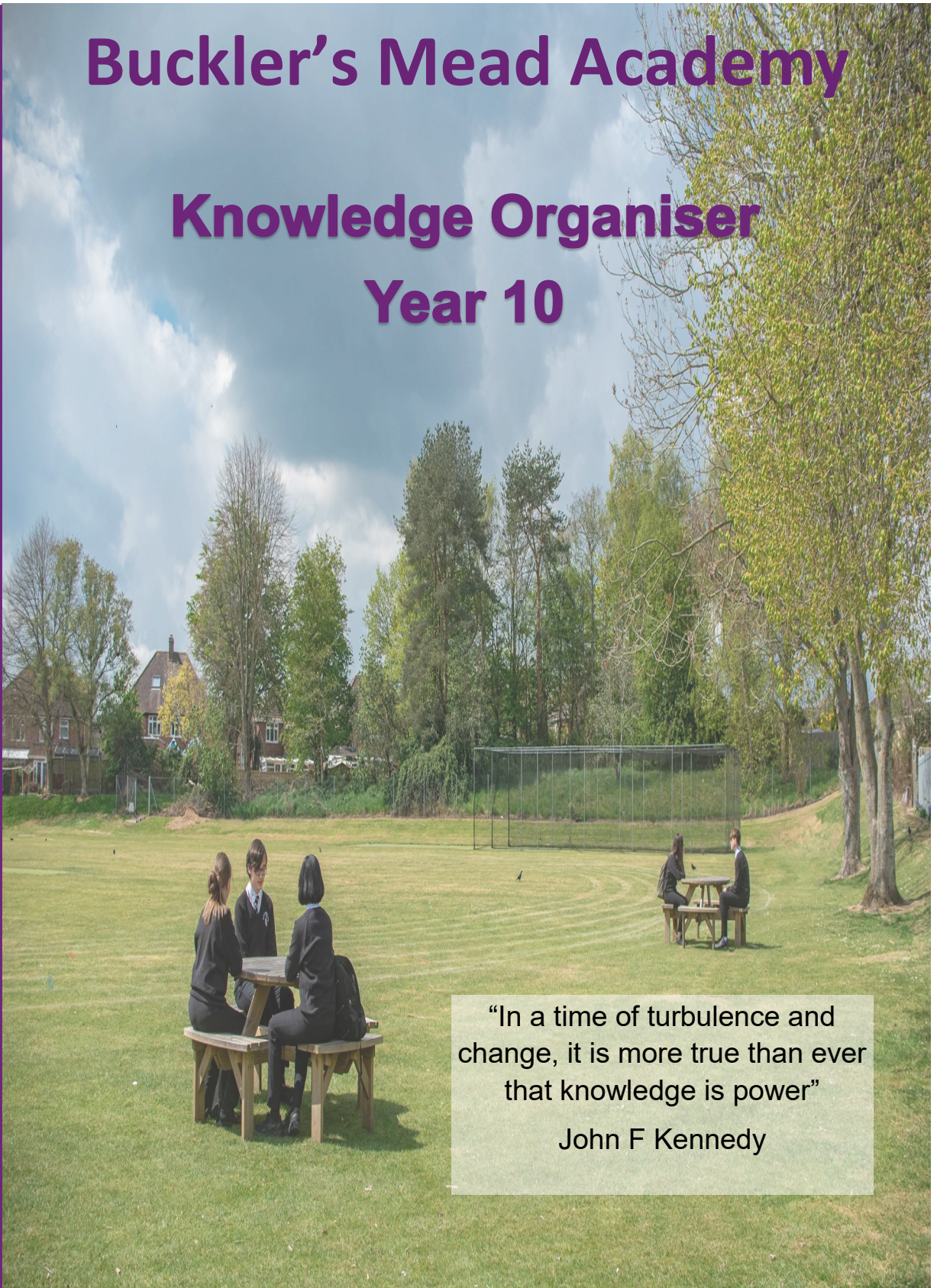


Buckler's Mead Academy

Knowledge Organiser Year 10

Learning Cycle 1



“In a time of turbulence and change, it is more true than ever that knowledge is power”

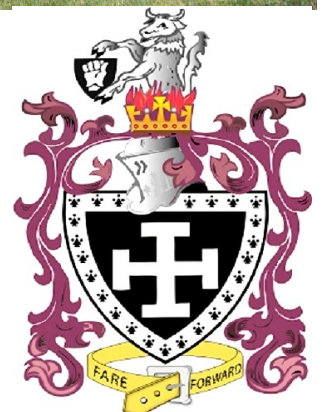
John F Kennedy

Inspiring Education for All

Name:

Tutor:

Ready, Responsible, Respect



Homework Timetable

	Week A	Week B
Monday		
Tuesday		
Wednesday		
Thursday		

Your Knowledge Organiser

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How to Use Your Knowledge Organiser

Self –Quizzing

Your Knowledge Organiser contains all of the key information you need to know for each subject area.

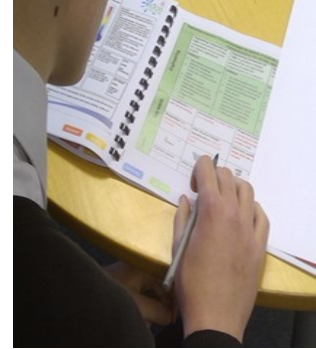
Your Knowledge Organiser will allow you to revise this key information and make sure it is stored in your long-term memory

The best way to use this resource is by self-quizzing.

“look, cover, write and check”

Look, Cover, Write, Check, Correct

First look through and read the information on a section of your knowledge organiser



Then Cover the section so you can no longer see the information

Next Try and **write out** the key definitions or facts that you need to know



Now uncover the section of your Knowledge Organiser and check how correct you were

Finally Correct anything that you wrote down that was incorrect

Knowledge Quiz

You teacher will quiz you on your Knowledge Organiser during the learning cycle .

