 6 <sup>th</sup> December	Option W	Complete homework task 4 from the option block homework tasks

<b>Week</b>	<b>Date</b>	<b>Subject</b>	<b>Task</b>
LP2.6	Monday 9 <sup>th</sup> December	Option X	Complete homework task 4 from the option block homework tasks
	Tuesday 10 <sup>th</sup> December	Option Y	Complete homework task 4 from the option block homework tasks
	Wednesday 11 <sup>th</sup> December	Option Z	Complete homework task 4 from the option block homework tasks
	Thursday 12 <sup>th</sup> December	Maths	Make a revision card about standard form calculations.
	Friday 13 <sup>th</sup> December	English	Write an article, entitled 'why do we have to have...'

<b>Week</b>	<b>Date</b>	<b>Subject</b>	<b>Task</b>
LP2.7	Monday 16 <sup>th</sup> December	Science	Draw a series and a parallel circuit with 2 bulbs and a switch in. Explain how the properties of current and voltage vary in series and parallel circuits.
	Tuesday 17 <sup>th</sup> December	Option W	Complete homework task 5 from the option block homework tasks
	Wednesday 18 <sup>th</sup> December	Option X	Complete homework task 5 from the option block homework tasks
	Thursday 19 <sup>th</sup> December	Option Y	Complete homework task 5 from the option block homework tasks
	Friday 20 <sup>th</sup> December	Option Z	Complete homework task 5 from the option block homework tasks

### **Option Block Homework Tasks**

<b>Subject</b>	<b>Homework</b>
<b>3D Design</b>	Sketch out one of Norman Fosters buildings.
	Write up your latest build – how have the craftspeople influenced your design .
	Describe the work of Isabel and Alfredo Aquilizan.
	Explain how you have used card connection techniques to develop your final piece .
	Describe how your final piece meets the brief 'Places and Spaces'
<b>Art</b>	Define what a natural form is and make a list of 10 natural forms you could draw in your project.
	Draw a 3x3 box. In each box, develop a 'natural; texture, using your pen or a pencil.
	List 5 key points about your studied artists work. Add these into your sketchbook creatively.
	Define the key elements, LINE, COLOUR, TEXTURE
	Write a paragraph about hoe you have used the formal elements in your work so far. Include this into your sketchbook creatively.
<b>Business</b>	Look at the key vocabulary on page one and learn their spelling and definition. Then use look, cover, write, check to test yourself.
	Look at the key vocabulary on page two and learn their spelling and definition. Then use look, cover, write, check to test yourself.
	Create flashcards on 5 key terms and definitions you are struggling to remember.
	Choose an example of where you have seen technology used in a store and explain what it was used for/what it did
	Give 3 examples of where you have seen visual merchandising installation and explain what they looked like e.g. Christmas display at Asda and it had lots of different advent calendars on and pictures of Christmas trees and Santa





<b>Drama</b>	Explain the requirements of Learning Aim A and Learning Aim B. The purple boxes on the bottom left of the knowledge organiser will support you.
	Read the definition of skills and responsibilities in the key vocabulary. List the key skills and responsibilities required of a director.
	Read the definition of skills and responsibilities in the key vocabulary. List the key skills and responsibilities required of an actor.
	Look at the first 5 key words from the key vocabulary for Learning Aim A. Learn their spelling and definition. Then use look, cover, write, check to test yourself.
	Look at the remaining 6 key words from the key vocabulary for Learning Aim A. Learn their spelling and definition. Then use look, cover, write, check to test yourself.
<b>Geography</b>	Explain how the components of an ecosystem interact.
	Describe the location, climate and species found in rainforests.
	Describe and explain two adaptations of plant species in rainforests.
	Explain how the nutrient cycle works.
	Explain causes and effects of deforestation in a rainforest of your choice.
<b>Health and Social Care</b>	Name how the physical factors of Smoking, Alcohol and Drugs can impact a person's physical growth.
	Describe how having psychological difficulties could impact someone socially
	Explain why people measure blood pressure.
	Describe why athletes often have their peak flow measured.
	When using a person-centred approach how can we ensure we are meeting the needs of a Muslim woman.
<b>History</b>	Learn and list the reasons for crises in 1923.
	Explain the impact of the Weimar Republic, using a PEE paragraph.
	Revise 5 T3 vocab words.
	Describe problems in Germany after WW1.
	Create a storyboard for the events of the Spartacist and Kapp Putsches.
<b>ICT</b>	Create flashcards for different Excel Formulas.
	Design a main menu to be used on Excel for a local supermarket called 'Fresh Foods'. Annotate this design with any buttons or form controls you would use, as well as what macros you would use and what they would do.
	List as many uses as possible spreadsheets could be used for in everyday life. How do spreadsheets improve peoples lives?
	Create a cheatsheet for excel formulas. What can they do and how can they be used?
	Research and list as many formatting tools as you can that are in Excel.
<b>Spanish</b>	Log onto your personal <b>Languagenut</b> account and complete the appropriate homework task.
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<b>Music</b>	Create a flashcard using the key vocabulary about Professional Skills e.g. time management.
	Which method of capturing music development do you think is the most effective? Compare the pros and cons of 2 methods.



	Using your knowledge organiser and the internet to support you – find out which social media platform is the most effective for musicians to use to share their work?
	Using the guide on your knowledge organiser, write a practice reflection log for your discipline.
	Why is it important for a musician to demonstrate awareness of health and safety and safe working practices in their reflections/technical logs?
<b>Btec Sport</b>	Use the ‘Look, cover, write, check’ method to list the key training principles/key terms of your sport or activity.
	Create a list of the positions (team sports) or events in your sport (athletics)
	Make flashcards on the tactics you could use within your sport/activity to gain an advantage (e.g. how to get a head start)
	Practice some of the key techniques that are used within your sport/activity at home.
	Use a method of your choice to revise the rules for your sport/activity.
<b>Photography</b>	Download OneDrive on your phone and log in with your academy username and password.
	Write up your latest photoshoot, using the annotation guide.
	Describe the key words Aperture and Shutter Speed.
	Create a fact file on a chosen photographer using the influences section.
	Explain how you have used the Aperture and Shutter speed this term.
<b>Religious Education</b>	Mind map Muslim teachings on Justice.
	Summarise Muslim attitudes towards crime, punishment and suffering.
	Create flashcards on the aims of punishment.
	Explain the Muslim teachings on forgiveness.
	Mind map key Muslim beliefs on the treatment of criminals, including the death penalty.
<b>Hospitality and Catering</b>	Write a list of the different types of service in the hospitality industry
	Create an idea of a menu for silver service – 3 courses
	Explore the Michelin star ratings
	Write the difference between AA rosettes and Michelin stars
	<b>Create a mind map of</b>

# Y11 Places and Spaces

# Recall

Biography		Significant Works	
<ul style="list-style-type: none"> <li>-Norman Foster is a British architect.</li> <li>-His company, Foster and Partners, has an international design practice. He is the UK's biggest builder of landmark office buildings.</li> <li>-His most famous buildings include 'The Gherkin' building and Wembley Stadium (both in London) and Hearst Tower in New York.</li> <li>-His works are often considered amongst the most important pieces of contemporary architecture.</li> <li>-Foster has received many awards and titles. He was knighted in 1990, and became a life peer, as Baron Foster of Thames Bank in 1999. He was awarded the Pritzker Architecture Prize in 1999.</li> </ul>			<p><b>The Gherkin (2003)</b></p> <ul style="list-style-type: none"> <li>-The Gherkin (officially 30 St. Mary's Axe) is a commercial skyscraper in London's financial district. It has 41 floors and is 181 metres tall.</li> <li>-The building uses only half of the energy of most buildings of its size, due to its eco-friendly skin. Its curved shape also makes it wind-resistant.</li> </ul>
			<p><b>The Hearst Tower (2006)</b></p> <ul style="list-style-type: none"> <li>-The Hearst Tower is in Manhattan, NY, and is the Head Office of Hearst Communications.</li> <li>-It has 46 floors and is 182 metres high. It uses triangles, for strength, throughout the frame. This required 9,500 tons of steel. It includes a 3-story water sculpture, named Icefall. The outer wall of the building is jagged.</li> </ul>
	<p>-Norman Foster was born on 1<sup>st</sup> June, 1935, in Stockport, England. He now has homes all over the world, including London and New York.</p>		<p><b>Wembley Stadium 2007 (1996)</b></p> <ul style="list-style-type: none"> <li>-Wembley Stadium is the largest football stadium in the UK, and the home of the England football team. It holds 90,000 people. It has a retractable roof, to allow sport in all weathers. The roof is supported by a 133 metre arch above the stadium.</li> </ul>

KS4 Progression

# A01

EXPLORE  
ANNOULATE  
THEME IMAGES  
TO YOUR CHOICE ARTISTS WORK  
WRITTEN ANALYSIS  
LINK ARTISTS WORK TO  
IDEAS AND ARTWORK

# A02

EXPERIMENT  
WITH A  
RANGE  
OF MEDIA  
LINKING TECHNIQUES  
TO ARTISTS  
AND THEMES  
TEXTILES  
CLAY  
PAINTED MEDIA  
PHOTOGRAPHS  
OIL PASTEL  
WATERCOLOUR  
PEN AND INK

# A03

IDEAS  
LINKING TO  
ARTISTS WORK  
LINKING TOGETHER  
PLANS, DESIGNS  
IN A RANGE OF  
DIFFERENT MEDIA  
OBSERVATIONAL  
DRAWINGS  
PLANS  
EXPLANATIONS  
ANNOTATION

# A04

FINAL  
MEANINGFUL  
INFORMED  
RESPONSE  
LINK BETWEEN  
VISUALS AND ARTISTS  
PRESENTATION  
PIECE OF WORK  
SHOW UNDERSTANDING  
LINKS  
TO ARTISTS WORK  
RELEVANT

Isabel and Alfredo Aquilizan work as a husband and wife team primarily in the medium of cardboard. Their soaring installations fill gallery spaces, reaching from floor to ceiling and wall to wall. The duo's massive sculptural works are comprised of miniature homes that have been piled and stacked, creating dizzying towers of comingled landscapes. For many of their installations, the artists work with students and community members to collaboratively build the cardboard structures, inviting participants to reflect on and channel their own migratory experiences. The Aquilizans moved from the Philippines to Australia in 2006, and much of their work centers around the migrant experience, and having a foot in two worlds.



## CARDBOARD Attachments

FLANGE

L-BRACE

SLOT

TABS

BRASS FASTENERS

HOLE PUNCH

Tapping into Declarative and Procedural Knowledge in the Art Room

www.theartofred.com

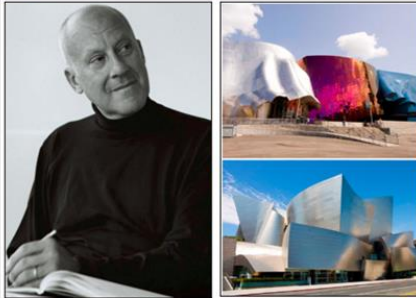


# Y11 Places and Spaces

# Recall

## Biography

- Norman Foster is a British architect.
- His company, Foster and Partners, has an international design practice. He is the UK's biggest builder of landmark office buildings.
- His most famous buildings include 'The Gherkin' building and Wembley Stadium (both in London) and Hearst Tower in New York.
- His works are often considered amongst the most important pieces of contemporary architecture.
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-Norman Foster was born on 1<sup>st</sup> June, 1935, in Stockport, England. He now has homes all over the world, including London and New York.

## Significant Works

**The Gherkin (2003)**



-The Gherkin (officially 30 St. Mary's Axe) is a commercial skyscraper in London's financial district. It has 41 floors and is 181 metres tall. -The building uses only half of the energy of most buildings of its size, due to its eco-friendly skin. Its curved shape also makes it wind-resistant.

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-Wembley Stadium is the largest football stadium in the UK, and the home of the England football team. It holds 90,000 people. It has a retractable roof, to allow sport in all weathers. The roof is supported by a 133 metre arch above the stadium.

Cube	Cuboid	Triangular prism

<b>Geometry</b>			
arc	equilateral	parallel lines	side
acute angle	hexagon	pentagon	sphere
brackets ( )	horizontal line	perpendicular lines	square
circle	intersecting lines	quadrilateral	star
cone	isosceles	rectangular	trapezoid
cube	triangle	prism	vertices
cylinder	moon	rhombus	vertical line
	obtuse angle	right angle	

## Styles and Techniques

**Postmodern Architecture**

-Postmodern architecture is a style of architecture that emerged in the 1960s. It was a reaction to the traditional, repetitive nature of modern architecture. -Postmodern architects felt that modern architecture was 'uniform' (all the same) and ignored the history and culture of the cities in which it appeared. -Postmodern architects aim to use unusual materials and form unusual shapes, whilst also making subtle references to the location's landscape and historical background. Foster uses bold architectural features & unusual shapes. He tries to incorporate the history and traditions of the site into the building.



**High-Tech Architecture**

-Foster's designs are often sleek, modern and high-tech - using the latest technological advances and understanding of materials for effect, e.g. for stability, strength, and appearance. -Many of his works (particularly more recent buildings) are examples of sustainable design - reducing consumption of the earth's resources and reducing negative impacts on the environment.



## KS4 Progression

**A01** EXPLORE  
 BEGIN TO LINK A THEME TO YOUR OWN ARTIST'S WORK  
 ANNOTATE THEMES WITH WRITTEN ANALYSIS  
 LINK ARTISTS WORK TO IDEAS AND ARTWORK  
**IMAGES**  
**ARTISTS**  
**RESEARCH**

**A02** EXPERIMENT WITH A RANGE OF MEDIA  
 LINKING TECHNIQUES TO ARTISTS AND THEMES  
 TEXTILES OF MEDIA  
 CLAY WATERCOLOUR  
 MIXED MEDIA PHOTOGRAPHS OIL PASTEL PEN AND INK

**A03** IDEAS  
 IDEAS LINKING TO ARTISTS WORK  
 ALL ARTWORK LINKING TOGETHER  
 IN A RANGE OF DIFFERENT MEDIA  
 OBSERVATIONAL DRAWINGS  
 PLANS  
 EXPLANATIONS  
 ANNOTATION

**A04** FINAL MEANINGFUL PIECE OF WORK  
 INFORMED SHOW UNDERSTANDING  
 RESPONSE LINKS  
 LINK BETWEEN VISUALS AND ARTISTS  
 PRESENTATION TO ARTISTS WORK  
**RELEVANT**



# Y11 Low Light

## CAMERA SETTINGS

ISO SETTINGS

ISO is how much light is let into the camera and controls how light or dark an image is. The higher the number the brighter the image. It can also affect the by making it grainier or creating 'noise' on the photograph.

ISO 100-200 Daylight  
ISO 200-400 Shade/Indoors  
ISO 400-800 Flash Indoors  
ISO 800-1600 Darker Indoors  
ISO 1600-3200 Indoors at Night  
ISO 3200+ Extra Low Light

ISO 100 CLEAR IMAGE  
ISO 3200 MOST NOISE

COMPOSITIONAL ELEMENTS

Composition needs to be considered when setting up a photograph. There are different compositional elements which can be used; use one or more elements to create a composition that works for the image.

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

## ASSESSMENT

You will be assessed on two components for your GCSE; 60% of your GCSE mark is coursework and 40% is your exam mark. Each component is marked against four assessment objectives, each assessment objective is marked out of 24. The objectives do not need to be completed in order; pieces of artwork can meet more than one assessment objective.

### HOW TO SUCCEED

Try your best, take risks, be creative, practice, work hard, take pride in your work, listen to your teacher, be independent, enjoy the journey.

Photography captures the world around you - you need to be independent and motivated; take photos outside of school to really make your work stand out and personal to you.

### ASSESSMENT OBJECTIVE 1 (AO1)

Develop ideas through investigation, demonstrating critical understanding of sources.

- \* Artist research pages
- \* Your responses in the style of artists
- \* Contact sheets
- \* Annotation and analysis of findings

### ASSESSMENT OBJECTIVE 2 (AO2)

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

- \* Photoshoots exploring different photography techniques
- \* Contact sheets and selecting most successful photo
- \* Using Photoshop (or similar) to digitally edit and develop your photographs
- \* Using art materials and techniques to develop further outcomes

### ASSESSMENT OBJECTIVE 3 (AO3)

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

- \* Planning photoshoots
- \* Contact sheets
- \* Visually - as well as photography you must evidence a form of drawing, such as sketches, designs
- \* Annotation - recording ideas through mind maps, mood boards, notes, explanations, evaluations, justifications.

### ASSESSMENT OBJECTIVE 4 (AO4)

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

- \* Your whole creative journey, presenting an individual and meaningful response from your initial thoughts to your final outcome.
- \* Plan of your final outcome
- \* Range of shoots and contact sheets for final outcome
- \* An original final outcome that is clearly inspired by your research and creative journey

## KS4 Progression

# AO1

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

# IMAGES

# ARTISTS

# RESEARCH

# AO2

EXPERIMENT  
WITH A  
RANGE  
AND THEMES  
OF MEDIA  
TEXTILES  
WATERCOLOUR  
CLAY  
MIXED MEDIA  
PHOTOGRAPHS  
OIL PASTEL  
PEN AND INK

# AO3

IDEAS  
IDEAS LINKING TO  
ARTISTS WORK  
ALL ARTWORK  
LINKING TOGETHER  
PLANS, DESIGNS  
IN A RANGE OF EXPLANATIONS  
DIFFERENT MEDIA ANNOTATION

# OBSERVATIONAL

# DRAWINGS

# PLANS

# AO4

FINAL  
MEANINGFUL  
INFORMED  
RESPONSE  
LINK BETWEEN  
VISUALS AND ARTISTS  
PRESENTATION

PIECE OF WORK  
SHOW UNDERSTANDING  
LINKS  
TO ARTISTS WORK  
RELEVANT



# Y11 Urban

**ANNOTATION** Annotations are written explanations or critical comments added to your artwork that record and communicate your thoughts and ideas. It is important that you annotate your work as it progresses; explaining, describing and evaluating.

**KEY VOCABULARY DESCRIBING THE FORMAL ELEMENTS**

Shape, Form, Space	Tone	Texture and Pattern	Line	Colour
Closed Open Distorted Flat Organic Geometric Negative/Positive Perspective Scale Depth Composition 2D/3D Volume	Value Dark/Medium/Light Faded Harsh Contrasting Intense Sombre Faint Graduated Dramatic Shadow Highlight Grey	Repeated Structured Geometric/Organic Uniform Random Symmetrical Irregular Rough/Smooth Broken Fine Flat Uneven Soft	Controlled Continuous Bold Sketched Free Rough Light Flowing Thick/Thin Broken Overlapping Angular	Hue Tint Bright Pastel Primary/Secondary/Tertiary Harmonious Complementary Monochrome Neutral Subtle Vivid Cool/Warm Contrasting

**Describe the context of the piece.**  
What is it? (What is it you have drawn?)  
What are you working from? (Primary or secondary source, and explain)  
What is the purpose? (Observation, development, design idea?)

- This piece is part of my ...
- I have been working from ...
- My subject matter has been... this is because...

**Write about materials, techniques and processes used.**  
What materials have you used and how have you applied them?  
Explain techniques or processes used.  
What formal skills have you demonstrated?

- To create my artwork, I used...
- I explored using...
- I created this piece because ...
- I am pleased with this study because ...
- I could further develop my work by...

**Explain your artist research and its context.**  
Which artist has influenced your work and why is their artwork relevant?  
How would you describe their artwork? (What art movement, when produced, how it's created)  
What influenced their artwork? How? (Other artists, themes, events in their life, etc.)  
What formal elements, materials and techniques have you used in your work and how do these link to the artist's style?  
How have you used the artist style in your own way?

- I have chosen to look at artwork by the artist ... They link to my theme because...
- Their artwork was created during the ... movement in ... and focuses on...
- Influences for the artist were ... and this is shown in their use of... because...
- My work is inspired by ... because I

**Write about your influences.**  
Describe how you have used the artist's work to inspire and inform your artwork.  
Describe the qualities you wanted to achieve in your artwork.

- I used the work of artist ... to inspire my own work by ...

**CONNECTIVES:** for example, such as, in addition to, as well as, to show, however, because of, alternatively, except, also, similarly, on the whole, apart from, in summary

What to write and how to start

**ASSESSMENT**

You will be assessed on two components for your GCSE: 60% of your GCSE mark is coursework and 40% is your exam mark. Each component is marked against four assessment objectives, each assessment objective is marked out of 24. The objectives do not need to be completed in order; pieces of artwork can meet more than one assessment objective.





**HOW TO SUCCEED**  
Try your best, take risks, be creative, practice, work hard, take pride in your art, listen to your teacher, be independent, enjoy the journey.  
Art takes time - use the art rooms after school, work at home, make the most of your lessons.

**ASSESSMENT OBJECTIVE 1 (AO1)**  
Develop ideas through investigation, demonstrating critical understanding of sources.  
\* Artist research pages \* Your responses in the style of artists \* Gathering primary research (photography, gallery visits) \* Annotation and analysis of findings

**ASSESSMENT OBJECTIVE 2 (AO2)**  
Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.  
\*Experimenting in response to artist research \*Using relevant materials and techniques \*Exploring new materials, techniques and combinations \*Practice and refine your use of materials, showing skill and control

**ASSESSMENT OBJECTIVE 3 (AO3)**  
Record ideas, observations and insights relevant to intentions as work progresses.  
\*Recording observations and ideas both visually and written as annotations \*Visually - recording through observational drawing, photography, sketches, designs \*Annotation - recording ideas through mind maps, mood boards, notes, explanations, evaluations, justifications.

**ASSESSMENT OBJECTIVE 4 (AO4)**  
Present a personal and meaningful response that realises intentions and demonstrates understanding of visual languages  
\*Your whole creative journey, presenting an individual and meaningful response from your initial thoughts to your final outcome. \*Plan of your final outcome \*Experiments for final outcome \*An original final outcome that is clearly inspired by your research and creative journey

**AO1 EXPLORE**  
BEGIN TO LINK A  
**THEME IMAGES**  
TO YOUR CHOSEN ARTIST'S WORK  
**WRITTEN ANALYSIS**  
LINK ARTISTS WORK TO  
IDEAS AND ARTWORK **RESEARCH**

**AO2 EXPERIMENT**  
LINKING TECHNIQUES  
**TO ARTISTS AND THEMES**  
WITH A **RANGE**  
OF MEDIA  
**TEXTILES WATERCOLOUR**  
**CLAY PHOTOGRAPHY**  
**SOIL PASTEL PEN AND INK**

**AO3 IDEAS**  
IDEAS LINKING TO  
ARTISTS WORK  
**ALL ARTWORK**  
LINKING TOGETHER  
**PLANS, DESIGNS**  
IN A RANGE OF **EXPLANATIONS**  
DIFFERENT MEDIA **ANNOTATION**

**AO4 FINAL**  
MEANINGFUL PIECE OF WORK  
**INFORMED** SHOW UNDERSTANDING  
**RESPONSE**  
LINK BETWEEN TO ARTISTS WORK  
VISUALS AND ARTISTS  
PRESENTATION **RELEVANT**

**What I Need to Know**  
**To understand and explain the purpose of visual merchandising**  
**To identify and explain different types of visual merchandising**  
**To identify and explain the different principles of visual merchandising**

**Key Vocabulary**

<b>E-Commerce and m-commerce</b>	Online shopping, which is also referred to as e-commerce and e-tailing, is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet. The Internet has made it much easier for retailers of all sizes and in different markets to sell their products and services to a wider range of customers. Recently there has been an increase in sales from wireless handheld devices; this is referred to as m-commerce. Online retailing allows customers to buy products without visiting a physical store. Can include retailer’s own website or a third-party marketplace such as Amazon. Visual merchandising is used by online retailers to display their products and services onscreen.
<b>Pop-up shops</b>	Temporary or pop-up shops often use vacant premises for a short period of time. Some pop-up shops create and build their own temporary shops on the high street or in shopping malls.
<b>Markets</b>	Markets are places, either indoor or outdoor, where there are many stalls that sell a range of products. Market stall owners, usually small scale and independent, run the stalls. Some markets are permanent in a specific location, others are temporary and may move location.
<b>Multi-channel retailing</b>	Multi-channel is using more than one of the retail channels to sell through. For most retailers this means selling in a physical store and online. Often referred to as ‘clicks and bricks’ which means that businesses need to have a web presence (clicks), plus a physical presence on the high street or in shopping centres (bricks). Using a multi-channel approach can increase the number of potential customers and therefore increase sales and profit.
<b>Retail types</b>	Retail types include department stores, supermarkets, warehouses, clothing stores, specialty stores convenience stores, discount stores, independent shops and charity shops.
<b>Scale</b>	A retail business that operates at a local level is often small, limited in size, the number of people it employs and the revenue it creates. A national retail business will operate all over one country. It may have multiple retail outlets throughout the country, and a distribution network to ensure it can distribute its products to where they are being sold. A global retail business will operate internationally throughout the world.
<b>Product type</b>	Different types of retail products include perishable and non-perishable goods, high value items, high volume goods, low volume goods, fragile items, large items, items which are part of a product range, and restricted goods.
<b>Target customers</b>	Without customers, retail business will fail. Any successful business must be able to identify potential customers and understand the reasons why customers are willing to visit its store and pay for the products or services the business is selling.

## Key Vocabulary

<b>Gender</b>	Some products are aimed at men and some at women. Some retail businesses will target a particular gender while others will sell products to appeal to more than one to increase sales.
<b>Income</b>	Depending on their income customers will buy more expensive or cheaper products. Retail businesses know this so they will offer a range of products at different price points.
<b>Lifestyle</b>	Peoples lifestyles are the individual patterns of behaviour; this is made up of their attitudes, beliefs and habits. Lifestyles also include interests and hobbies.
<b>The marketing mix</b>	The marketing mix consists of four important factors needed to sell products and services; product, price, promotion, and place (known collectively as the 4Ps)
<b>Product features and Design</b>	Many customers will buy a particular product because of its features and design. Retail businesses need to sell products that give the customer the features and design. Retail businesses need to sell products that give customer the features and design they want.
<b>Product differentiation</b>	Product differentiation is used in retail businesses to make their products different from other products they sell, and make them different from those offered by its competitors.
<b>Packaging</b>	Packaging is an important tool in selling as well as protecting the product. Every product we buy must be packaged.
<b>Customer Service</b>	Many retail businesses have a good reputation for providing a high level of customer service.
<b>Use of brands</b>	Product design and innovation, USP, customer service and packaging all contribute towards branding of a product.



**COMMAND WORDS – LEARNING AIM A**

1	<b>IDENTIFY &amp; DEFINE</b> (Level 1 pass / merit)	Create a list of the stylistic qualities and say what they mean.  Create a list of the features of the roles, responsibilities and skills and say what they mean.
2	<b>DESCRIBE</b> (Level 2 pass)	Give some clear features of the stylistic qualities and what they mean. Give some clear features of the roles, responsibilities and skills, including all of the main points.
3	<b>ANALYSE</b> (Level 2 merit)	Talk about the stylistic qualities, thinking about what professionals have done well, what would have been tricky how they have/could have overcome this using their skills.
4	<b>EVALUATE</b> (Level 2 distinction)	Go into detail about why the stylistic qualities are effective/not effective in the performance and justify why you think this.

**KEY VOCABULARY - LEARNING AIM A**

1	<b>PERFORMANCE STYLE</b>	The 'type' of performance and the way it is created and performed. For example: Realism, Melodrama, Physical Theatre, Epic Theatre, Political Theatre, Verbatim Theatre
2	<b>STYLISTIC QUALITIES</b>	Drama techniques and conventions that are specific to a style of performance. For example, exaggerated gestures and slapstick comedy in Pantomime / natural speech and realistic physicality in Realism / choral movement and minimal set in Physical Theatre
3	<b>PRACTITIONER / THEATRE COMPANY</b>	A person or company who has influenced theatre in a big way or has a distinct style of performance e.g. Charlie Chaplin (Slapstick Comedy), Stanislavski (Naturalism), Frantic Assembly (Physical Theatre).
4	<b>ROLES</b>	A person's job to create a theatre performance Performance roles: actor / dancer / singer/ puppeteer, etc... Non-performance roles: choreographer /set designer / director / writer etc...
5	<b>RESPONSIBILITIES</b>	What the practitioner is in charge of doing or the tasks they carry out. For example, rehearsing /performing /contributing to the creation and development of performance material / devising, designing, choreographing, directing, writing / refining performance material / managing self and others.
6	<b>SKILLS</b>	What the practitioner needs to be good at to make a theatre performance. For example, script writing, creative and research skills for a writer / line recall, vocal and physical skills for an actor / communication, research and visualisation skills for a director.
7	<b>CREATIVE INTENTIONS</b>	The decisions, made by theatre makers, to communicate deeper meaning through their work. It includes decisions about how they want the audience to feel, what atmosphere they want to put across to the audience and how they want character's to be interpreted.
8	<b>PURPOSE</b>	Why was it made? To educate / to inform / to entertain to provoke/ to challenge viewpoints / to raise awareness / to celebrate...
9	<b>THEME / ISSUE</b>	What the performance is about or the problem/idea it explores.
10	<b>STIMULUS</b>	The starting point where the main ideas for the performance come from.
11	<b>INFLUENCES AND COLLABORATION</b>	Other professionals that have created similar work in the past which has given professionals new ideas. This can also include working together with others who like to create similar work or merging ideas together.

**LEARNING AIM A: Investigate how professional performance or production work is created**

1. Investigating the **STYLE** of professional performances and how it communicates a **THEME**.
2. Investigating **WHO** makes theatre performances, what their **JOB**s are and the **SKILLS** they need to do it.



## COMMAND WORDS – LEARNING AIM B

1	<b>IDENTIFY &amp; DEFINE</b> (Level 1 pass / merit)	Create a list of the processes, skills and approaches to create a performance and say what they mean.
2	<b>DESCRIBE</b> (Level 2 pass)	Give a clear, straightforward account of the processes, skills and approaches to create a performance. Give a clear, straightforward account of the production process, which includes all of the main points.
3	<b>ANALYSE</b> (Level 2 merit)	Talk about how professionals in theatre work together, thinking about what parts of the process worked well, what parts were tricky and how practitioners could overcome this using different approaches and skills.
4	<b>EVALUATE</b> (Level 2 distinction)	Go into detail about how professionals in theatre have worked together to create a production and justify why this was effective.

## KEY VOCABULARY - LEARNING AIM B

1	<b>PROCESSES</b>	The steps taken in the journey to prepare for a performance. This could be: Researching a stimulus to come up with ideas for a performance / exploring and developing ideas / discussion with performers / setting tasks for performers / sharing ideas and intentions / teaching material to performers / developing performance material / organising and running rehearsals / refining and adjusting material to make improvements / providing notes and/or feedback on improvements.
2	<b>SKILLS</b>	What the performer / designer needs to be good at in the process (journey) of putting on a theatre performance. For example: organisation, planning and artistic skills for a Set Designer / musical, timing and collaborative skills for a Choreographer / time management, technical and imaginative skills for a Lighting Designer
3	<b>APPROACHES</b>	The different methods used to prepare for a performance. This could be in a rehearsal / production / technical rehearsal / dress rehearsal / performance / post-performance evaluation For example: one director might approach the rehearsal process by blocking the scene at first, whereas another director might approach the rehearsal process by getting the actors to improvise at first.
4	<b>REPERTOIRE</b>	The production that you are studying e.g. 'Blood Brothers'
5	<b>INTERRELATIONSHIPS</b>	How different roles and parts in theatre have worked together to create the performance.
6	<b>PRODUCTION PROCESS</b>	This refers to the events leading up to putting on a production e.g. rehearsals, production meetings (with designers etc...), technical rehearsals, dress rehearsals, performance and the reviews after a performance.
7	<b>CONTRIBUTE EFFECTIVELY</b>	Add something positive to the performance. This could be by making it clearer, more entertaining, more engaging, easier for the actors etc...

**LEARNING AIM B: Demonstrate understanding of the skills, techniques and approaches used by professionals to create performance / production work.**

1. Explore the *JOURNEY* taken to get ideas, create and rehearse performances and the *SKILLS* and *TECHNIQUES* needed to do this
2. Explore how different roles work together to put on a final production.

## Non-fiction Writing:

### Assessment Objectives:

**AO5** Communicate clearly and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences.

Organise information and ideas, using structural and grammatical features to support coherence and cohesion of texts.

**AO6** Use a range of vocabulary and sentence structure for clarity, purpose and effect, with accurate spelling and punctuation.

### Component 2 Exam facts:

- Two writing tasks
- 20 marks each
- 5 minutes to plan
- 25 minutes to write
- Write 300-400 words per task

### Before Starting:

1. Read each task carefully (remember you *have to* do both).
2. Highlight the keywords in the task that suggest audience, content, purpose, style, structure and so on.
3. Try to step back from the task – sometimes you are asked to give your views – try to consider how you feel or what your immediate reaction is.
4. Use the planning time to form a clear plan.

### Planning:

#### Why plan?

Planning helps you to capture your immediate reactions and views about a task.

- Planning allows you to jot down useful vocabulary.
- Planning allows you to consider the structure of your work.
- Planning will save you time in the long run.

#### Things to consider:

- The content of your writing – what angle will allow you to write in sufficient detail?
- Words, phrases and ideas that are suited to the topic and will enhance your writing.
- Structure – how will you present your work. Have you been asked for a specific structure (e.g. a formal letter)?
- Remember to write in full sentences and paragraphs.
- How will you begin your work, how will your ideas develop and how will you conclude your work?
- Once you have written down your ideas in a plan, remember to give some consideration to the order that you will write.