Record your score from each quiz in the mark box.

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

Key Literary Vocabulary:

Media/Medium

The materials and tools used by an artist to create a piece of art.

Technique

The skill in which an artist uses tools and materials to create a piece of art.

Abstract

A piece of art which is not realistic. It uses shapes colours and textures.

Style

The technique an artist uses to expressive their individual character of there work.

Composition

The arrangement and layout of artwork/objects.

Highlight

The bright or reflective area within a drawing/painting where direct light meets the surface of the object or person.

Shadow, shade, shading

The tonal and darker areas within a drawing/painting where there is less light on the object or person.

Texture

The feel, appearance or the tactile quality of the work of art.

Mark making

Mark making is used to create texture within a piece of art by drawing lines and patterns.

Collage

A piece of art made by using a variety of materials such as paper/newspaper/photographs which are cut out, rearranged and glued on a surface.

Art Elements
(Elements of the Visual Language)

Artworks are 'built' using the visual elements. These elements are an expressive language.



Line: different lines express different emotions and ideas. a line is a path made by a moving point...



Colour

Another word for colour is 'hue'. Colours can be very pure (with a high intensity). Colours can be lightened or darkened using white or black. This is called the brightness or the 'value of the colour.'



Value is the lightness or darkness of something. It is also called **tone**. ← different values or tones created by shading.



Shape:

shapes can be freeform or geometric. A shape is an are enclosed by a line

Artworks are 'built' using the visual elements. These elements are an expressive language.

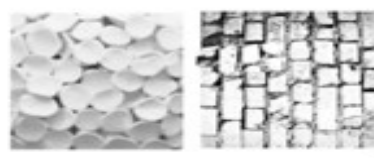
Form is 3D shape.

← Sculpture uses form, of course.



Texture

is the roughness or smoothness. Also called 'surface quality'



Space

You can't have shape or form without having space. Here the 'negative space' creates the image.



Photography

Visual Elements in Photography



Focus: what areas appear clearest or sharpest in the photograph? What do not? How would you describe the Depth of Field?



Light: what areas of the photograph are most highlighted? Are there any shadows? Does the photograph allow you to guess the time of day? Is the light natural or artificial? Harsh or soft? Reflected or direct?



Line: are there objects in the photograph that act as lines? Are they straight, curvy, thin, thick? Do the lines create direction in the photograph? Do they outline? Do the lines show movement or energy?



Repetition: are there any objects, shapes or lines which repeat and create a pattern?



Shape: do you see geometric or organic shapes? What are they?



Space: is there depth to the photograph or does it seem shallow? What creates this appearance? Are there important negative spaces in addition to positive spaces? Is there depth created by spatial illusions?



Texture: if you could touch the surface of the photograph how would it feel? How do the objects in the picture look like they would feel?



Value: is there a range of tones from dark to light? Where is the darkest value? Where is the lightest?



Angle: the vantage point from which the photograph was taken; generally used when discussing a photograph taken from an unusual or exaggerated vantage point.



Background: the part of a scene or picture that is or seems to be toward the back.



Balance: the distribution of visual elements in a photograph. Symmetrical balance distributes visual elements evenly in an image. Asymmetrical balance is found when visual elements are not evenly distributed in an image.



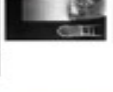
Points of Interest: the object(s) which appears most prominently and/or most clearly focused in a photograph.



Composition: the arrangement or structure of the formal elements that make up an image.



Contour: the outline of an object or shape.



Contrast: strong visual differences between light and dark, varying textures, sizes, etc.



Framing: what the photographer has placed within the boundaries of the photograph.



Setting: actual physical surroundings or scenery whether real or artificial.



Vantage point: the place from which a photographer takes a photograph.

Computing

Community

Opportunity

“Inspiring Education for All”

Enjoyment

Success

Project Life Cycle	Initiation, Planning, Execution, Evaluation
SMART Targets	Specific, Measurable, Achievable, Relevant, Timed
Planning Tools	GANTT Charts, PERT (Project Evaluation and Review Technique), Critical Path, Flowcharts, Mind map.
Risk Mitigation	A strategy to prepare for and reduce the risk of threats.
Feasibility	How practical/realistic a project is.
Interaction/Iteration	Each phase of the Project Life cycle interacts with the phases before and after.

Data	raw facts and figures before they have been processed.
Data types	Text, alphanumeric, integer, real, currency, percentage, fraction, decimal, date/time, limited choice, object, logical/Boolean.
Information	The end result of data being processed.
Data collection methods	questionnaires/surveys, email, sensors, interviews, consumer panels,
IT methods of data collection	Barcode readers, QR codes, web based surveys, wearable technology, and mobile technology.
Storage methods	The cloud (virtual), hard disk drive, solid state drive, optical, flash memory device (all physical).
Big data	Large amounts of data collected and processed.

Types of threats	Malware (adware, bot, virus, worm, spyware); Social engineering (phishing, pretexting, baiting); Hacking, DDOS (distributed denial of service)
Vulnerability	A weakness that allows a person to launch a cyber-security attack (environmental, physical, system).
Impacts of cyber-security attack	Identity theft, data destruction, data manipulation, data modification, data theft.
IT legislation	Data Protection 1998; Copyright, design and patents act 1988; Computer Misuse Act 1990; Freedom of information act 2000.
Primary data	data collected directly through surveys/questionnaires
Secondary data	Collected from secondary sources such as journals/magazines.

Processing data	Two main tools for this: spreadsheets and database software.
Spreadsheets	Formulas, functions, worksheets.
Databases	Tables, records, queries, validation.
Presenting data	Word processing, desktop publishing, PowerPoint presentation.
Considerations of presenting data	Target audience, content limitations, availability of information.
Distribution Channel	Messaging services, websites, and Multimedia Cloud and Mobile apps.
Presentation Methods/Resources	report, presentation, charts, tables, hardware, software, connectivity

DT - food & Nutrition

Functions of ingredients
Ingredients provide a variety of functions in recipes.