**Work out in advance what kind of planning works best for you. Do you prefer to plan using a mind map, a spider diagram, a flow chart or a different style?**

### Top tips:

- Remember to use a range of appropriate and well selected details to develop and support your points
- Always leave enough time to proofread your work.

### Examples of previous Component 2 Writing questions:

**Write a lively article** for your school/college magazine with the heading: A Teenager's Guide to Managing Parents.

#### Write your article.

You have been asked to give a talk to your class with the title: The person I'd most like to spend a day with.

#### Write down what you would say in your talk.

Write a review for a teenage magazine of a book, film or TV programme/series you have enjoyed in the last year and why it might appeal to others of your age.

#### Write your review.

Your headteacher has decided that there should not be an end of year celebration such as a school prom or party. The headteacher believes it would just be an excuse for students to show off in an expensive way.

#### Write a letter to your headteacher giving your opinions on this.

### How will my work be marked?:

Your writing in both Component 1 and Component 2 is marked using very specific criteria. You are awarded marks for AO5 Communication and organisation and AO6 Vocabulary, sentence structure, spelling and punctuation.

In Component 2, AO5 is marked out of 12 and AO6 is marked out of 8. During your revision, you should have a look at the mark scheme that the examiners will use, this will help you to see exactly what they are looking for.

Remember, getting the basics (full stops and capital letters) is just as important as trying to include some more complex sentences. Aim to include an accurate range of sentence types and vocabulary.

### Checklist for improving your writing:

- ✓ Have you planned your work carefully?
- ✓ Have you included sufficient detail?
- ✓ Have you considered the language you use?
- ✓ Have you structured your work carefully?
- ✓ Have you varied your punctuation for effect?
- ✓ Have you proof-read your work for errors?



## Assessment Objectives:

**AO5** Communicate clearly and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences.

Organise information and ideas, using structural and grammatical features to support coherence and cohesion of texts.

**AO6** Use a range of vocabulary and sentence structure for clarity, purpose and effect, with accurate spelling and punctuation.

## Before Starting:

1. Read through the task choices carefully.
2. Before making your choice, think about experiences that you have had (or that you know about) which you could use to answer the task. Or, if choosing to write purely from imagination, how will you make your narrative sound convincing and authentic?
3. Choose a task that you think you would have plenty to write about.
4. Spend 5-10 minutes planning carefully to make sure that you can produce an interesting and engaging piece of writing.

## Things to avoid:

Don't be tempted to give your reader all of the information they need about your narrative too quickly. You need to control what your reader knows. If you give out all of the key details about what is going to happen in your opening paragraph then you may shut down the ways in which you can add interesting detail later on.

## Planning:

### Plan

- Use a system that makes most sense to you – e.g. a spider diagram, bullet points, table, notes.
- A plan should be tightly focused – don't waste time writing out full sentences, key words and ideas are all that are needed.

### Things to consider

- Key details – what happened and in what order?
- People – who is involved? How are you going to let your reader know key details about them?
- Structure – think about your beginning and how your narrative will end. Are you building to a particular point of interest for the reader?
- Detail – which areas will you develop further to add interest for your reader?

## TIP 1: Write something manageable:

You only have a short amount of time so make sure that you don't have too many characters or too many things happening.

If you spread yourself too thinly you won't be able to fully showcase your skills.

## Examples of previous Component 1 Writing questions:

Write about a time when you broke the rules.

Write about a time when you had to go shopping with a relative.

The Wedding.

Grandma.

A memory of primary school.

Continue the following: It really wasn't the result I was looking for.

Write a story which ends:  
...and that was the worst job of my life.

Write a story which ends:  
...and I felt so sorry for myself.

## Structure:

Using structural features like dialogue or flashbacks can add interest as long as you use them carefully and your writing makes sense. Your writing *must* be **coherent**.

## TIP 2: Be aware of your reader:

*For the highest marks you **must** fully engage the reader's interest.*

Write about people and events in a way that makes your reader care about them. This could happen in a number of ways. For example, they could be interested or amused, horrified or worried.

Develop detail in a way that engages your reader. Influence them through what you **show** them and your development of the content.

## Checklist for improving your writing:


- ☑ Have you tried to engage your reader?
- ☑ Have you made your reader learn things through implied detail (what you have shown them)?
- ☑ Have you provided interest by developing detail?
- ☑ Have you structured your work carefully?
- ☑ Have you proof-read your work for errors?

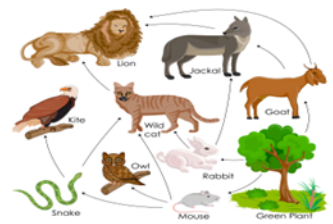
# Geography

## What is an Ecosystem?

An ecosystem is a system in which organisms interact with each other and with their environment.

## Ecosystem's Components

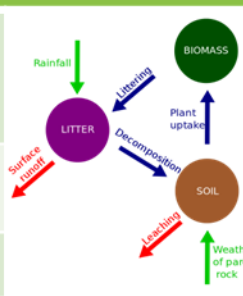
<b>Abiotic</b>	These are <b>non-living</b> , such as air, water, heat and rock.
<b>Biotic</b>	These are <b>living</b> , such as plants, insects, and animals.
	<b>Flora</b> Plant life occurring in a particular region or time.
	<b>Fauna</b> Animal life of any particular region or time.



**Food Web and Chains**  
Simple **food chains** are useful in explaining the basic principles behind ecosystems. They show only one species at a particular trophic level. **Food webs** however consists of a network of many food chains interconnected together.

## Nutrient cycle

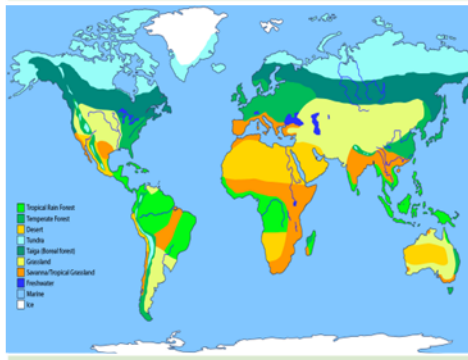
Plants take in **nutrients** to build into new organic matter. Nutrients are taken up when animals eat plants and then returned to the soil when animals die and the body is broken down by **decomposers**.



<b>Litter</b>	This is the <b>surface layer</b> of vegetation, which over time breaks down to become <b>humus</b> .
<b>Biomass</b>	The total mass of <b>living organisms</b> per unit area.

## Biomes

A biome is a **large geographical area of distinctive plant and animal groups**, which are adapted to that particular environment. The climate and geography of a region determines what type of biome can exist in that region.



Coniferous forest
Deciduous forest
Tropical rainforests
Tundra
Temperate grasslands
Tropical grasslands
Hot deserts.

The **most productive biomes** – which have the greatest biomass- grow in climates that are **hot and wet**.

## Biome's climate and plants

Biome	Location	Temperature	Rainfall	Flora	Fauna
<b>Tropical rainforest</b>	Centred along the Equator.	Hot all year (25-30°C)	Very high (over 200mm/year)	Tall trees forming a canopy; wide variety of species.	Greatest range of different animal species. Most live in canopy layer
<b>Tropical grasslands</b>	Between latitudes 5°- 30° north & south of Equator.	Warm all year (20-30°C)	Wet + dry season (500-1500mm/year)	Grasslands with widely spaced trees.	Large hoofed herbivores and carnivores dominate.
<b>Hot desert</b>	Found along the tropics of Cancer and Capricorn.	Hot by day (over 30°C) Cold by night	Very low (below 300mm/year)	Lack of plants and few species; adapted to drought.	Many animals are small and nocturnal: except for the camel.
<b>Temperate forest</b>	Between latitudes 40°- 60° north of Equator.	Warm summers + mild winters (5-20°C)	Variable rainfall (500-1500mm /year)	Mainly deciduous trees; a variety of species.	Animals adapt to colder and warmer climates. Some migrate.
<b>Tundra</b>	Far Latitudes of 65° north and south of Equator	Cold winter + cool summers (below 10°C)	Low rainfall (below 500mm/ year)	Small plants grow close to the ground and only in summer.	Low number of species. Most animals found along coast.
<b>Coral Reefs</b>	Found within 30° north – south of Equator in tropical waters.	Warm water all year round with temperatures of 18°C	Wet + dry seasons. Rainfall varies greatly due to location.	Small range of plant life which includes algae and sea grasses that shelters reef animals.	Dominated by polyps and a diverse range of fish species.

# Unit 1b The Living World



## CASE STUDY: UK Ecosystem: Epping Forest, Essex



This is a typical English lowland deciduous woodland. **70% of the area** is designated as a **Site of Special Scientific Interest (SSI)** for its biological interest, with **66%** designated as a **Special Area of Conservation (SAC)**.

Components & Interrelationships	Management
<b>Spring</b> Flowering plants (producers) such as bluebells store nutrients to be eaten by consumers later.	- Epping has been managed for centuries. - Currently now used for <b>recreation and conservation</b> . - Visitors <b>pick fruit</b> and berries, helping to <b>disperse seeds</b> . - Trees cut down to encourage <b>new growth for timber</b> .
<b>Summer</b> Broad tree leaves grow quickly to <b>maximise photosynthesis</b> .	
<b>Autumn</b> Trees shed leaves to <b>conserve energy</b> due to sunlight hours decreasing.	
<b>Winter</b> Bacteria <b>decompose</b> the leaf litter, releasing the nutrients into the soil.	

## Tropical Rainforest Biome

Tropical rainforest cover about **2 per cent** of the Earth's surface yet they are home to **over half of the world's plant and animals**.

## Interdependence in the rainforest

A rainforest works through **interdependence**. This is where the plants and animals **depend on each other** for survival. If one component changes, there can be **serious knock-up effects** for the entire ecosystem.



## Distribution of Tropical Rainforests

Tropical rainforests are **centred along the Equator** between the Tropic of Cancer and Capricorn. Rainforests can be found in South America, central Africa and South-East Asia. **The Amazon** is the world's largest rainforest and takes up the majority of northern South America, encompassing countries such as Brazil and Peru.



## Layers of the Rainforest

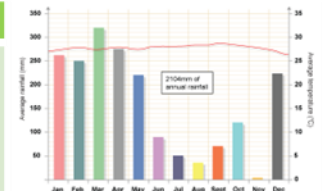
<b>Emergent</b>	Highest layer with trees reaching <b>50 metres</b> .
<b>Canopy</b>	Most life is found here as it receives <b>70% of the sunlight</b> and <b>80% of the life</b> .
<b>U-Canopy</b>	Consists of trees that reach <b>20 metres high</b> .
<b>Shrub Layer</b>	Lowest layer with <b>small trees</b> that have adapted to living in the <b>shade</b> .

## Rainforest nutrient cycle

The **hot, damp conditions** on the forest floor allow for the **rapid decomposition** of dead plant material. This provides plentiful nutrients that are easily absorbed by plant roots. However, as these nutrients are in high demand from the many fast-growing plants, they do not remain in the soil for long and stay close to the surface. If vegetation is removed, the soils quickly become **infertile**.

## Climate of Tropical Rainforests

- Evening temperatures rarely fall below **22°C**.
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.





## Tropical Rainforests: Case Study Malaysia



Malaysia is a LIC country in south-east Asia. 67% of Malaysia is a tropical rainforest with 18% of it not being interfered with. However, Malaysia has the fastest rate of deforestation compared to anywhere in the world

Adaptations to the rainforest		Rainforest inhabitants
Orangutans	Large arms to swing & support in the tree canopy.	Many tribes have developed sustainable ways of survival. The rainforest provides inhabitants with... <ul style="list-style-type: none"> <li>• Food through hunting and gathering.</li> <li>• Natural medicines from forest plants.</li> <li>• Homes and boats from forest wood.</li> </ul>
Drip Tips	Allows heavy rain to run off leaves easily.	
Lianas & Vines	Climbs trees to reach sunlight at canopy.	

Issues related to biodiversity	What are the causes of deforestation?		
Why are there high rates of biodiversity?	<table border="1"> <tr> <td> <b>Logging</b> <ul style="list-style-type: none"> <li>• Most widely reported cause of destructions to biodiversity.</li> <li>• Timber is harvested to create commercial items such as furniture and paper.</li> <li>• Violent confrontation between indigenous tribes and logging companies.</li> </ul> </td> <td> <b>Agriculture</b> <ul style="list-style-type: none"> <li>• Large scale 'slash and burn' of land for ranches and palm oil.</li> <li>• Increases carbon emission.</li> <li>• River siltation and soil erosion increasing due to the large areas of exposed land.</li> <li>• Increase in palm oil is making the soil infertile.</li> </ul> </td> </tr> </table>	<b>Logging</b> <ul style="list-style-type: none"> <li>• Most widely reported cause of destructions to biodiversity.</li> <li>• Timber is harvested to create commercial items such as furniture and paper.</li> <li>• Violent confrontation between indigenous tribes and logging companies.</li> </ul>	<b>Agriculture</b> <ul style="list-style-type: none"> <li>• Large scale 'slash and burn' of land for ranches and palm oil.</li> <li>• Increases carbon emission.</li> <li>• River siltation and soil erosion increasing due to the large areas of exposed land.</li> <li>• Increase in palm oil is making the soil infertile.</li> </ul>
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- Warm and wet climate encourages a wide range of vegetation to grow.
- There is rapid recycling of nutrients to speed plant growth.
- Most of the rainforest is untouched.

- Main issues with biodiversity decline**
- Keystone species (a species that are important of other species) are extremely important in the rainforest ecosystem. Humans are threatening these vital components.
  - Decline in species could cause tribes being unable to survive.
  - Plants & animals may become extinct.
  - Key medical plants may become extinct.

- Impacts of deforestation**
- Economic development**
- + Mining, farming and logging creates employment and tax income for government.
  - + Products such as palm oil provide valuable income for countries.
  - The loss of biodiversity will reduce tourism.
- Soil erosion**
- Once the land is exposed by deforestation, the soil is more vulnerable to rain.
  - With no roots to bind soil together, soil can easily wash away.

- Climate Change**
- When rainforests are cut down, the climate becomes drier.
  - Trees are carbon 'sinks'. With greater deforestation comes more greenhouse emissions in the atmosphere.
  - When trees are burnt, they release more carbon in the atmosphere. This will enhance the greenhouse effect.

- Mineral Extraction**
- Precious metals are found in the rainforest.
  - Areas mined can experience soil and water contamination.
  - Indigenous people are becoming displaced from their land due to roads being built to transport products.
- Tourism**
- Mass tourism is resulting in the building of hotels in extremely vulnerable areas.
  - Lead to negative relationship between the government and indigenous tribes
  - Tourism has exposed animals to human diseases.
- Energy Development**
- The high rainfall creates ideal conditions for hydro-electric power (HEP).
  - The Bakun Dam in Malaysia is key for creating energy in this developing country, however, both people and environment have suffered.
- Road Building**
- Roads are needed to bring supplies and provide access to new mining areas, settlements and energy projects.
  - In Malaysia, logging companies use an extensive network of roads for heavy machinery and to transport wood.

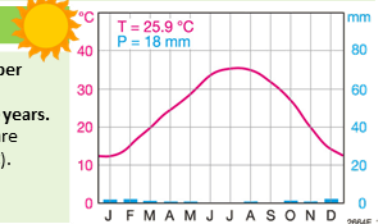
- Sustainability for the Rainforest**
- Uncontrolled and unchecked exploitation can cause irreversible damage such as loss of biodiversity, soil erosion and climate change.
- Possible strategies include:
- Agro-forestry - Growing trees and crops at the same time. It prevents soil erosion and the crops benefit from the nutrients.
  - Selective logging - Trees are only felled when they reach a particular height.
  - Education - Ensuring those people understand the consequences of deforestation
  - Afforestation - If trees are cut down, they are replaced.
  - Forest reserves - Areas protected from exploitation.
  - Ecotourism - tourism that promotes the environments & conservation

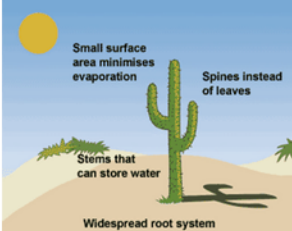
## Hot Desert: Case Study Thar Desert – India/Pakistan




The Thar Desert is located on the border between India and Pakistan in Southern Asia. With India soon becoming the most populated country in the world in the next five years. With this, more people will plan to live in the desert.

Distribution of the world's hot deserts	Major characteristics of hot deserts
<p>Most of the world's hot deserts are found in the subtropics between 20 degrees and 30 degrees north &amp; south of the Equator. The Tropics of Cancer and Capricorn run through most of the world's major deserts.</p> 	<ul style="list-style-type: none"> <li>• Aridity – hot deserts are extremely dry, with annual rainfall below 250 mm.</li> <li>• Heat – hot deserts rise over 40 degrees.</li> <li>• Landscapes – Some places have dunes, but most are rocky with thorny bushes.</li> </ul>

Hot Deserts inhabitants	Climate of Hot Deserts
<ul style="list-style-type: none"> <li>- People often live in large open tents to keep cool.</li> <li>- Food is often cooked slowly in the warm sandy soil.</li> <li>- Head scarves are worn by men to provide protection from the Sun.</li> </ul>	<ul style="list-style-type: none"> <li>• Very little rainfall with less than 250 mm per year.</li> <li>• It might only rain once every two to three years.</li> <li>• Temperate are hot in the day (45 °C) but are cold at night due to little cloud cover (5 °C).</li> <li>• In winter, deserts can sometimes receive occasional frost and snow.</li> </ul> 



Adaptations to the desert	Desert Interdependence				
<table border="1"> <tr> <td><b>Cactus</b></td> <td> <ul style="list-style-type: none"> <li>• Large roots to absorb water soon after rainfall.</li> <li>• Needles instead of leaves to reduce surface area and therefore transpiration.</li> </ul> </td> </tr> <tr> <td><b>Camels</b></td> <td> <ul style="list-style-type: none"> <li>• Hump for storing fat (NOT water).</li> <li>• Wide feet for walking on sand.</li> <li>• Long eyelashes to protect from sand.</li> </ul> </td> </tr> </table>	<b>Cactus</b>	<ul style="list-style-type: none"> <li>• Large roots to absorb water soon after rainfall.</li> <li>• Needles instead of leaves to reduce surface area and therefore transpiration.</li> </ul>	<b>Camels</b>	<ul style="list-style-type: none"> <li>• Hump for storing fat (NOT water).</li> <li>• Wide feet for walking on sand.</li> <li>• Long eyelashes to protect from sand.</li> </ul>	<p>Different parts of the hot desert ecosystem are closely linked together and depend on each other, especially in a such a harsh environment.</p> 
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Opportunities and challenges in the Hot desert	
Opportunities	Challenges
<ul style="list-style-type: none"> <li>• There are valuable minerals for industries and construction.</li> <li>• Energy resources such as coal and oil can be found in the Thar desert.</li> <li>• Great opportunities for renewable energy such as solar power at Bhaleri.</li> <li>• Thar desert has attracted tourists, especially during festivals.</li> </ul>	<ul style="list-style-type: none"> <li>• The extreme heat makes it difficult to work outside for very long.</li> <li>• High evaporation rates from irrigation canals and farmland.</li> <li>• Water supplies are limited, creating problems for the increasing number of people moving into area.</li> <li>• Access through the desert is tricky as roads are difficult to build and maintain.</li> </ul>

Causes of Desertification		Strategies to reduce Desertification
<p><b>Desertification means the turning of semi-arid areas (or drylands) into deserts.</b></p>	<p><b>Climate Change</b> Reduce rainfall and rising temperatures have meant less water for plants.</p>	<ul style="list-style-type: none"> <li>• Water management - growing crops that don't need much water.</li> <li>• Tree Planting - trees can act as windbreakers to protect the soil from wind and soil erosion.</li> <li>• Soil Management - leaving areas of land to rest and recover lost nutrients.</li> <li>• Technology – using less expensive, sustainable materials for people to maintain. i.e. sand fences, terraces to stabilise soil and solar cookers to reduce deforestation.</li> </ul>
<p><b>Fuel Wood</b> People rely on wood for fuel. This removal of trees causes the soil to be exposed.</p>	<p><b>Overgrazing</b> Too many animals mean plants are eaten faster than they can grow back. Causing soil erosion.</p>	
<p><b>Over-Cultivation</b> If crops are grown in the same areas too often, nutrients in the soil will be used up causing soil erosion.</p>	<p><b>Population Growth</b> A growing population puts pressure on the land leading to more deforestation, overgrazing and over-cultivation.</p>	

LP2 Health and social care

Year 11 Component review - key learning

Component 3:

This is split into understanding three key areas.

- 1) factors that affect health and wellbeing
- 2) How to interpret health indicators
- 3) Person-centered approaches to improving health and wellbeing

1) Factors

This is where we need to understand the following:

**Physical** — part of their lifestyle or body that stop or impact their ability to remain in health

**Psychological** - How is their mental state or any conditions/disabilities going to impact them

**Environmental** - Does their living situation help or hinder their ability to live a 'normal' life

**Economic** — Do they have the funds to support a health life?

2) How to interpret health indicators

There are four main ones to understand:

**Body Mass Index (BMI)** - this will be a basic graph where you have to find the person's height on one axis and the weight on the other. This will meet at a point in the middle where the m will be a number and you have to say if this is healthy, under or overweight or even obese.

**Respiration** - this measures the lungs capacity to store oxygen and how powerful the person can breathe. This will look like a number chart with what is a normal range for the age and gender you have you work out if the number of the person in the case study is within the normal range.

**Blood Pressure** - How hard the person's heart has to work to pump blood around the body. This one you have to measure what is good and what is bad. Anything above 90/120 over 60-80 is high and anything below it is low.

3) Person Centered Approaches

We need to understand how to provide the best individual support for the person within the case study. This could be that they only want female or male staff to work with them. Their diet only allows them to eat certain things, or that they need to access different religious items to pray. How we support our service users needs to fit their wants and their needs. To work this out we need to understand the person by fully reading the case study.

How to read and understand a case study.

When reading through the case study you need to identify the following aspects:

- Life stage of the individual
- The gender of the individual
- The difficulties they are facing from their circumstances
- Highlight any positive or negative that is obvious
- Underline or find different social groups they might be a part of such as sports clubs or religious groups

When you have found all of these bullet points you then need to understand what the question is asking.

For example if the questions asks about the support types that the person has you need to think of how being a member of a family or social group could help them to overcome the issues.

How to use the information:

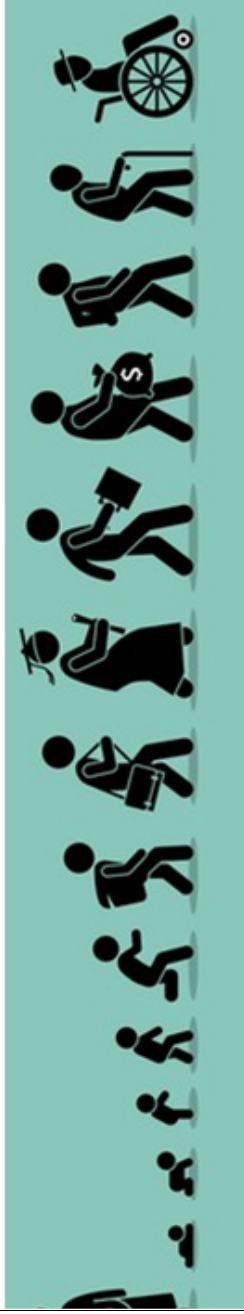
'Tony is 54 and recently divorced. He goes to his local rugby club every Saturday and often drinks 5 pints a game'

There are 3 main elements of this text:

His age : 54—Middle Adulthood


His social life : He visits a local rugby club which means there will be other people to talk to. This means he could talk to them about how he feels in relation to his divorce.

His life style : He drinks—whilst 5 pints is not a lot. Alcohol is a depressant and this could potentially cause him issues in the future.






# History

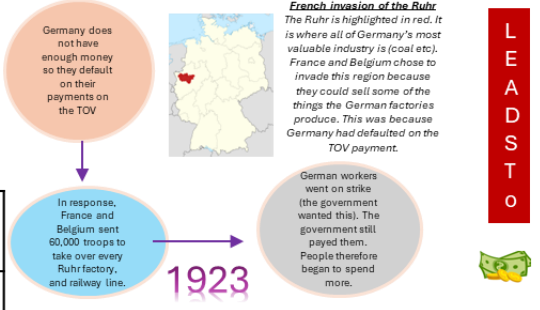
## Y11 LP2 Germany Knowledge Organiser

Kaiser Fact file	
<ul style="list-style-type: none"> <li>Was the grandson of Queen Victoria. He was jealous of the British Empire: its navy and the size of its vast empire.</li> <li>The Kaiser developed a foreign policy called 'Weltpolitik,' which meant world policy. This was to try and expand the German Empire and to try and rival Britain.</li> <li>He therefore wanted to build up the German army and navy (militarism). This soon turned into an 'arms race' where Germany tried to overtake Britain's navy.</li> <li>By 1913, Germany had overtook Britain in world trade and its navy was not far behind Britain's.</li> <li>This alarmed Britain but showed that Kaisers 'Weltpolitik' was a success.</li> </ul>	



Germany after WW1:	
<p><b>Social Problems</b></p> 	<ul style="list-style-type: none"> <li>Women worked in the factories during WW1- some thought this damaged traditional family values.</li> <li>There were 60,000 war widows and 2 million children without fathers.</li> </ul>
<p><b>Economic Problems</b></p> 	<ul style="list-style-type: none"> <li>Germany was virtually bankrupt; it had lent money to its allies and had huge loans to repay to countries (Treaty of Versailles- £6.6 billion).</li> <li>German factories were exhausted by the war; they had been producing war equipment and had not, for many years, produced good for abroad.</li> </ul>
<p><b>Political Problems</b></p> 	<ul style="list-style-type: none"> <li>Germany used to be a stable nation but it was now there was mutiny and revolution.</li> <li>Many ex soldiers felt the government had betrayed them and called the war off to early ("November Criminals")</li> </ul>

**Germany after WW1:**  
*Germany was in chaos after WW1; the Home Front had collapsed and many people were on the brink of starvation. As the situation was so bad, there was an attempted revolution in November 1918. Despite the revolution failing, Germany still had the following serious problems.*





LEADSTO

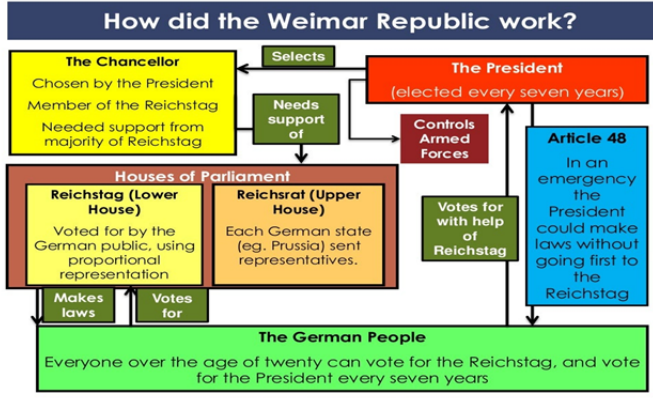
**Hyperinflation**  
 As the German government was still paying people during the invasion of the Ruhr, the German government became VERY short of money. This was because; they could not sell goods from the Ruhr; they had to pay striking workers; they had to pay striking workers more money as people increased their prices

Because they were running out of money, the German government decided to just print more money. This made the money less value and led to hyperinflation (where prices increase at a massive rate and money becomes less and less value).

LEADS

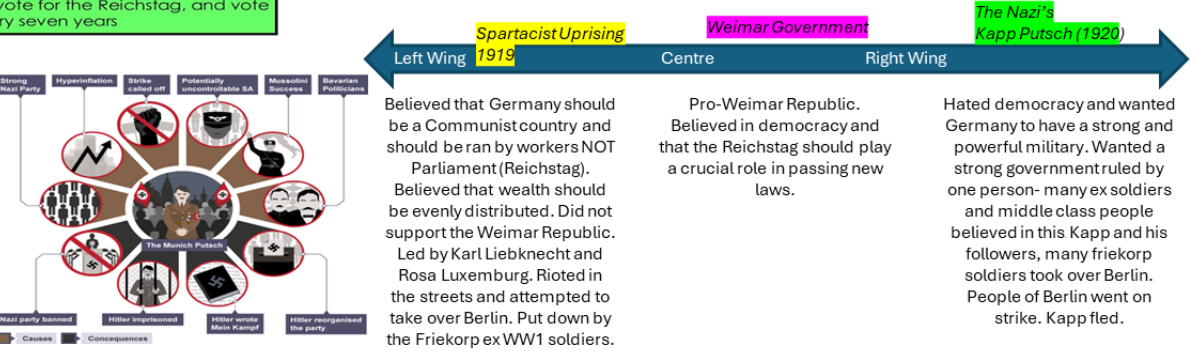
On the night of 8 November 1923, Hitler and 600 SA members burst into a meeting that Kahr and Lossow were holding at the local Beer Hall. Waving a gun at them, Hitler forced them to agree to rebel - and then let them go home. Hitler also managed to persuade General Ludendorff, a German war hero, to back his revolution. The SA took over the army headquarters and the offices of the local newspaper.

Changes in Germany 1890-1914:	How this was a problem for the Kaiser
<p>The rise of industries in Germany made many working class people join trade unions. The speed at which the Kaiser was trying to industrialise created poor working conditions</p> 	<p>Strikes increased as workers were more open to campaign for change. This challenged autocracy in Germany.</p>
<p>The rise of the SDP (Social Democratic Party)</p> 	<p>Around 1/3 Germans voted for this party. Major concern for the Kaiser as some in the party wanted to get rid of him. Socialism and social change was on the rise in Germany.</p>



Keywords	
T2 words	
Social	To do with people.
Political	To do with laws and the way the country is governed
economic	To do with money
Reparations	Money paid as compensation
Autocracy	One person has absolute power to rule.
Democracy	System of government where people can vote.
Domestic	Home or same country
Bankrupt	Having no money
Hyperinflation	More money put into circulation, so the value is less.
T3 words	
Reichstag	German parliament (like House of Commons)
Kaiser	King of Germany
Weltpolitik	World policy - the German idea of how to deal with the rest of the world.
President	Elected by the German people/Reichstag every 7 years
Chancellor	Chosen by the Reichstag to help run Germany.
Reichsrat	Upper house of German Parliament (like the House of Lords)
Article 48	President can make laws in an emergency without the Reichstag's say.

ToV	Why it made Germany angry:
<p>Germany had to pay £6.6 billion in <b>reparations.</b></p>	<p>Germans felt they should not pay it and as it was so expensive, it stopped Germany from recovering after WW1.</p>
<p>Germany could only have an army of 100k/6 battleships and no submarines, tanks or air force</p>	<p>As a country that used to pride itself on its army, it was a national humiliation. Germany felt defenceless and that it could be attacked by other powers.</p>
<p>Germany could never unite with Austria and areas of Germany were given to Poland. 13% of land taken.</p>	<p>People who identified as Germans were now Polish citizens. Loss of colonies and Saar coalfields further destroyed the economy</p>



Believed that Germany should be a Communist country and should be ran by workers NOT Parliament (Reichstag). Believed that wealth should be evenly distributed. Did not support the Weimar Republic. Led by Karl Liebknecht and Rosa Luxemburg. Rioted in the streets and attempted to take over Berlin. Put down by the Friekorp ex WW1 soldiers.

Pro-Weimar Republic. Believed in democracy and that the Reichstag should play a crucial role in passing new laws.

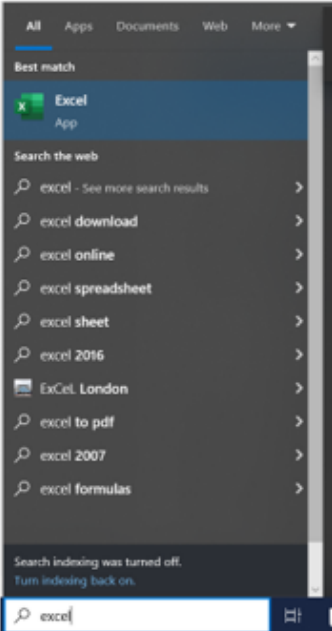
Hated democracy and wanted Germany to have a strong and powerful military. Wanted a strong government ruled by one person- many ex soldiers and middle class people believed in this Kapp and his followers, many friekorp soldiers took over Berlin. People of Berlin went on strike. Kapp fled.



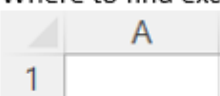
# ICT

Key Vocabulary	
Vocabulary	Definition
Cell	A location on a spreadsheet where data can be inputted
Cell Reference	The address of a cell. This is made up of columns and rows. For example A2.
Spreadsheet	A tool used to organise data so that it is readable.
Excel	Spreadsheet software by Microsoft that you will use in lesson.
Column	The vertical stack of cells. A column's name is a letter. For example, A, B, C
Row	The horizontal row of cells. A row's name is a number. For example, 1, 2, 3, 4
Function	A function is used to make the spreadsheet do things such as maths for you.
Chart	A visual representation of data.
Macro	Recording keystrokes/mouse movements to automate tasks for you. For example creating a macro that activates when a button is clicked, the spreadsheet will go to a certain page.
Buttons	A tool used to activate macros when pressed.
Formatting	Arranging your spreadsheet so the data is readable and is visually pleasing.