Carbohydrate, protein and fat
Carbohydrate, protein and fat all have a range of properties that make them useful in a variety of food products.

Carbohydrates perform different functions in food.
They can:

- help to cause the colour change of bread, toast and bakery products (dextrinisation);
- contribute to the chewiness, colour and sweet flavour of caramel;
- thicken products such as sauces and custards (gelatinisation).

Maillard reaction
Foods which are baked, grilled or roasted undergo colour, odour and flavour changes. This is primarily due to a group of reactions involving amino acids (from protein) and reducing sugars.

Dextrinisation
When foods containing starch are heated they can also produce brown compounds due to dextrinisation. Dextrinisation occurs when the heat breaks the large starch polysaccharides into smaller molecules known as dextrins which produce a brown colour.

Caramelisation
When sucrose (table sugar) is heated above its melting point it undergoes physical and chemical changes to produce caramel.

Gelatinisation
When starch is mixed with water and heated, the starch granules swell and eventually rupture, absorbing liquid, which thickens the mixture. On cooling, if enough starch is used, a gel forms.

Proteins perform different functions in food products.
They:

- aerate foods, e.g. whisking egg whites;
- thicken sauces, e.g. egg custard;
- bind ingredients together, e.g. fishcakes;
- form structures, e.g. gluten formation in bread;
- gel, e.g. lime jelly.

Gluten formation
Two proteins, gliadin and glutenin, found in wheat flour, form gluten when mixed with water. Gluten is strong, elastic and forms a 3D network in dough. In the production of bread, kneading helps untangle the gluten strands and align them. Gluten helps give structure to the bread and keeps in the gases that expand during cooking.

Gelation
Gelatine is a protein which is extracted from collagen, present in animal connective tissue. When it is mixed with warm water, the gelatine protein molecules start to unwind. On cooling, a stable, solid network is formed, trapping the liquid.

Denaturation
Denaturation is the change in structure of protein molecules. The process results in the unfolding of the protein's structure. Factors which contribute to denaturation are heat, salts, pH and mechanical action.

Coagulation
Coagulation follows denaturation. For example, when egg white is cooked it changes colour and becomes firmer (sets). The heat causes egg proteins to unfold from their coiled state and form a solid, stable network.

Aeration
Products such as creamed cakes need air incorporated into the mixture in order to give a well-risen texture. This is achieved by creaming a fat, such as butter or baking spread, with sugar. Small bubbles of air are incorporated and form a stable foam.

Fats performs different functions in food.
They help to:

- add 'shortness' or 'flakiness' to foods, e.g. shortbread, pastry;
- provide a range of textures and cooking mediums;
- glaze foods, e.g. butter on carrots;
- aerate mixtures, e.g. a creamed cake mix;
- add a range of flavours.

Plasticity
Fats do not melt at fixed temperatures, but over a range. This property is called plasticity.

Colloidal systems
Colloidal systems give structure, texture and mouthfeel to many different products.

System	Disperse phase	Continuous phase	Food
Sol	Solid	Liquid	Unset jelly
Gel	Liquid	Solid	Jelly
Emulsion	Liquid	Liquid	Mayonnaise
Solid emulsion	Liquid	Solid	Butter
Foam	Gas	Liquid	Whipped cream
Solid foam	Gas	Solid	Meringue

Raising agents
Raising agents include anything that causes rising within foods, and are usually used in baked goods. Raising agents can be:

- biological, e.g. yeast;
- chemical, e.g. baking powder;
- Mechanical, e.g. adding air through beating or folding.

Functional ingredients
These are ingredients that are specifically included in food for additional health benefits. They include:

- probiotics – 'good' bacteria that may have a positive impact on human health;
- prebiotics – food ingredients that promote the growth of beneficial microorganisms in the gut;
- sterols/sterols – compounds that can lower cholesterol;
- healthy fats (e.g. omega-3);
- added vitamins and minerals (more than in the original food).

Food is prepared and cooked to:

- make the food more palatable – improves flavour, texture and appearance;
- reduce the bulk of the food;
- Provide variety and interest to meals.

Methods of cooking food
The methods of cooking are divided up into groups. These are based on the cooking medium used. They are:

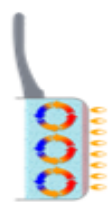
- moist/liquid methods, e.g. boiling;
- dry methods, e.g. grilling;
- Fat-based, e.g. frying.

Selecting the most appropriate way of preparing and cooking certain foods is important to maintain or enhance their nutritional value.

- Vitamins can be lost due to oxidation during preparation or leaching into the cooking liquid.
- Fat-based methods of cooking increase the energy (calories) of the food.
- The use of different cooking methods affects the sensory qualities of the food.

There are three ways that heat is transferred to food.

- Conduction – the exchange of heat by direct contact with foods on a surface.
- Radiation – energy in the form of rays.
- Convection – currents of hot air or hot liquid transfer the heat energy to the food.



Tasks

- Choose a recipe that you enjoy or have made recently and explain in detail the functions of the ingredients.
- Explain the function of raising agents, giving examples of recipes.

Key terms
Conduction: the exchange of heat by direct contact with foods on a surface.
Convection: currents of hot air or hot liquid transfer the heat energy to the food.
Functional ingredients: Included in food for additional health benefits.
Heat transfer: transference of heat energy between objects.
Radiation: energy in the form of rays.

Tenderisation

- Mechanical tenderising – a meat cleaver or meat hammer may be used to beat the meat. Cutting into small cubes or mincing can also help.
- Chemical tenderisation (marinating) – the addition of any liquid to flavour or soften meat before cooking.

DT - Textiles

Key Textile Techniques to try

- Applique
- Batik
- Beading
- CAD
- Couching
- Embroidery
- Felting
- Knitting
- Macramé
- Mola
- Patchwork
- Pleating
- Printing
- Quilting
- Ruffles
- Smocking
- Suffolk Puffs
- Tie Dye
- Weaving
- 3D Shibori

How to Analyse a Designer / Artist:

- Introduce the work of your designer or artist (**key facts only**), how does their work fit into trends at the time it was produced or current trends?
- Are there any social, environmental, moral, issues surrounding your designers work?
- Consider **what** key features appear regularly in your designers work, **why** might that be?
- **What** colours do they use a lot of? **What** effect does this give?
- **Who** do you think their designs are aimed at? **Why**?
- Explain what you like / dislike about the designs and **why** that is.
- **What** techniques has the designer used? **Why**? Could different techniques be used to create different effects?
- **How** will this designer inspire your work? **How** does the designer fit into the theme? **What** techniques will you sample? **Why**?

Sublimation: Sublimation ink is applied to paper and then transferred to fabric using a heat press



Keywords to use in your analysis

- Aesthetics
- Style
- Process
- Trend
- Connotation
- Textile Technique
- Movement
- Colour
- Line
- Form
- Tone
- Texture
- Shape
- Pattern
- Decoration
- Repetition
- Scale
- Structure

How to Evaluate a sample:

- **What** have you done?
- **What** techniques did you use?
- **What** inspired you?
- **How** does it relate to your theme?
- **How** have you done it?
- **What** did you like / dislike about the technique?
- **Was** it successful? **Why / why not**?
- **How** could you improve?
- **What** else could you try?
- **Is** there anything you would change? **Why**?
- **How** will you develop your work now?

Batik: Dyeing a piece of fabric after first applying a wax resist pattern or picture



Media you can use to record ideas

Design ideas / drawing

- Pencils
- Collage
- Watercolours
- Paints
- Chalk Pastels
- Charcoal
- Fineliners
- Pen
- Artist Markers
- Photoshop (CAD)
- Photographs

Insights / written annotation

- Written – pen / pencil
- Bullet points / key words / paragraphs
- Typed up on the computer

How to annotate a design:

What textile techniques have you used in your designs?

Why?

How does it link to the samples you have done?

Is you design inspired by any of your sources? **How? Why?**

What materials would you use? **Why?**

How does this design link to your theme?

What developments would you make to your designs?

Why?

Mola: Layers of fabric are stitched together – small sections are cut and sewn folded over to create an image (reverse applique) – similar but *reater* finish than **Cutting**



Drama

Key concepts, skills, questions or processes	
What will I learn?	You will develop your understanding of the performing arts by examining practitioners' work and the processes used to create performance.
What is a practitioner?	A practitioner is an individual or company who has a distinct style of performance, e.g. Brecht (Epic theatre), Stanislavski (Naturalism), Kneehigh, Frantic Assembly (Physical Theatre), 1927, Artaud (Theatre of Cruelty), Boal (Theatre of the Oppressed), Berkoff, Lecoq.
How will I do this?	You will watch a range of performances by professional rep in a range of styles. You will investigate how they created the pieces, and what influenced them, stylistically and contextually. You will also engage in workshops (lessons) where you will try out these styles for yourselves, and explore how different roles within the companies are linked together – e.g. director and actor/ puppeteer, set designer and choreographer, etc. You will keep a record of everything you are learning along the way.
What is expected of me?	It is vital that you keep an ongoing record, using your rehearsal logs, of everything we do in lessons, writing analytically (WWW/EB) rather than just recounting the events of the lesson. You need to become critics as well as participants, showing an understanding of the processes behind the performance. You will have a number of assignments to submit, both practical and online/ written. You MUST keep on top of these assignments, as they all count towards your final grade.
What is an Assignment Brief?	This document explains exactly what you are expected to do, and how you will evidence it. The brief will also contain all your deadlines for submitting work. It details all the success criteria, so you should look at it often to ensure you are on track.

Key Vocabulary	Definitions & Explanations	Examples
Creative Intentions	What was the director/ writer/ creator thinking about? Themes / issues / response to stimulus / style/genre / contextual influences / collaboration with other practitioners / influences by other practitioners.	FUP – look at your creative intentions sheet – have you been able to complete all the boxes?
Purpose	Why was it made? to educate / to inform / to entertain to provoke/ to challenge viewpoints / to raise awareness / to celebrate...	This is not a complete list – what other purposes can you think of?
Practitioners' roles, responsibilities and skills	Performance roles e.g., actor / dancer / singer/ puppeteer, etc & Non-performance roles e.g.: choreographer /set designer / director / writer etc. Responsibilities: rehearsing /performing /contributing to the creation and development of performance material, e.g., devising, designing, choreographing, directing, writing / refining performance material / managing self and others. Skills: physical, vocal and music skills, managing and directing skills, communication skills used to liaise, direct and perform, creative skills, such as designing set, costume, lighting or sound, writing scripts and composing songs, organisational skills used to put on a performance by a director or choreographer.	You will be expected to research several roles within the Performing Arts business, and explore how they work with each other to create a piece, e.g. How does the musical director of Kneehigh work with the director/ writer/ actors when creating a piece like FUP? Music is integral to the piece – look at how their creative process unfolds – it's all on the website. How do roles differ, depending on the company and the performance piece itself?
Processes used in development, rehearsal and performance	Responding to stimulus to generate ideas for performance material / exploring and developing ideas to develop material / 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.	What does a good rehearsal look like? Can you use your rehearsal time productively? How do you do this? Do you assign roles? Do you keep track of decisions made? Are you asking other people to feedback their opinions?