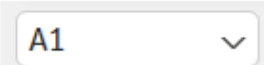
### Knowledge



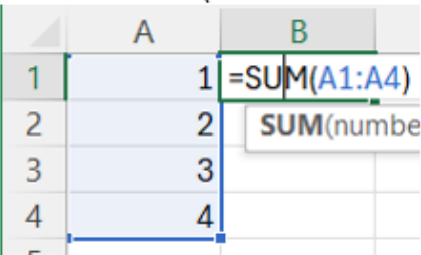
Where to find excel on the windows search bar.



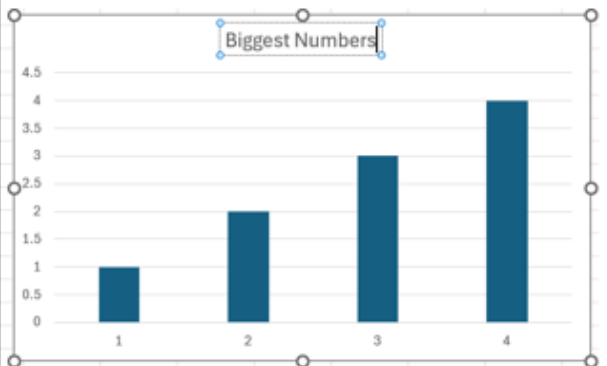
A cell, a column and a row.



A cell reference (the location of the cell)



The SUM function which adds numbers together from a range of cells.



A chart which is visualising data from the spreadsheet.

=SUM(cells) – Adds a range of cells together

=AVERAGE(cells) – Gives you the average number from a range of cells

=MAX(cells) – Gives you the biggest number from a range of cells

=MIN(cells) – Gives you the smallest number from a range of cells

=COUNT(cells) – Counts from a range of cells how many have numbers in. Gives you the number of cells with numbers in.



# Year 11 - Number

## What do I need to be able to do?

- How to solve problems using percentages.
- How to convert and calculate with standard form
- How to write a number as a product of prime factors
- How to find the HCF and LCM of a pair of numbers
- How to calculate with exact values
- How to estimate
- How to work with limits of approximation

## Support to help you revise

- Mathswatch.co.uk:** topic practice, teaching videos, homework assignments
- Maths genie:** exam topic booklets, past papers, walk through videos of exam papers
- Onmaths.com:** online mini mocks, past papers that are automatically marked.

## Percentages

## Keywords

- Growth:** to increase/ to grow.
- Integer: whole number, can be positive, negative or zero.
- Invest:** use money with the goal of it increasing in value over time (usually in a bank).
- Multiplier:** the number you are multiplying by.
- Profit:** the income take away any expenses/ costs
- Standard form:** A system of writing very big or very small numbers
- Estimation:** when we use approximate values in a calculation to give an approximate, predicted answer rather than an exact answer.
- Surd:** an expression that includes a root symbol.

**Finding Percentages of Amounts**  
 'Per cent' means 'out of 100'.  
 Eg 30% means '30 out of 100' =  $\frac{30}{100} = 0.3$

**Two steps for '% of' questions:**

- Change percentage to a decimal.
- Replace 'of' with  $\times$  and multiply.

**EXAMPLE**  
 Find 45% of 80.  
 1  $45\% = 0.45$   
 2  $0.45 \times 80 = 36$

**To find 10%, divide by 10**  
**To find 5%, find 10% then divide by 2.**  
**To find 1%, divide by 100.**

**EXAMPLE**  
 Write 30 as a percentage of 250.  
 1  $\frac{30}{250} = \frac{3}{25}$  — Simplify fraction first if you don't have a calculator.  
 2  $\frac{3}{25} \times 100 = 12\%$

**Two Methods for Percentage Change**  
**Find Percentage then Add or Subtract:**

- Find % of original amount.
- Add to/subtract from original value.

**EXAMPLE**  
 Increase £25 by 20%.  
 1 20% of £25 =  $0.2 \times £25 = £5$   
 2  $£25 + £5 = £30$   
 — It's an increase, so add

**The Multiplier Method:**  
**MULTIPLIER** — decimal you multiply original value by to increase/decrease it by a %.

- % increase — multiplier is greater than 1
- % decrease — multiplier is less than 1

**Two steps for using multipliers:**

- Find multiplier — write % change as a decimal and add to/subtract from 1.
- Multiply original value by multiplier.

**EXAMPLE**  
 A scarf originally cost £7.50. Its price is reduced by 12%. Find the new price.  
 1  $12\% = 0.12$   
 Multiplier for 12% decrease =  $1 - 0.12 = 0.88$   
 2 New price of scarf =  $£7.50 \times 0.88 = £6.60$

**Simple Interest**  
**SIMPLE INTEREST** — a % of the original value is paid at regular intervals (e.g. every year). The amount of interest doesn't change.

**Three steps for simple interest questions:**

- Find the interest earned each time.
- Multiply by the number of intervals.
- Add to original value (if needed).

**EXAMPLE**  
 Lila puts £2500 in a savings account that pays 2% simple interest each year. How much will be in the account after 5 years?  
 1 2% of £2500 =  $0.02 \times £2500 = £50$   
 2  $5 \times £50 = £250$  — Total interest earned  
 3  $£2500 + £250 = £2750$

**Finding the Percentage Change**  
 'Change' = increase, decrease, profit, loss, etc.  
 Percentage change =  $\frac{\text{change}}{\text{original}} \times 100$

**Two steps to find the percentage change:**

- Find the change between the two amounts.
- Put values into the formula.

**EXAMPLE**  
 A car was bought for £11 500. It is sold for £8855. Find the percentage loss.  
 1 Loss =  $£11\,500 - £8855 = £2645$   
 2 % loss =  $\frac{2645}{11\,500} \times 100 = 0.23 \times 100 = 23\%$

**Three Steps to Find the Original Value**

- Write the amount as a percentage of the original value.
- Divide to find % of original value.
- Multiply by 100 to find the original value (100%).

**EXAMPLE**  
 A village has a population of 960. The population of the village has increased by 20% since 2016. What was the population in 2016?  
 1  $960 = 120\%$   
 2  $960 = 120 = 120\% \times 100$   
 $8 = 1\%$   
 3  $8 \times 100 = 1\% \times 100$   
 $800 = 100\%$   
 So the population in 2016 was 800.

*Mega's interest in percentage isn't worth increasing.*



# Standard form, Product of primes, HCF, LCM

## Numbers in Standard Form

**STANDARD FORM** — used to write very big or very small numbers.

Number between 1 and 10  $\rightarrow A \times 10^n$   
 Number of places the decimal point moves — **positive** for big numbers, **negative** for small numbers.

### EXAMPLE

What is 24 300 in standard form?

Count how far the decimal point moves to get 2.43  
 $= 2.43 \times 10^4$   
 Big number, so positive n

### EXAMPLE

Express 3.81  $\times 10^{-5}$  as an ordinary number.

Negative n, so small number.  
 $0.0000381$   
 Move the decimal point by this many places.

## Three Steps to Multiply or Divide

- 1 Rearrange so the front numbers and powers of 10 are together.
- 2 Multiply/divide the front numbers. Use power rules to multiply/divide the powers of 10.
- 3 Put the answer in standard form.

### EXAMPLE

Find  $(8 \times 10^7) \times (4 \times 10^3)$ .  
 Give your answer in standard form.

- 1  $(8 \times 10^7) \times (4 \times 10^3)$
- 2  $= (8 \times 4) \times (10^7 \times 10^3)$   
 $= 32 \times 10^{10}$  — Add powers
- 3  $= 32 \times 10^5$   
 $= 3.2 \times 10 \times 10^4$  — Not in standard form — 32 isn't between 1 and 10  
 $= 3.2 \times 10^5$

## Three Steps to Add or Subtract

- 1 Make sure the powers of 10 are the same.
- 2 Add/subtract front numbers.
- 3 Put the answer in standard form if needed.

### EXAMPLE

Find  $(9.4 \times 10^7) + (6.7 \times 10^8)$ .

- Give your answer in standard form.
- 1  $(9.4 \times 10^7) + (6.7 \times 10^8)$  — Different powers
  - 2  $= (9.4 \times 10^7) + (0.67 \times 10 \times 10^8)$
  - 3  $= (9.4 + 0.67) \times 10^8$  — Not in standard form yet.  
 $= 10.07 \times 10^8$   
 $= 1.007 \times 10 \times 10^8$   
 $= 1.007 \times 10^9$

## Lowest Common Multiple (LCM)

**LCM** — the smallest number that divides by all numbers in question. Find it in **two steps**:

- 1 List multiples of each number.
- 2 Find the smallest that is in every list.

### EXAMPLE

Find the LCM of 6 and 14.

- 1 Multiples of 6 are: 6, 12, 18, 24, 30, 36, (42), 48.  
 Multiples of 14 are: 14, 28, (42), 56.
- 2 Smallest in both is 42, so LCM = 42.

## LCM — Alternative Method

Find it from prime factors in two steps:

- 1 List all prime factors that are in either number. (If a factor appears more than once in a number, list it that many times.)
- 2 Multiply together.

### EXAMPLE

$8 = 2^3$  and  $20 = 2^2 \times 5$ .  
 Find the LCM of 8 and 20.

- 1  $8 = 2 \times 2 \times 2$     $20 = 2 \times 2 \times 5$   
 So prime factors in either number are 2, 2, 2, 5
- 2 LCM =  $2 \times 2 \times 2 \times 5 = 40$

## Highest Common Factor (HCF)

**HCF** — the biggest number that divides into all numbers in question. Find it in **two steps**:

- 1 List factors of each number.
- 2 Find the biggest that is in every list.

### EXAMPLE

Find the HCF of 16 and 40.

- 1 Factors of 16 are: 1, 2, 4, (8), 16  
 Factors of 40 are: 1, 2, 4, 5, (8), 10, 20, 40
- 2 Biggest in both is 8, so HCF = 8.

## HCF — Alternative Method

Find it from prime factors in two steps:

- 1 List all prime factors that are in both numbers.
- 2 Multiply together.

### EXAMPLE

$36 = 2^2 \times 3^2$  and  $60 = 2^2 \times 3 \times 5$ .  
 Find the HCF of 36 and 60.

- 1  $36 = 2 \times 2 \times 3 \times 3$   
 $60 = 2 \times 2 \times 3 \times 5$   
 So prime factors in both numbers are 2, 2, 3
- 2 HCF =  $2 \times 2 \times 3 = 12$

# Estimation and exact values

## Rounding to Decimal Places (d.p.) and Significant Figures (s.f.)

Digit after the last digit is the decider:

- If decider is 5 or more, round last digit up.
- If decider is 4 or less, leave last digit as is.

To find significant figures:

- 1 The first non-zero digit is the first s.f.
  - 2 Each following digit (zero or non-zero) is another s.f.
- After rounding, fill in with zeros up to, not beyond, the decimal point.

## Six Rules for Manipulating Surds

1  $\sqrt{a} \times \sqrt{b} = \sqrt{a \times b}$   
 $\sqrt{5} \times \sqrt{3} = \sqrt{15}$

2  $\frac{\sqrt{a}}{\sqrt{b}} = \frac{a}{b}$   
 $\frac{\sqrt{27}}{\sqrt{3}} = \sqrt{\frac{27}{3}} = \sqrt{9} = 3$

3  $\sqrt{a} + \sqrt{b}$  — do nothing. (Definitely NOT  $\sqrt{a+b}$ )

4  $(a + \sqrt{b})^2 = a^2 + 2a\sqrt{b} + b$   
 $(6 + \sqrt{2})^2 = (6 + \sqrt{2})(6 + \sqrt{2})$   
 $= 36 + 12\sqrt{2} + 2$   
 $= 38 + 12\sqrt{2}$

5  $(a + \sqrt{b})(a - \sqrt{b}) = a^2 - b$   
 $(4 + \sqrt{7})(4 - \sqrt{7}) = 16 + 4\sqrt{7} - 4\sqrt{7} - 7$   
 $= 16 - 7 = 9$

6  $\frac{a}{\sqrt{b}} = \frac{a\sqrt{b}}{b}$   
 $\frac{3}{\sqrt{5}} = \frac{3}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} = \frac{3\sqrt{5}}{5}$

This is known as 'rationalising the denominator'.

### EXAMPLE

Write  $\sqrt{54} + \sqrt{150} - \sqrt{24}$  in the form  $a\sqrt{b}$ .

$$\begin{aligned} \sqrt{54} &= \sqrt{9 \times 6} = \sqrt{9} \times \sqrt{6} = 3\sqrt{6} \\ \sqrt{150} &= \sqrt{25 \times 6} = \sqrt{25} \times \sqrt{6} = 5\sqrt{6} \\ \sqrt{24} &= \sqrt{4 \times 6} = \sqrt{4} \times \sqrt{6} = 2\sqrt{6} \\ 3\sqrt{6} + 5\sqrt{6} - 2\sqrt{6} &= 6\sqrt{6} \end{aligned}$$

## Upper and Lower Bounds

LOWER BOUND  $\leq$  actual value  $<$  UPPER BOUND

Rounded value  $\leq$  actual value  $<$  Rounded value  
 — half a unit                      + half a unit

Truncated value  $\leq$  actual value  $<$  + 1 whole unit

To find max and min values for a calculation:

- 1 Find bounds for each number.
- 2 Pick bounds to use for each operation.

### EXAMPLE

To 1 d.p.,  $x = 1.4$  and  $y = 3.7$ .  
 What are the maximum and minimum values of  $x \times y$ ?

- 1  $1.35 \leq x < 1.45$  — 1 d.p.  $\pm 0.1$   
 $3.65 \leq y < 3.75$  — so half of the 0.05.
- 2  $\max(x \times y) = \max(x) \times \max(y)$   
 $= 1.45 \times 3.75 = 5.4375$   
 $\min(x \times y) = \min(x) \times \min(y)$   
 $= 1.35 \times 3.65 = 4.9275$   
 $\max(a + b) = \max(a) + \max(b)$   
 $\min(a + b) = \min(a) + \min(b)$

### EXAMPLE

Estimate the value of  $\sqrt{68}$  to 1 d.p.

- 1  $64 (= 8^2) < 68 < 81 (= 9^2)$
- 2 68 is closer to 64 than 81, so  $\sqrt{68}$  is closer to 8 than 9.  $\sqrt{68} \approx 8.2$

## Estimating Calculations and Square Roots

To estimate calculations, round all numbers to either 1 or 2 s.f.

### EXAMPLE

$$\frac{20.2 \times 2.87}{5.93} = \frac{20 \times 3}{6} = \frac{60}{6} = 10$$

- Two steps to estimate square roots:
- 1 Find a square number on each side of the given number.
  - 2 Decide which it's closer to, then estimate the digit after the decimal point.