English

Ozymandias	Shelley was a Romantic poet who was well known as a 'radical' during his lifetime. He was expelled from university for writing about atheism which led to him to fall out with his father who disinherited him. Some people think Ozymandias reflects this side of his character. Although it is about the remains of a statue of Ozymandias (another name for the Egyptian pharaoh Rameses II) it can be read as a criticism of people or systems that become huge and believe themselves to be invincible.
Storm on the Island	Heaney was born in Northern Ireland to a farming family, much of his poetry is centred on the countryside and farm life that he knew as a child. In the late 60s, right up until the 90s, there was conflict in Northern Ireland between the Unionists (a group who wanted to remain in UK) and the Nationalists (a group who wanted to keep Ireland separate). This poem considers the power of nature.
Remains	Armitage made a film for Channel 4 in 2007 called <i>The Not Dead</i> and wrote a collection of poems of the same name. In preparation for this work, he interviewed veteran soldiers of different wars. The reference to 'desert sand' in this poem suggests that it is written about the Gulf War. The poem presents a dark and disturbing image of a soldier suffering post-traumatic stress disorder after conflict.
Bayonet Charge	Bayonet Charge is perhaps unusual for a Ted Hughes poem in that it focuses on a nameless soldier in the First World War (1914-18). It describes the experience of 'going over-the-top'. This was when soldiers hiding in trenches were ordered to 'fix bayonets' and climb out of the trenches to charge an enemy position. The aim was to capture the enemy trench. The poem describes how this process transforms a soldier from a living thinking person into a dangerous weapon of war.
Charge of the Light Brigade	Alfred Tennyson was one of 11 children born to an upper-middle class country vicar. In 1850, he became poet laureate, meaning he had to write important poems about events that affected the British nation. This poem celebrates the heroism and bravery of soldiers in the Crimean War which was fought between Britain and Imperial Russia from 1853-1856. In the Battle of Balaclava, an order given to the British army's cavalry (the Light Brigade) was misunderstood and 600 cavalymen ended charging down a valley straight into the fire of Russian cannons. Over 150 British soldiers were killed, and more than 120 were wounded.
War Photograph	Duffy was inspired to write this poem by her friendship with a war photographer. She was especially intrigued by the challenge faced by these people whose job requires them to record horrific events without being able to help. Duffy asks us to consider our own response when confronted with the photographs that we regularly see in our newspapers, and why so many of us have become desensitised to these images.
London	Blake rejected established religion for various reasons. One of the main ones was the failure of the Church to help children in London who were forced to work. Blake lived and worked in the capital, so was arguably well placed to write clearly about the conditions people who lived there faced. This poem comes from his collection 'Songs of Experience' where he deals with various dangerous industrial conditions, child labour, prostitution and poverty. Blake alludes to the 1789 French Revolution in this poem where the French people revolted against the monarchy and aristocracy.
The Prelude	Wordsworth grew up in the Lake District- his childhood experiences there, and the death of his mother, had a huge influence on his writing. Wordsworth is considered a Romantic poet as his poems deal with Nature. The poem shows the spiritual growth of the poet, how he comes to terms with who he is, and his place in nature and the world.

Community

Opportunity

"Inspiring Education for All"

Enjoyment

Success

English

Kamikaze	During the Second World War, the term 'kamikaze' was used for Japanese fighter pilots who were sent on suicide missions. They were expected to crash their warplanes into enemy warships. The word 'kamikaze' literally translates as 'divine wind'. Pilots were revered for their heroism and remembered as martyrs. This poem perhaps prompts us to think about the consequences of suicide missions for families in the modern world as well as in past conflicts.
Poppies	Weir grew up in Italy and Northern England, with an English mother and an Italian father. She has continued to absorb different cultural experiences throughout her life, also living in Northern Ireland during the troubled 1980s. The poem is concerned with Armistice Sunday, which began as a way of marking the end of WW1 in 1918. It was set up so people could remember the ordinary men who had been killed. When Poppies was written, British soldiers were still dying in wars in Iraq and Afghanistan. As a way of trying to understand the suffering that deaths caused, Carol Ann Duffy asked a number of writers to compose poems.
Exposure	Owen used his writing to inform people about the horrors of life on the front line. It contradicted the glory portrayed in the British media. Owen joined the army in 1915 but was hospitalised in May 1917 suffering from 'shell shock' (Post-Traumatic Stress Disorder). He returned to the war but was tragically killed days before it ended; he was just 26. This poem deals with the winter of 1917 which was particularly cold- soldiers suffered from hypothermia or frostbite, and many died in the freezing conditions.
My Last Duche ss	Browning was heavily influenced as a youngster by his father's extensive collection of books and art. This poem reflects Browning's love of history and European culture as the story is based on real historical figures. The narrator is Duke Alfonso II who ruled in Ferrara between 1559 and 1597. The Duchess of whom he speaks was his first wife, Lucrezia de' Medici, who died aged 17 in suspicious circumstances and might have been poisoned.
The Emigree	The poem deals with the dilemma of the emigree, forced by war or conflict to leave their home, and longing to return. The complex emotions and pain of exile are explored as well as the way that the media presents conflict abroad and the way that society understands it.
Tissue	Dharker was born in Pakistan and grew up in Scotland. She has written numerous poems that deal with themes of identity, the role of women in society and the search for meaning. She draws on her multi-cultural experience in her work. The poet addresses some of the larger issues in society; greed, pride etc. and how we have built our world around them, at odds with our own existence.
Checking Out Me History	John Agard was born in Guyana in the Caribbean, in 1949. He moved to the UK in the late 1970s. At school, he had to follow a curriculum biased towards whites, especially British whites, instead of learning about significant black figures. He uses non-standard phonetic spelling to represent his own accent, and writes about what it is like being black to challenge racist attitudes.