## Knowledge Organiser Year 11

### Trabajar – Working!

#### ¿En qué trabajas?

<b>¿En qué trabajas?</b>	<b>What is your job?</b>
Me gustaría ser	<i>I would like to be</i>
Abogado/a	<i>lawyer</i>
Albañil	<i>builder</i>
Amo/a de casa	<i>housewife/husband</i>
Azafto/a	<i>flight attendant</i>
Bombero/a	<i>firefighter</i>
Contable	<i>accountant</i>
Enfermero/a	<i>nurse</i>
Escritor/a	<i>writer</i>
Fontanero/a	<i>plumber</i>
Funcionario/a	<i>civil servant</i>
Guía turístico	<i>tour guide</i>
Periodista	<i>journalist</i>
Socorrista	<i>life guard</i>
Soldado	<i>soldier</i>
Es un trabajo...	<i>it is a...job</i>
Artístico/emocionante	<i>artistic/exciting</i>
Manual/monótono	<i>manual/monotonous</i>
Variado/repetitive	<i>varied/repetitive</i>
Con buenas perspectivas	<i>with good prospects</i>
Tengo que/suelo	<i>I have to/I tend to</i>
Cuidar a los clients	<i>look after the customers</i>
Contestar llamadas telefónicas	<i>answer the phone</i>
Cuidar las plantas	<i>Look after the plants</i>
Enseñar a los niños	<i>teach children</i>
Hacer entrevistas	<i>do interviews</i>
Trabajar en un taller	<i>work in a workshop</i>
Reparar coches	<i>repair cars</i>
Trabajar en una tienda	<i>work in a shop</i>
Servir comida y bebida	<i>serve food and drink</i>
Vender ropa de marca	<i>sell designer clothes</i>
Viajar por todo el mundo	<i>travel the world</i>

#### ¿Qué haces para ganar dinero?

<b>What do you do to earn money</b>	
Reparto periódicos	<i>I deliver newspapers</i>
Hago de canguro	<i>I babysit</i>
Trabajo de cajero/a	<i>I work as a cashier</i>
Cocino	<i>I cook</i>
Lavo los platos	<i>I wash the dishes</i>
Paso la aspiradora	<i>I do the hoovering</i>
Plancho la ropa	<i>I do the ironing</i>
pongo y quito la mesa	<i>I lay and clear the table</i>
Paseo al perro	<i>I walk the dog</i>
Corto el césped	<i>I cut the lawn</i>
Lo hago...	<i>I do it</i>
Antes/después del insti	<i>before/after school</i>
Cuando necesito dinero	<i>when I need money</i>
Cuano me necesitan	<i>when they need me</i>
Gano...libras a la hora	<i>I earn...pounds per hour</i>
el horario es flexible	<i>the hours are flexible</i>

#### En el futuro

<b>En el futuro</b>	<b>The future</b>
Espero	<i>I hope to</i>
Tengo la intención de	<i>I intend to</i>
Voy a...	<i>I am going to</i>
Aprender a conducir	<i>learn to drive</i>
Casarme	<i>get married</i>
Conseguir un buen trabajo	<i>get a good job</i>
Montar mi propio negocio	<i>set up my own business</i>
Tener hijos	<i>have children</i>
Cuando sea mayor	<i>when I'm older</i>
cuando tenga...años	<i>when I'm...years old</i>
me casaré	<i>I will get married</i>
Compraré una casa	<i>I will buy a house</i>
Me tomaré un año sabático	<i>I will take a gap year</i>

#### Mis prácticas laborales

Hice mis prácticas laborales en	<i>I did my work experience in</i>
Pasé quince días trabajando en	<i>I spent a fortnight working in</i>
Una agencia de viajes	<i>a travel agency</i>
Una granja	<i>a farm</i>
Una fábrica de juguetes	<i>a toy factory</i>
Una tienda benéfica	<i>a charity shop</i>
La empresa de mi madre	<i>my mum's company</i>
Archivaba documentos	<i>I filed documents</i>
Ayudaba	<i>I helped</i>
Cogía el autobús/metro	<i>I caught the bus/underground</i>
Empezaba/terminaba a las	<i>I started/finished at</i>
Hacía una variedad de tareas	<i>I did a variety of tasks</i>
Iba en transporte público	<i>I went by public transport</i>
Llevaba ropa elegante	<i>I wore smart clothes</i>
Ponía folletos en los estantes	<i>I put brochures on shelves</i>
Sacaba fotocopias	<i>I did photocopying</i>
Mi jefe/a era	<i>my boss was</i>
Mis compañeros eran	<i>my colleagues were</i>
Alegre	<i>cheerful</i>
(des)agradable(s)	<i>(un)pleasant</i>
(mal)educado/a(s)	<i>polite (rude)</i>
El trabajo era duro	<i>the job was hard</i>

#### Work experience

#### Un año sabático

Si pudiera un año sabático	<i>If I could take a gap year</i>
Si tuviera bastante dinero	<i>If I had enough money</i>
Aprendería a esquiar	<i>I would learn to ski</i>
Enseñaría inglés	<i>I would teach English</i>
Haría un viaje en Interrail	<i>I would go interrailing</i>
Iría a ...	<i>I would go to</i>
Pasaría un año en	<i>I would spend a year in</i>
Viajaría con mochila	<i>I would go back packing</i>

#### A gap year



Year 11—LP2—Knowledge Organiser—Component 2

Key Vocabulary for Professional Portfolio:  
 Time management, self-discipline, working with others, correct and safe use of equipment (health and safety), identifying resources required, auditing existing skills

Methods of capturing music development

- Digital or traditional portfolios including studio track sheets, production notes, rehearsal diaries, screenshots, milestone performances and reviews from others
- Recorded auditions
- Compositional sketches
- Rough cuts and initial mixes



Having a clear and organised approach to communication

- Key points in the process are referred to in a logical order
- Images, videos and recordings are clear
- Written commentary supports the quality of work

Sharing and commenting on work

- Social media eg Soundcloud, Facebook, YouTube
- Jam sessions, improvisation sessions, mixtapes, demos, sharing samples, remixing, remote collaboration



Developing Music Skills

- Timing and phrasing
- Using rhythm and pitch
- Using equipment appropriately
- Expression
- Combining instruments/sounds
- Health & safety in the use of equipment

Creating Original Music

- Exploring and extending ideas
- Using structure effectively
- Using rhythmic and melodic patterns
- Development of harmony



Music Performance

- Tuning (if appropriate)
- Learning repertoire
- Physical preparation and exercises
- Instrumental/vocal techniques
- Practise routines
- Following an accompaniment
- Stage presence

Writing a Reflective Log/Producing a Reflective Video

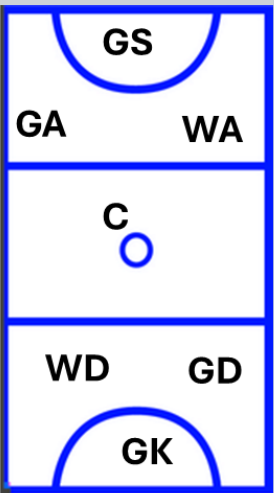
WHAT—What did you do during your rehearsal/creation time today—what was your focus?

OUTCOME—What did you achieve during today's session—did you meet any of your goals?

IMPACT—Have you made progress towards your targets for improvement? How?

NEXT STEPS—After what you did today, what do you now need to do?

<i>Year 11 - Key Skills - Netball</i>		<i>Key Terms</i>	
Passing	Advanced passing and signaling with power and accuracy. Various passes are used within a game; chest, bounce, overhead and shoulder.	<b>Tactical Skills</b> Attack and Defence Free Space Losing an opponent Change of speed Timing Decision making	<b>Physical Fitness</b> Coordination Agility Reaction time Power Stamina Strength
Catching	Catching is consistent and mistakes are rare. A skill used to receive the ball, enabling the team to keep possession of the ball.		
Footwork	Excellent control when catching the ball performing both two- and one-foot landing. Introduction of running pass.		
Dodging	Advanced techniques to outwit opponents. A change of speed and direction in order to get free into space to receive the ball		
Shooting	Shooting with control and fluency, shots are on target. A skill used by Goal Attack and Goal Shooter within the game to score a goal		

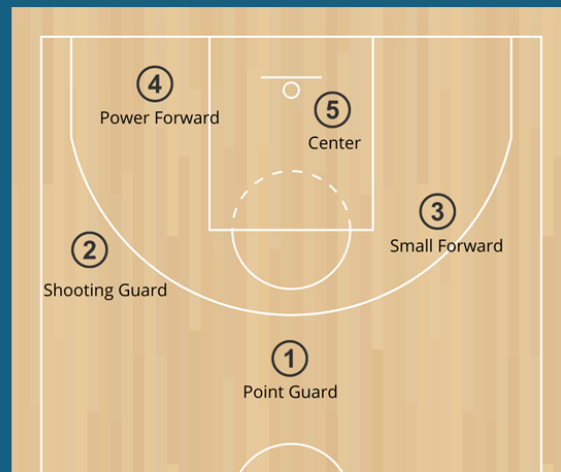
<i>Positions</i>	<i>Key Rules</i>
	<p>Failure to take court; a team may take the court with a minimum of five players. If a team fails to do so the umpire will start the game, if the team fails to take the court in 30 seconds the match awarded to team on court.</p> <p>A player who has left the court must be allowed back on court, Marking off court will result in a penalty pass being awarded.</p> <p>A rebound can only be caught by the player if it touches the net or rim. If the ball fails to hit the net or rim it would be considered repossession.</p>

## Year 11 - Key Skills - Basketball

## Key Terms

Passing	Various passes are used within a game; chest, bounce, overhead and shoulder with control and accuracy.	<b>Tactical Skills</b> Attack and Defence Free Space Losing an opponent Change of speed Timing Decision making	<b>Physical Fitness</b> Coordination Agility Reaction time Power Stamina Strength
Catching	A skill used to receive the ball, enabling the team to keep possession of the ball. Catching is consistent and accurate.		
Behind the Back Dribble	Involves the ball handler bouncing the ball off of the floor behind his feet and catching it with the other hand.		
Dodging	Advanced techniques to outwit opponents. A change of speed and direction in order to get free into space to receive the ball.		
Shooting	Fluency, control and accuracy when shooting. A skill used by any player within the game to score a basket.		

## Positions



## Key Rules

**Excessive contact results in a flagrant foul.** Flagrant fouls refer to a personal foul that can potentially injure the opponent. These fouls carry heavier penalties. There are two types of flagrant fouls: flagrant foul penalty (1) and flagrant foul penalty (2). Flagrant 1 refers to fouls involving unnecessary contact. The penalty for this foul type is a free throw for the opponent and possession of the ball. Flagrant 2 refers to any foul involving unnecessary and excessive contact. The opposing team receives free throws and possession of the ball.



# Y11 Low Light

## CAMERA SETTINGS

ISO SETTINGS

ISO is how much light is let into the camera and controls how light or dark an image is. The higher the number the brighter the image. It can also affect the by making it grainier or creating 'noise' on the photograph.

50 100 200 400 800 1600 3200 6400 12800 25600

ISO 100-200 Daylight  
ISO 200-400 Shade/Indoors  
ISO 400-800 Flash Indoors  
ISO 800-1600 Darker Indoors  
ISO 1600-3200 Indoors at Night  
ISO 3200+ Extra Low Light

ISO 100 CLEAR IMAGE  
ISO 3200 NOISE IMAGE

ISO 100 ISO 200  
ISO 400 ISO 800

Composition needs to be considered when setting up a photograph. There are different compositional elements which can be used; use one or more elements to create a composition that works for the image.

## COMPOSITIONAL ELEMENTS

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

### ASSESSMENT

You will be assessed on two components for your GCSE; 60% of your GCSE mark is coursework and 40% is your exam mark. Each component is marked against four assessment objectives, each assessment objective is marked out of 24. The objectives do not need to be completed in order; pieces of artwork can meet more than one assessment objective.

### HOW TO SUCCEED

Try your best, take risks, be creative, practice, work hard, take pride in your work, listen to your teacher, be independent, enjoy the journey.

Photography captures the world around you - you need to be independent and motivated; take photos outside of school to really make your work stand out and personal to you.

#### ASSESSMENT OBJECTIVE 1 (AO1)

Develop ideas through investigation, demonstrating critical understanding of sources.

\* Artist research pages \* Your responses in the style of artists \* Contact sheets \* Annotation and analysis of findings

#### ASSESSMENT OBJECTIVE 2 (AO2)

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

\*Photoshoots exploring different photography techniques \*Contact sheets and selecting most successful photo \*Using Photoshop (or similar) to digitally edit and develop your photographs \*Using art materials and techniques to develop further outcomes

#### ASSESSMENT OBJECTIVE 3 (AO3)

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

\*Planning photoshoots \*Contact sheets \*Visually - as well as photography you must evidence a form of drawing, such as sketches, designs \*Annotation - recording ideas through mind maps, mood boards, notes, explanations, evaluations, justifications.

#### ASSESSMENT OBJECTIVE 4 (AO4)

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

\*Your whole creative journey, presenting an individual and meaningful response from your initial thoughts to your final outcome. \*Plan of your final outcome \*Range of shoots and contact sheets for final outcome \*An original final outcome that is clearly inspired by your research and creative journey

## KS4 Progression

### AO1 EXPLORE

EXPLORE  
ANNOTATE  
BEGIN TO LINK ARTISTS TO THEIR WORK  
THEME IMAGES  
WRITTEN ANALYSIS  
LINK ARTISTS WORK TO IDEAS AND ARTWORK

### AO2 EXPERIMENT

EXPERIMENT WITH A RANGE OF MEDIA  
LINKING TECHNIQUES TO ARTISTS AND THEMES  
TEXTILES  
CLAY  
WATERCOLOUR  
MIXED MEDIA  
OIL PASTEL  
PEN AND INK

### AO3 IDEAS

IDEAS LINKING TO ARTISTS WORK  
ALL ARTWORK LINKING TOGETHER  
OBSERVATIONAL DRAWINGS  
PLANS  
DESIGNS  
IN A RANGE OF DIFFERENT MEDIA  
EXPLANATIONS  
ANNOTATION

### AO4 FINAL

MEANINGFUL PIECE OF WORK  
INFORMED SHOW UNDERSTANDING  
RESPONSE LINKS  
LINK BETWEEN VISUALS AND ARTISTS TO ARTISTS WORK  
PRESENTATION RELEVANT

# Religious Education

## 1. Justice

### The Nature of Justice

Justice means rewarding the good and punishing the bad, making sure that what is right is what happens in society. The way to make sure there is justice in society is to have laws which organise the behaviour of individuals and to protect the weak from the strong.

### Non-Religious attitudes to Justice

Atheists and Humanists believe that justice is important because justice makes sure that:

- People are rewarded for their labour: People would not work if they weren't sure that they would be paid and people would not make things if others could just take them away)
- The weak are protected from the strong (if there were no laws on stealing, murder and rape life would be horrible!)

### Why is Justice important for Muslims?

- The Qur'an describes God as just. As God himself is just, then justice must be of the highest importance for Muslims.
- The Qur'an says that God wants people to treat each other fairly and to establish Justice

**Surah 16:90** - God commands justice, the doing of good... and He forbids all shameful deeds and injustice.

- The Prophet is shown as acting justly and telling Muslims to treat everyone justly and equally.
- Muslims believe it is part of their role as **vicegerents** (stewards) of God's creative to behave justly by following the Shari'ah Law
- Islamic teaching on the Last Day is concerned with the need for the good to be rewarded and the evil to be punished.

### Why Muslims believe Justice is important for the victim

- Islam teaches that justice should always be given as the victim is totally innocent
- The Qur'an teaches that the victims of crime should be compensated
- The fact that God commands Muslims to be just means that the unjust must be punished so that their victims are given justice.

## 2. Crime

### The Nature of Crime

A crime is an act against the law. In the UK, laws are made either by Parliament or by judges. Types of crime include:

- **Violent Crime** - Ranges from minor assaults to murder.
- **Cyber Crime** - which is a crime committed using the internet and involves such crimes as hacking people's bank accounts to steal money from them.

### Causes of Crime

- **Poverty** - Many people convicted of shoplifting were stealing it to feed themselves or their families.
- **Upbringing** - In a survey from 2011, 24% of people stated they had been in car at some point. 29% of prisoners had experienced abuse.
- **Drugs** - Some research studies have found that a lot of **acquisitive crimes** (crimes where the criminal wants to acquire someone else's property, is committed by users of heroin and crack cocaine.
- **Low Self Esteem** - Criminals in prison for drug offences and those with extensive criminal histories were found to have significantly lower self-esteem than the average person.

### Muslims Attitudes to Crime

Muslims are against crime because misdeeds are breaking the laws of God. They try to remove the cause of criminality and alleviate the problems of crime:

- **Poverty** - Islam tries to deal with the issue of poverty by banning the use of interest and gambling and encouraging other Muslims to share their wealth. They also use Zakah to help poor Muslims in the UK and support charities such as Muslim Aid and Islamic Relief
- **Upbringing** - Muslims help people to fulfil their duties as Muslim parents. Islam teaches that children are a gift from God and that, on the Last Day, Muslims will be judged by God on how well they have brought up their children. Muslims are expected to teach the difference between right and wrong, introduce them to faith through Salah (prayer) and observe Ramadan.
- **Alcohol and Drugs** - These are haram (not allowed) in Islam so shouldn't be an issue. The Qur'an says that intoxicants are a means by which Satan tries to keep people God.
- **Self-Esteem** - Islam's teachings should mean that no Muslim has problems with Self-Esteem. To know that you are the **Khalifah** of God, given the task of looking after the world in the way God wants, should mean never having a problem with low self-esteem.



# Crime and Punishment



## 4. Attitudes to Punishment

### The Nature of Punishment

Punishment is a penalty inflicted on an offender for breaking the law. Different types of punishment include:

- **Imprisonment**: Courts can take away the offender's freedom and send them to prison for a fixed period of time.
- **Suspended sentence**: Courts can impose a term of imprisonment and then order that they will not be sent to prison as long as they do not reoffend
- **Community Service Order**: Offender is required to do unpaid work in the community and to remain in contact with their probation officer.
- **Fine**: A monetary penalty
- **Compensation Order**: Order the offender to pay the victim compensation for personal injury, loss or damage
- **Restitution Order**: Forces the offender to return anything they gained by committing the crime
- **Hospital order**: People with mental health problems can be detained in a secure hospital.

### Muslim Teachings about Punishment

Islam teaches that criminals should be punished for their crimes and the Qur'an sets down specific punishments for certain crimes. Islam teaches that Muslims should not commit crimes because any crime is a sin against God. Those who commit crimes will not only be punished by the law, but also face judgement of God on the Last Day.