Geography

	<p>The structure of the Earth</p> <p>The Crust Varies in thickness (5-10km) beneath the ocean. Made up of several large plates.</p> <p>The Mantle Widest layer (2900km thick). The heat and pressure means the rock is in a liquid state that is in a state of convection.</p> <p>The Inner and outer Core Hottest section (5000 degrees). Mostly made of iron and nickel and is 4x denser than the crust. Inner section is solid whereas outer layer is liquid.</p>
	<p>Convection Currents</p> <p>The crust is divided into tectonic plates which are moving due to convection currents in the mantle.</p> <ol style="list-style-type: none"> Radioactive decay of some of the elements in the core and mantle generate a lot of heat. When lower parts of the mantle molten rock (Magma) heat up they become less dense and slowly rise. As they move towards the top they cool down, become more dense and slowly sink. These circular movements of semi-molten rock are convection currents. Convection currents create drag on the base of the tectonic plates and this causes them to move.
	<p>Types of Plate Margins</p> <p>Destructive Plate Margin When the denser plate subducts beneath the other, friction causes it to melt and become molten magma. The magma forces its way up to the surface to form a volcano. This margin is also responsible for devastating earthquakes.</p> <p>Constructive Plate Margin Here two plates are moving apart causing new magma to reach the surface through the gap. Volcanoes formed along this crack cause a submarine mountain range such as those in the Mid Atlantic Ridge.</p> <p>Conservative Plate Margin A conservative plate boundary occurs where plates slide past each other in opposite directions, or in the same direction but at different speeds. This is responsible for earthquakes such as the ones happening along the San Andreas Fault, USA.</p>
	<p>What is a Natural Hazard</p> <p>A natural hazard is a natural process which could cause death, injury or disruption to humans, property and possessions.</p> <p>Geological Hazard These are hazards caused by land and tectonic processes.</p> <p>Meteorological Hazard These are hazards caused by weather and climate.</p> <p>Causes of Earthquakes Earthquakes are caused when two plates become locked causing friction to build up. From this stress, the pressure will eventually be released, triggering the plates to move into a new position. This movement causes energy in the form of seismic waves, to travel from the focus towards the epicentre. As a result, the crust vibrates triggering an earthquake.</p> <p>The point directly above the focus, where the seismic waves reach first, is called the EPICENTRE.</p> <p>SEISMIC WAVES (energy waves) travel out from the focus.</p> <p>The point at which pressure is released is called the FOCUS.</p>
	<p>Volcanic Hazards</p> <p>Small pieces of pulverised rock and glass which are thrown into the atmosphere.</p> <p>Sulphur dioxide, water vapour and carbon dioxide come out of the volcano.</p> <p>A volcanic mudflow which usually runs down a valley side on the volcano.</p> <p>A fast moving current of super-heated gas and ash (1000°C). They travel at 450mph.</p> <p>A thick (viscous) lava fragment that is ejected from the volcano.</p>
	<p>HIC - CS: Chile Earthquake 2010</p> <p>Causes On the 27th February 2010, a huge earthquake measuring 8.8 on the Richter scale struck off the coast of Chile, lasting for over three minutes! The earthquake occurred on a destructive plate margin, where the Nazca plate subducts beneath the South American plate. Smaller aftershocks followed the initial earthquake. As the earthquake occurred in the Pacific Ocean, the plate movement displaced a lot of seawater, triggering a tsunami.</p> <p>Effects Around 500 killed and 12,000 injured. Many buildings were destroyed, including 22,000 homes, 4,500 schools, 53 ports and 56 hospitals. The Santiago airport was also badly damaged. Landslides damaged 1500km of roads. Debris blocked roads for weeks, which cut off rural communities. Fires broke out in buildings due to burst pipes.</p> <p>Responses Emergency services were deployed quickly. Within 24 hours, temporary repairs were made to the Route 5 north-south highway. Within 24 hours, temporary repairs were made to the Route 5 north-south highway. Power and water was restored to 90% of homes.</p>
	<p>Managing Volcanic Eruptions</p> <p>Warning signs Small earthquakes are caused as magma rises up. Temperatures around the volcano rise as activity increases. When a volcano is close to erupting it starts to release gases.</p> <p>Monitoring techniques Seismometers are used to detect earthquakes. Thermal imaging and satellite cameras can be used to detect heat around a volcano. Gas samples may be taken and chemical sensors used to measure sulphur levels.</p> <p>Preparation Being ready and able to evacuate residents. Trained emergency services and a good communication system.</p>
	<p>Earthquake Management</p> <p>PREDICTING</p> <p>Methods include:</p> <ul style="list-style-type: none"> Satellite surveying (tracks changes in the earth's surface) Laser reflector (surveys movement across fault lines) Radon gas sensor (radon gas is released when plates move so this finds that) Seismometer Water table level (water levels fluctuate before an earthquake). Scientists also use seismic records to predict when the next event will occur. <p>PROTECTION</p> <p>You can't stop earthquakes, so earthquake-prone regions follow these three methods to reduce potential damage:</p> <ul style="list-style-type: none"> Building earthquake-resistant buildings Raising public awareness Improving earthquake prediction <p>LIC - CS: Nepal 2015</p>
	<p>Causes On the 25th April 2015, a 7.9 magnitude earthquake hit Nepal, caused by the subduction of the Indo-Australian plate beneath the Eurasian plate (destructive plate margin). The earthquake's epicentre was around 80km away from Nepal's capital, Kathmandu. The earthquake originated only 15km below the surface, which meant it was felt very strongly on the surface.</p> <p>Effects 9,000 killed and 20,000 injured. 3 million people left homeless. 7,000 schools destroyed, and 50% of all shops destroyed, food shortages. Landslides and avalanches which lead to flooding</p> <p>Responses International aid quickly arrived from the UK, India and China. They brought search and rescue teams, medical support. Half a million tents were provided many from UNICEF. Field hospitals were set up</p>