The punishments set out in the Qur'an are known as **hadd** punishments and are seen as punishments for crimes considered to be against the rights of God. There are six crimes for which punishments are fixed:

- Theft (Punishment - Amputation of the hand)
- Illicit sexual relations (Punishment - Death by stoning or 100 lashes)
- Making unproven accusations of illicit sex (Punishment - 80 lashes)
- Drinking intoxicants (Punishment - 80 lashes)
- Apostasy (Punishment - Death or banishment)
- Highway robbery (Punishment - death)

Most Muslim countries operate a legal punishment system similar to that of Europe, however the Taliban, Isis and other areas under the Sunni Movement end to apply these punishments.

**Surah 5:41** - As to the thief, male or female, cut off his or her hands: a punishment by way of example, from God for their crime.

## 3. Muslims Attitudes to good, evil and suffering

In Islam, good actions are known as 'halal', meaning 'that which is permitted'. Good actions are subdivided into:

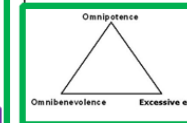
- **Fard** - Actions which must be performed for a person to be regarded as good. These include observing the Five Pillars and obeying the laws of the Shari'ah. Performing these actions will be rewarded and not performing them will be punished.
- **Mandub** - Actions which a Muslim will be rewarded for doing, but not punished if they do not do them
- **Mubah** - Actions which are permitted because nothing is said about them in the Qur'an or the hadith, for example watching television. These actions will neither be rewarded nor punished.

Evil actions are called 'haram', meaning 'that which is forbidden'. Any action that is forbidden in the Qur'an, hadith or Shari'ah law (such as alcohol, gambling) is haram and so is regarded as evil. Evil is often divided into **moral** and **natural** evil:

- **Moral** - Evil that is caused by humans misusing their free will. E.g. rape, murder and burglary are clear examples
- **Natural** - Suffering that has not been caused by humans. E.g. earthquakes, floods and volcanoes are not caused by humans, but result in suffering.

### Non-Religious attitudes to Evil and Suffering

Many atheists and humanists believe that a good God would have designed a world that had natural evils. They cannot believe in a God that would create such horrible diseases, and believe that evil and suffering are either the fault of humans misusing their free will or the fault of accidental nature. Non-religious philosophers express the problem like this:



- If God is **omnipotent** (all-powerful), he must be able to remove evil and suffering from the world
- If God is **omnibenevolent** (all-good/loving), he must want to remove evil and suffering from the world
- It follows, that if God exists, there should be no evil or suffering in the world.

### Muslim answer to why people suffer

Muslims argue that because God is so much greater than humans, they cannot understand his motives and therefore must just accept what God does. The Qur'an says that God is good and so there must be good reasons for evil and suffering.

Humans can, and will, be questioned about their evil actions because they have been born with a natural instinct to understand the difference between right and wrong. Muslims believe that life is a test and a true Muslim will remain faithful through the trials of his life.

Muslims respond to evil and suffering by helping those who suffer, either practically or by prayer, because helping the suffering and fighting evil will be rewarded by God on the Last Day.

## 4. Attitudes to Punishment

### Why punishment can be regarded as Justice

Punishment can be seen as justice because part of justice is making sure that the good are rewarded and the lawbreakers are punished. Some people, especially victims of crime, regard punishment as a form of justice:

**Retributive Justice** - A theory of justice which considers that punishment should be proportionate to the crime. This is not revenge like 'an eye for an eye'. In other words, the severity of punishment must reflect the severity of the crime.

### Why punishment might be needed in society

Imagine what life would be like if there were no laws such as driving on one side of the road or laws for murder or rape. If society needs laws, it also needs punishment in order to make sure that all members of society obey those laws and that the rest of society are protected from those who break the laws.



## 5. The aims of punishment

The main aim of punishment is to try to make sure that everyone obeys the law, but there are some other aims:

- To protect law-abiding members of society from the lawbreakers
- The deter law-abiding citizens from committing crimes
- To reform and rehabilitate criminals so that they do not break the law in the future
- To make criminals pay for their actions and give the victims of crime a sense of retribution

Retribution	Retribution is the theory that criminals should pay for their crimes. Many people think this should be the main reason for punishment because: <ul style="list-style-type: none"> <li>- It makes criminals pay for their crimes in proportion to the severity of the crimes they have committed.</li> <li>- It makes criminals suffer for what they have done wrong. Criminals make their victims suffer, so the criminals should also suffer</li> <li>- It actually punishes the criminal. The dictionary definition of punish is to 'make an offender suffer for what they have done', and this is exactly what retribution does.</li> </ul>
Deterrence	Deterrence is the theory that punishment should put people off committing crime. Many people think that deterrence should be the main reason for punishment because the main aim of punishment is to stop people from committing crimes. The idea of deterrent punishment is that punishment should be so severe that no one will dare commit crimes. <ul style="list-style-type: none"> <li>- If someone knows they will have their hand cut off if they are caught stealing, then they will not steal</li> <li>- If people know that they will be executed if they are found guilty, they will not murder.</li> </ul>
Reformation	Reformation is the theory that criminals should be taught not to commit crimes again. <ul style="list-style-type: none"> <li>- Many people believe that the only way to stop crime is to reform the criminals so that they will become honest law-abiding citizens who will not want to commit crimes again</li> <li>- Many people believe that most criminals commit crimes because of how they have been brought up and need to be taught how to live a life without crime.</li> <li>- Reformation punishment often involve giving criminals education and qualifications so that they can find a job</li> </ul>
Protection	Protection is the theory that punishment should protect society from criminals and their activities. Many people think: <ul style="list-style-type: none"> <li>- Capital punishment is a good punishment for murderers and terrorists because they are dead and cannot threaten people</li> <li>- Long prison sentences are a good m punishment for people as they keep them out of society</li> <li>- Community service can be a good punishment for hooligans and vandals because it keeps them off the streets</li> </ul>

### Muslim attitudes to the aims of punishment

Muslims agree with all four aims of punishment because:

- The Qur'an sets down lashes or amputation for certain crimes and the Qur'an is the Word of God which must be followed.
- Whipping and amputation allow the offender to remain in society with their families where, it is believe, they are less likely to reoffend than those who have been sent to prison

## 6. Forgiveness

### The Nature of Forgiveness

Forgiveness is a conscious, deliberate decision on the part of a victim to release the feelings of resentment or vengeance they have towards a person who has harmed them.

### Muslim beliefs about forgiveness

The Qur'an teaches that God is compassionate and merciful to sinners.

**Surah 64:14 - But if ye forgive and overlook and cover up their faults, verily God is Oft-forgiving. Most Merciful.**

Because of this, Muslims believe that they too should be forgiving because:

- On the Day of Judgement, God will deal with everyone as they deserve, but Muslims will be able to request his mercy. However, how can Muslims ask God for forgiveness if they are not prepared to forgive?
- The Qur'an says that Muslims should forgive other people's sins against them and Muslims should obey the Qur'an as they believe it is the word of God.
- There are many hadith from the Prophet Muhammad about forgiving people who have offended others and bringing reconciliation to conflicts.

### Why and how offenders are forgiven by the community

At any given time, there are around 65,000 people in prison and 60% of prisoners reoffend within a year of being released back into society. The community needs to forgive offenders and help them to reintegrate into law-abiding society so they feel they are apart of it and will not need to return to a life of crime.

There are examples of business owners and charities who work with offenders to help bring them back into the community.

**Business** - Timpson (the key-cutting and shoe repair business) goes into prisons and offers training workshops and starts employing prisoners on day-release schemes. In 12 years, only 3 people have reoffended.

**Charities** - Nacro offers information and advice to ex-offenders, serving prisoners, families and friends through a helpline

### Restorative Justice

Restorative justice gives victims of crime a chance to explain to the offender how they have been affected by the crime. It is important for criminals because:

- It makes them realise the effects of their crime
- It brings them face to face with their victims
- It makes them realise that actions can have terrible consequences

### Muslim attitudes towards Restorative Justice

Muslims are in favour of restorative justice because it is the only way of bringing peace and reconciliation between the victim and the criminal. In Islam, all brothers and sisters should work to help each other:

**Surah 49:10 - The believers are but a single brotherhood: so make peace and reconciliation between your two contending brothers**

## 7. Treatment of Criminals

### Human Rights

The Universal Declaration of Human Rights was proclaimed by the United Nations in 1948. It set out fundamental human rights to be universally protected which all members of the United Nations agreed to. These rights include:

- Freedom from torture and degrading treatment
- The right to liberty - people are free to do anything that is not against the law
- The right to a fair trial - trials are made in public and judgements are made by impartial people
- The right to not be punished for something that was not a crime when you did it
- Freedom of thought, conscience and religion

### Muslim attitudes to the treatment of criminals

1. Some Muslims believe that criminals should be treated fairly and that punishments should aim at both reforming criminals and bringing in restorative justice. Both the Muslim Prison Chaplains' Association and Muslim Aid work with Muslim prisoners to achieve these ends.

2. Muslim countries with Shari'ah justice systems have a somewhat different attitude as they believe that criminals should be punishment according to the **hadd punishments** set out in the Qur'an.

### Islam and the use of torture

All Muslims are opposed to the use of torture. However, some non-Muslims interpret the Shari'ah punishments such as flogging, stoning or amputation as torture.

Some Muslims would say that it is permitted to torture criminals who are hiding a secret which will harm innocent people.

Most Muslims believe that the Qur'anic verse: **and they feed, for the love of Allah, the indigent, the orphan and the captive** Surah 76:8, means that Muslims have been ordered by God to treat captives fairly and humanely.

### Islam and Fair Trial

Muslim countries adopting the Western-type legal systems operate a jury where 12 ordinary members of the public decide whether the accused is guilty. However, Muslim countries operating the Shari'ah legal systems do not use a jury. Crimes against God's law are prosecuted as **hadd** crimes and all other criminal matters are treated as disputes between individuals.

### Islam and Human Rights

Muslims have some problems with the United Nations Declaration of Human Rights, especially around the areas of gay rights, sex outside of marriage and freedom of speech and religion. As a result, Muslim countries signed an alternative agreement which stated that **'all men are equal in terms of basic human dignity and basic obligations and responsibilities'**. In Muslim countries, there are often no gay rights and no equal rights for women.

### Humanist and Atheist Attitudes

Humanists believe that criminals should be treated justly and humanely as this helps to ensure that innocent suspects are treated this way too.

Humanists have always been in favour of the Human Rights and are supporters of the United Nations Declaration of Human Rights.

Most atheists would agree with the Humanist attitudes, but some atheists think that convicted criminals should not be able to use human rights legislation for such things as stopping them from being deported as it would split them from their spouse and children or to allow them to vote while in prison. Such atheists are also likely to approve of government agencies using torture to prevent terrorist attacks.

## 8. The Death Penalty

### The Nature of Purpose of Capital Punishment

Capital Punishment is punishment which takes away the criminals life. There are several methods of Capital Punishment still in use around the world, such as lethal injection, electrocution, hanging, firing squad, stoning and decapitation (cutting off someone's head).

102 countries around the world have abolished the death penalty for all crimes, and was abolished in the UK in 1970. Seven have abolished it but retain it for special circumstances. The USA, Japan and Singapore are the only countries to retain it. These countries believe that it's purpose is to deter people from committing murder, to protect society from dangerous people and to act as retribution for those who have taken a life.

### Muslim attitudes and teachings about Capital Punishment

Islam allows capital punishment for three offences: murder, adultery and apostasy (giving up or denying your religious faith).

Most Muslims agree with Capital Punishment because...	Some Muslims do not agree with Capital Punishment because...
It is a punishment set down by God in the Qur'an and Muslims believe the Qur'an is the Word of God	They feel that Capital Punishment is recommended by the Qur'an, but not compulsory
Muhammad made several statements agreeing with capital punishment and Muhammad is the seal of the prophets whose words should be obeyed	They feel that since Capital Punishment does not reduce crimes and since there is a possibility of the wrong person being convicted and then executed, capital punishment is not justice and so is banned by Suah 6:151
<b>Surah 6:151: Take not life, which God hath made sacred, except by way of justice and the law</b>	

### Humanist and Atheist attitudes to Capital Punishment

Most Humanists disagree with Capital Punishment because...	Some Atheists would agree with Capital Punishment because...
Murdered who know they are going to be killed if caught are more likely to kill more people to avoid being caught.	If people know that they will lose their life if they murder someone, it will act as a deterrent and there will be fewer murders.
Human life is the most important thing there is, so no one has the right to take it. Executing murderers demonstrates that society does not regard life as important.	Human life is the most important thing there is, and the value of human life can only be shown by giving those who take human life the worst possible punishment, which is the death penalty.

### Three-core Cables

- Most electrical items have a three-core cable.
- The insulation on each wire has a particular colour to identify it.

	live wire	neutral wire	earth wire
Colour	brown	blue	green and yellow
Potential difference (V)	230	around 0	0
Use	Provides alternating potential difference from mains supply.	Completes the circuit.	Stops appliance casing becoming live.



### Electricity Vocabulary

- 1. Circuit** – a complete, closed path through which electric current can flow.
- 2. Connection** – the point where two electrical elements are joined.
- 3. Flow** – the movement of electric charge through a conductor.
- 4. Current** – the flow of electric charge in a particular direction.
- 5. Power** – the rate at which energy is transferred or converted by an electrical system.
- 6. Energy** – the capacity to do work or produce movement, transferred via electricity.
- 7. Charge** – the property of matter that causes it to experience a force in an electric field.
- 8. Potential** – the difference in electric charge between two points in a circuit.
- 9. Conduct** – to allow electricity or heat to pass through a material.
- 10. Insulate** – to prevent the flow of electricity through a material.
- 11. Switch** – a device for making and breaking the connection in a circuit.
- 12. Source** – the origin of electrical energy, such as a battery or power station.
- 13. Voltage** – the measure of electric potential difference between two points.
- 14. Resist** – to slow down the flow of electricity through a conductor.
- 15. Transform** – to change energy from one form to another, such as electrical energy into heat or light.

### Energy

$$E = QV$$

energy transferred (J) — charge flow (C)  
potential difference (V)

Amount of energy an appliance transfers depends on:

- appliance's power
- how long appliance is on for

$$E = Pt$$

energy transferred (J) — power (W)  
time (s)

### Power

**POWER** — energy transferred per second.

**POWER RATING** — maximum safe power an appliance can operate at.

$$P = VI$$

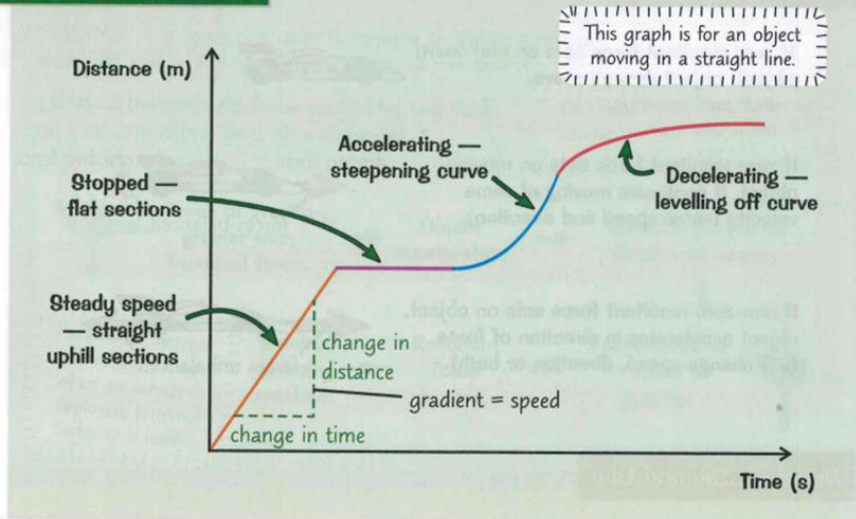
power (W) — potential difference (V)  
current (A)

$$P = I^2R$$

power (W) — current (A)  
resistance ( $\Omega$ )



## Distance-Time Graphs

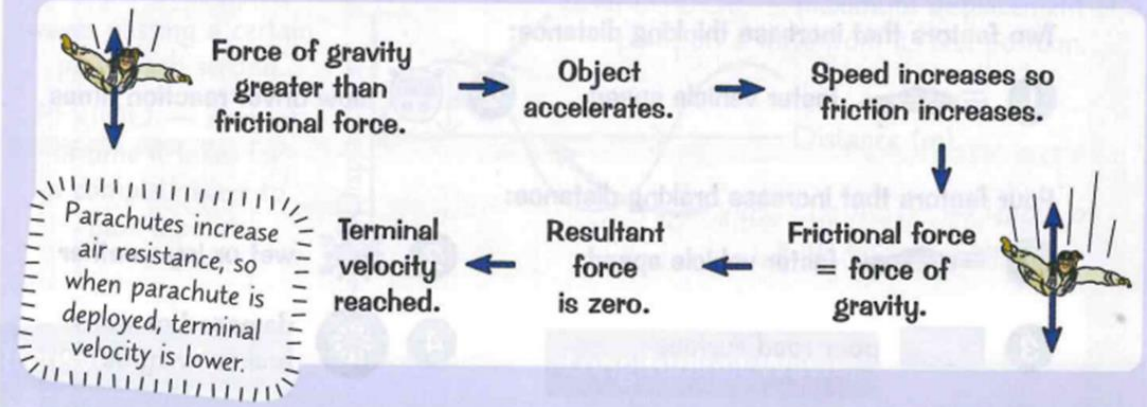


## Terminal Velocity

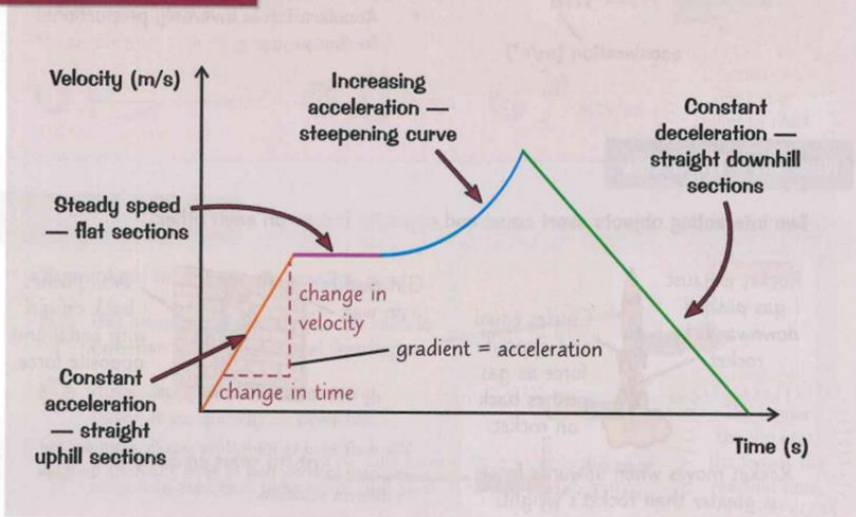
**FRICION** — a force that acts to oppose an object's motion. It always acts in the opposite direction to movement.