Geography

Development is an improvement in living standards through better use of resources.	What is development?
Economic This is progress in economic growth through levels of industrialisation and use of technology.	LIcs Poorest countries in the world. GNI per capita is low and most citizens have a low standard of living.
Social This is an improvement in people's standard of living. For example, clean water and electricity.	NEEs These countries are getting richer as their economy is progressing from the primary industry to the secondary industry. Greater exports leads to better wages.
Environmental This involves advances in the management and protection of the environment.	HICs These countries are wealthy with a high GNI per capita and standards of living. These countries can spend money on services.
These are used to compare and understand a country's level of development.	Causes of uneven development Development is globally uneven with most HICs located in Europe, North America and Oceania. Most NEEs are in Asia and South America, whilst most LICs are in Africa. Remember, development can also vary within countries too.
Economic indicators examples	Physical factors affecting uneven development
Employment type The proportion of the population working in primary, secondary, tertiary and quaternary industries.	Natural Resources • Fuel sources such as oil, minerals and metals for fuel. • Availability for timber. • Access to safe water.
Gross Domestic Product per capita This is the total value of goods and services produced in a country per person, per year.	Climate • Reliability of rainfall to benefit farming. • Extreme climates limit industry and affects health. • Climate can attract tourists.
Gross National Income per capita An average of gross national income per person, per year in US dollars.	Natural Hazards • Risk of tectonic hazards. • Benefits from volcanic material and floodwater. • Frequent hazards undermines redevelopment.
Social indicators examples	Location/Terrain • Landlocked countries may find trade difficulties. • Mountainous terrain makes farming difficult. • Scenery attracts tourists.
Infant mortality The number of children who die before reaching 1 per 1000 babies born.	Consequences of Uneven Development Levels of development are different in different countries. This uneven development has consequences for countries, especially in wealth, health and migration.
Literacy rate The percentage of population over the age of 15 who can read and write.	Wealth People in more developed countries have higher incomes than less developed countries.
Life expectancy The average lifespan of someone born in that country.	Health Better healthcare means that people in more developed countries live longer than those in less developed countries.
Mixed indicators	Migration If nearby countries have higher levels of development or are secure, people will move to seek better opportunities and standard of living.
Human Development Index (HDI) A number that uses life expectancy, education level and income per person.	



Aid • Aid can help some countries develop key infrastructure faster. Aid can improve services such as schools, hospitals and roads. • Too much reliance on aid might stop other trade links becoming established.	Trade • Countries that export more than they import have a trade surplus . This can improve the national economy. • Having good trade relationships • Trading goods and services is more profitable than raw materials.
Education • Education creates a skilled workforce meaning more goods and services are produced. • Educated people earn more money, meaning they also pay more taxes. This money can help develop the country in the future.	Health • Lack of clean water and poor healthcare means a large number of people suffer from diseases. People who are ill cannot work so there is little contribution to the economy. • More money on healthcare means less spent on development.
Politics • Corruption in local and national governments. The stability of the government can effect the country's ability to trade. • Ability of the country to invest into services and infrastructure further.	History • Colonialism has helped Europe's development, but slowed down other countries. Countries that went through industrialisation a while ago, have now develop further.
Consequences of Uneven Development Levels of development are different in different countries. This uneven development has consequences for countries, especially in wealth, health and migration.	

Microfinance loans This involves people in LICs receiving smalls loans from traditional banks. • Loans enable people to begin business. • Its not clear they can reduce poverty at a large scale.	Foreign direct investment This is when one country buys another country. • Leads to better access to finance, technology & expertise. • Investment can come with strings attached that country's will need to comply with.
Aid This is given by one country to another. • Improve literacy rates, building dams, improving agriculture. • Can be wasted by corrupt governments or they can become too reliant on aid.	Debt Relief This is when a country's debt is cancelled or interest rates are lowered. • Means more money can be spent on development. • Loans might not always get a return. • So might not always be a better condition from donor country.
Fair Trade This is a movement where farmers get a fair price for the goods produced. • They can develop schools & health centres. • Only a tiny proportion of the extra money reaches producers.	Technology Includes tools, machines and affordable equipment that improve quality of life. • They can develop schools & health centres. • Requires initial investment and skills in operating technology.
Location and Background Jamaica is a LIC island nation part of the Caribbean. Location makes Jamaica an attractive place for visitors to explore the tropical blue seas, skies and palm filled sandy beaches.	CS: Reducing the Development Gap in Jamaica
Tourism economy -In 2015, 2.12 million visited. -Tourism contributes 27% of GDP and will increase to 38% by 2025. -30,000 jobs rely on tourism. -Government has invested in tourism. -New sewage treatment plants is beginning to recover.	Multiplier effect -Jobs from tourism have meant more money has been spent in shops and other businesses. -Government has invested in tourism. -New sewage treatment plants have reduced pollution.
Development Problems • Tourists do not always spend much money outside their resorts. Infrastructure improvements have not spread to the whole island. • Many people in Jamaica still live in poor quality housing and lack basic services such as healthcare.	

Community

Opportunity

“Inspiring Education for All”

Enjoyment

Success

History

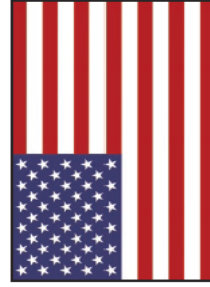
Vietnam Knowledge Organiser

Conflict and Tension in Asia 1950-1975

The Red Menace

Following the Second World War, Western nations were engaged in a cold war with communist nations. The two ideologies of communism and democracy were headed by two superpowers, the USSR and the USA respectively. These two superpowers feared fighting each other directly due to their fear of mutual destruction via nuclear weapons. Instead, they waged war by proxy, each country trying to ensure that smaller nations were either democratic or communist supporters.

Communism	Democracy
Held the belief that the government should be run by a communist party – unelected and powerful.	Held the belief that governments should be selected by the people through representative elections.
Believed that wealth should be shared between the citizens of a nation and, ultimately, the entire world population.	Believed that capitalist economics should hold sway, meaning that people had the opportunity to become independently wealthy.
Believed that the well-being of the community, be it local, national or international, was more important than the well-being of individuals.	Believed that society is made up of individuals and their families and that these individuals should have liberal freedoms to act as they wish.
Distusted members of society who were not workers, such as teachers, intellectuals and others.	Held a general belief that it was important to have some sectors of society that were richer than others, these riches gained by merit.
Examples of communist countries in 1950:	Examples of democratic countries in 1950:
<ul style="list-style-type: none"> USSR China North Korea East Germany Hungary 	<ul style="list-style-type: none"> USA United Kingdom South Korea West Germany France



Conflict and Tension in Asia 1950-1975

The Korean War 1950-1953

Following the Second World War, the Korean peninsula was split into two countries – the communist North liberated by the USSR, and the democratic South liberated by the USA.