**DRAG** — the frictional force caused by any fluid on a moving object (e.g. air resistance).

Frictional forces from fluids always increase with speed.



## Velocity-Time Graphs



The bigger the Force the bigger the acceleration. The greater the mass the smaller the acceleration.

$$F = ma$$

N                      kg                      m/s<sup>2</sup>

## Kinetic Energy

kinetic energy (J)

$$E_k = \frac{1}{2}mv^2$$

mass (kg)

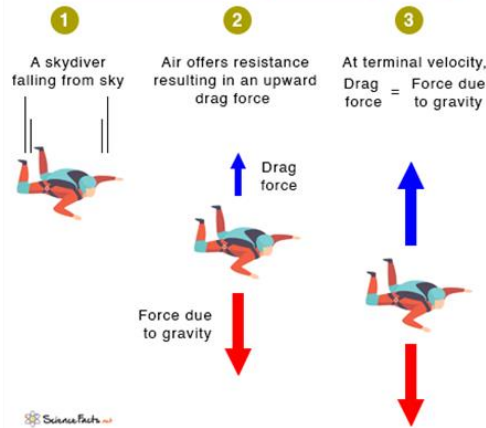
speed (m/s)

## Potential Difference Equation

$$V = IR$$

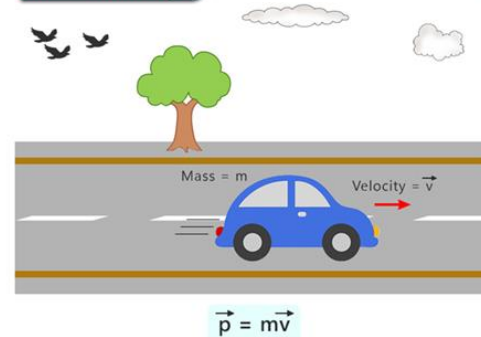
potential difference (V) — resistance ( $\Omega$ )  
current (A)

## Terminal Velocity of a Skydiver



After an acceleration, the sky diver reaches equilibrium and then falls at a constant speed.

## Momentum ( $\vec{p}$ )



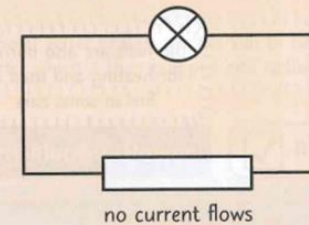
The momentum of an object is calculated by multiplying its mass by its velocity.

## Current, Potential Difference and Resistance

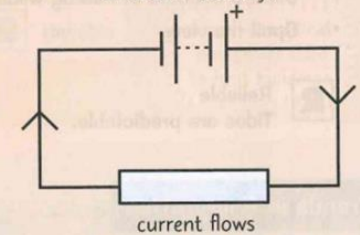
	Definition	Unit
CURRENT	flow of electrical charge	ampere, A
POTENTIAL DIFFERENCE	driving force that pushes charge round	volt, V
RESISTANCE	anything that slows down charge flow	ohm, $\Omega$

## Current in Circuits

no source of potential difference



source of potential difference (battery)



Current through a component depends on two factors:

1 The component's **resistance**.  
The **greater** the resistance, the **smaller** the current.

2 The **potential difference** across the component.  
The **greater** the potential difference, the **larger** the current (for a fixed resistance).

## Motion Vocabulary

- **Accelerate** – to increase the speed of an object.
  - **Constant** – staying the same over time, such as constant speed or velocity.
  - **Decrease** – to become smaller or less in size, amount, or speed.
  - **Distance** – the amount of space between two points.
  - **Direction** – the path along which something moves or faces.
  - **Velocity** – the speed of something in a given direction.
  - **Speed** – how fast an object is moving, calculated by distance over time.
  - **Rate** – a measure or quantity related to time, like the rate of motion.
  - **Position** – the location of an object relative to other objects or places.
  - **Change** – to make or become different, such as a change in motion.
  - **Travel** – to move from one place to another.
  - **Measure** – to determine the size, amount, or degree of something, such as measuring motion.
  - **Relative** – considered in relation to something else, such as relative motion between two objects.
  - **Steady** – remaining at a constant speed or velocity.
  - **Pattern** – a repeated or regular way in which something happens, such as patterns in movement.
-



# Y11 – Hospitality & Catering

Tier 3 Vocabulary:

## Boiling

- Up to 50% of vitamin C is lost when boiling green vegetables in water.
- The vitamin B group is damaged and lost in heat.

## Poaching

- The vitamin B group are damaged in heat and dissolve in water.

## Roasting

- Roasting is a method of cooking in high temperatures and so this will destroy most of the group C vitamins and some of the group B vitamins.

## Grilling

- Using this cooking method can result in losing up to 40% of group B vitamins.
- It is easy to overcook protein due to the high temperature used in grilling foods.



## The importance of nutrition

Listed below are the macro-nutrients and micro-nutrients. You need to know their function in the body and know examples of food items for each. You need to know why they are needed in the diet and why there is a need for a balanced/varied diet.

### Macro-nutrients

**Carbohydrates** - Carbohydrates are mainly used in the body for energy. There are two types of carbohydrates which are:

- **Starch** - Examples include bread, pasta, rice, potatoes and cereals.
- **Sugar** - Examples include sweets, cakes, biscuits & fizzy drinks.

**Fat** - This is needed to insulate the body, for energy, to protect bones and arteries from physical damage and provides fat soluble vitamins. There are two main types of fat which are:

- **Saturated fat** - Examples include butter, lard, meat and cheese.
- **Unsaturated fat** - Examples include avocados, plant oils such as sunflower oil, seeds and oily fish.

**Protein** - Protein is mainly used for growth and repair in the body and cell maintenance. There are two types of protein which are:

- **High biological value (HBV) protein** - Includes meat, fish, poultry, eggs, milk, cheese, yogurt, soya and quinoa.
- **Low biological value (LBV) protein** - Includes cereals, nuts, seeds and pulses.

### Micro-nutrients

#### Vitamins

- **Fat soluble vitamin A** - Main functions include keeping the skin healthy, helps vision in weak light and helps children grow. Examples include leafy vegetables, eggs, oily fish and orange/yellow fruits.
- **Fat soluble vitamin D** - The main function of this micro-nutrient is to help the body absorb calcium during digestion. Examples include eggs, oily fish, fortified cereals and margarine.
- **Water soluble vitamin B group** - Helps absorb minerals in the body, release energy from nutrients and helps to create red blood cells. Examples include wholegrain foods, milk and eggs.
- **Water soluble vitamin C** - Helps absorb iron in the body during digestion, supports the immune system and helps support connective tissue in the body which bind cells in the body together. Examples include citrus fruits, kiwi fruit, cabbage, broccoli, potatoes and liver.

#### Minerals

- **Calcium** - Needed for strengthening teeth and bones. Examples include dairy products, soya and green leafy vegetables.
- **Iron** - To make haemoglobin in red blood cells to carry oxygen around the body. Examples include nuts, beans, red meat and green leafy vegetables.
- **Sodium** - Controls how much water is in the body and helps with the function of nerves and muscles. Examples include salt, processed foods and cured meats.
- **Potassium** - Helps the heart muscle to work correctly and regulates the balance of fluid in the body. Examples include bananas, broccoli, parsnips, beans, nuts and fish.
- **Magnesium** - Helps convert food into energy. Examples include wholemeal bread, nuts and spinach.
- **Dietary fibre (NSP)** - Helps digestion and prevents constipation. Examples include wholegrain foods (wholemeal pasta, bread and cereals), brown rice, lentils, beans and pulses.
- **Water** - Helps control temperature of the body, helps get rid of waste products from the body and prevents dehydration. Foods that contain water naturally include fruits and vegetables, milk and eggs.

## Baking

- Due to high temperatures in the oven, it is easy to overcook protein and damage the vitamin C and B group vitamins.

# MathsWatch / SENECA / Kerboodle Instructions

## MathsWatch

Please navigate to [vle.mathswatch.co.uk](http://vle.mathswatch.co.uk) using your preferred browser (we do recommend Google Chrome but IE, Safari and others should work just as well).

You will be presented with this login page:

The screenshot shows the MathsWatch login interface. At the top left is the MathsWatch logo. Below it is a blue header bar. The main content area is titled 'Login' and contains two input fields: 'Username' with the value '19smifre@bircheshead' and 'Password' with the value 'maths1'. Below the input fields are two buttons: 'View Demo' and 'Login'. A blue box in the top-right corner of the page contains the text 'Firstname's account Logout 365 days until renewal'. Annotations include a speech bubble pointing to the username field with the text 'A year 10 student (Y7 in 2019) with the name Fred Smith', another speech bubble pointing to the password field with the text 'Generic password that can be changed upon first login', and a blue-bordered box at the bottom right with the text 'To do that, click on Firstname's account Logout 365 days until renewal in the top-right corner and then choose "My Details" from the drop-down menu.'

MathsWatch

Login

Username 19smifre@bircheshead

Password maths1

View Demo Login

Firstname's account  
Logout  
365 days until renewal

A year 10 student (Y7 in 2019) with the name Fred Smith

Generic password that can be changed upon first login

To do that, click on Firstname's account Logout 365 days until renewal in the top-right corner and then choose "My Details" from the drop-down menu.

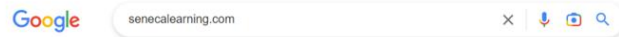
Use the login details given by your teacher.

# SENECA

## Information for Students: How to Sign up to Seneca

Please use the information below to learn how to sign up to Seneca Learning. This is where all of your English homework will be set.

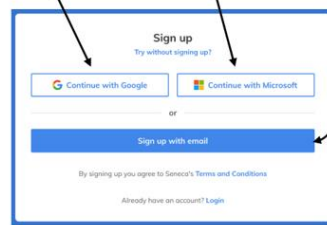
Step 1 – Go to a search engine (Google or Chrome) and go to **senecalearning.com**



Step 2 – Find the **sign up** button (top right of the screen) and click on it.

- Note: registering an account with Seneca is completely **free**. You will not be asked to enter any payment details.

Step 3 – You can **sign up** with your Gmail account, your Microsoft account or with your email address. Click on the icon.



Step 4 – Enter your details.

- If you have a Gmail or Microsoft account that you already use, just enter your details.
- If you do not have an email address, click **'Sign up with email.'**
- If you have clicked on the sign up with email button, you will be taken to a screen which looks like this:

If you do not have your own email address, use this formula:

[firstname.surname@bircheshead.com](mailto:firstname.surname@bircheshead.com)

e.g, if your name is Charlie Walker, it would be:

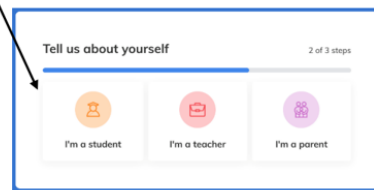
[charlie.walker@bircheshead.com](mailto:charlie.walker@bircheshead.com)

The password is **password**

**Write your new email here:**

**@bircheshead.com**

Step 5 – Click on the **student icon** and then type in the school name and select your year group.

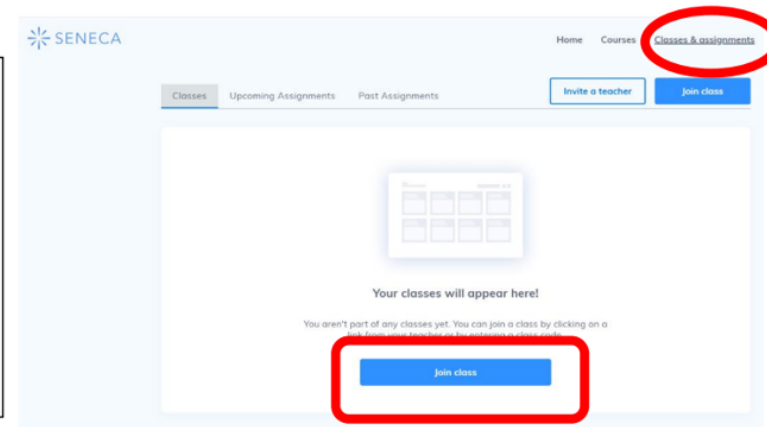


- You don't need a parent's email address, just **click the box** to say that you're over 13.

- Click the **Finish** sign up button.

Step 6 – Join your class by clicking on the **Classes & Assignments** button at the top right. Then click on the **Join class** button. Enter your **class code** given to you by your English teacher.

**Write your class code here:**

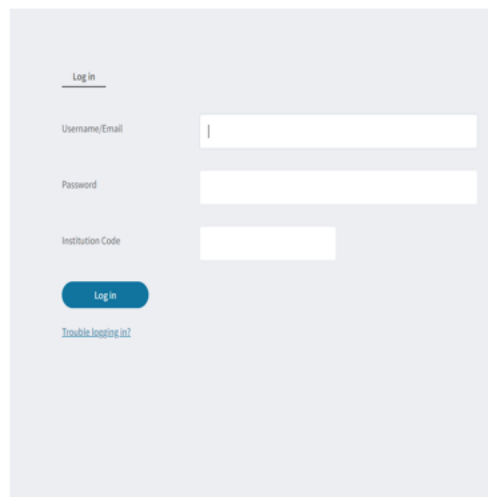


**Now you'll be able to access any homework set by your English teacher. Make a copy of your login details in your planner.**

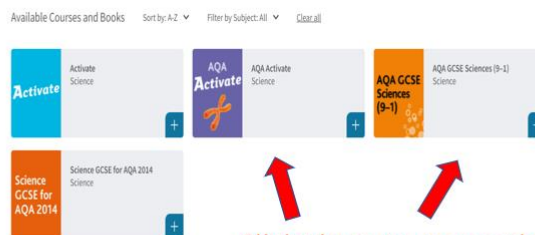
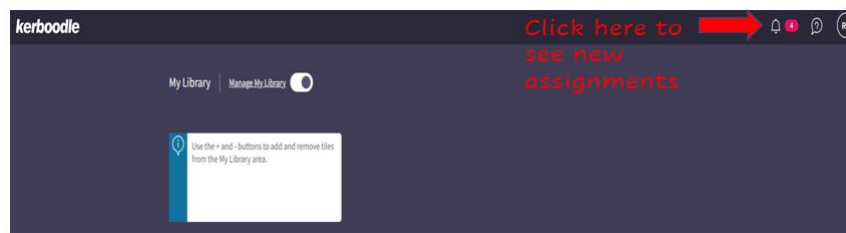


# Kerboodle

- Go to [www.Kerboodle.com](http://www.Kerboodle.com)
- It will look like this:



- Your username is your first initial and your complete surname. E.g.
- Joe Bloggs would be jbloggs
- Your password is the same as your username the first time you login.
- The institution code is: ua3
  
- The first time you login you can change your password



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