Korean War Timeline	
Sept. 1950	North Korea invades South Korea with backing from the USSR. South is nearly totally overrun.
Oct. 1950	The USA joins the war on the side of South Korea with the support of the UN. General MacArthur leads his troops in retaking South Korea, and then pushes north, taking most of North Korea also.
Jan. 1951	China supports North Korea with 200,000 troops and pushes the UN forces back past the capital of South Korea, Seoul.
Mar. 1951	General MacArthur threatens to invade China, against the wishes of President Truman.
April 1951	General MacArthur is fired by Truman for his attitude.
1951	A stalemate is reached along the 38th Parallel (see map).
1952	Peace talks begin.
Nov. 1952	US elections see Truman replaced with Eisenhower who calls for a quick end to the war.
Mar. 1953	Joseph Stalin, leader of the USSR, dies. Morale in North Korea is damaged.
July 1953	An end to open hostilities is declared.



Possible Reasons for the War

- The exact reason for the start of this war is unclear. Some factors may have included:
- USSR and China planned it together to gain more power.
 - Both countries were used as proxies by the USSR and USA to fight each other indirectly.
 - Kim Il Sung, (N. Korea), simply wanted to conquer S. Korea.
 - Stalin, (USSR) showing Mao, (China), that he was the boss of Asia.
 - South Korea provoked an attack from North Korea to bring the USA in to support them.

The Truman Doctrine

President Truman promised to help stop the spread of communism across the world in 1947. Despite US efforts to support the Chinese Nationalist Chiang Kai-Shek take control of China, the communist Mao Zedong turned the most populous country on earth communist in 1949.

The Role of the UN

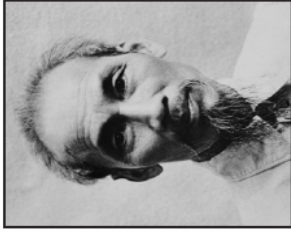
The UN agreed to join the war on the side of South Korea, but only because the USA was the most powerful voice at the table. Stalin and the USSR were boycotting the UN and China had been blocked from joining the UN by the USA. Troops from 18 UN countries joined the war, the majority from the USA.

History

Vietnam Knowledge Organiser

Viet Minh

Ho was the leader of the 'Viet Minh'; a group of resistance fighters against the Japanese rule during the Second World War. He learnt a lot about guerrilla warfare and was a staunch communist. He led forces that beat the French and gained independence for Indochina. He was a vastly popular leader in North Vietnam. Ho believed that Vietnam should be a single communist country and wanted to liberate South Vietnam from the cruel rule of President Diem. He led the National Liberation Front ('Viet Cong') in the Vietnam war against the USA.



Viet Cong Tactics

The Viet Cong fought using guerrilla tactics; they favoured hit-and-run attacks from the jungle, ambushes and the use of traps such as the spike trap pit. They lived in and operated from underground tunnel systems to avoid American bombing runs. The Viet Cong were supplied by the Ho Chi Minh trail, a series of trails throughout Vietnam, crossing into Cambodia and Laos at several points. Ho Chi Minh believed that the Viet Cong would be victorious through their use of numbers and by encouraging South Vietnamese to join their cause.

US Tactics

The US began attacks on the Viet Cong with heavy bombing raids. President Johnson began Operation Rolling Thunder following the Gulf of Tonkin incident. American bombers dropped bombs, Agent Orange and napalm across the jungle. Agent Orange was a herbicide used to destroy the plants in wide areas by poisoning the environment. Napalm was a chemical that burned hotter and longer than conventional weapons. Napalm would stick to its victim and burn them down to the bone. 'Search and Destroy' tactics were introduced when bombing proved ineffective; teams of soldiers were sent to villages that were sympathetic to the Viet Cong and would shoot Viet Cong members on sight.

Bombing Pros and Cons

- Pro: Disrupted supply routes (Ho Chi Minh trail).
- Pro: Required less manpower than 'boots on the ground'.
- Pro: Forced North Vietnam to join peace talks.
- Con: Bombing could not defeat the Viet Cong alone.
- Con: It cost an estimated \$400,000 to kill 1 Viet Cong fighter.
- Con: 14,000 US and South Vietnamese planes were shot down.

The Gulf of Tonkin

Before 1964, the US had military 'advisors' in South Vietnam and were not officially at war with the North. When US ships were attacked by North Vietnam in 1964, President Johnson used this to start a war officially. Operation Rolling Thunder began in February 1965.

Consequences of the Korean War

USA	China	USSR	Korea
The USA prevented communism from spreading to South Korea but lost 30,000 men and spent ~\$40 billion.	Gained the respect of the USSR and prevented a US invasion of North Korea but lost 500,000 men and a valuable trading partner in the USA.	Gained a better relationship with China and avoided direct conflict with the USA. They were happy for the USA and China to fight instead.	1.3 million Koreans died on both sides of the conflict. Homes, farms, factories and infrastructure were destroyed. The two countries were not united as some had hoped and the USA has had a military presence guarding the border on the 38th Parallel to this day, (37,000 men and women as of 2018).

Indochina to Vietnam

Before the Second World War, Indochina was a French colony. It was captured during the Second World War by Japan and conditions for the populace were harsh. The French reclaimed the country in 1945 but were not popular. Following a crushing military defeat at Dien Bien Phu in 1954, France agreed to grant Indochina independence as four separate countries; Cambodia, Laos, North Vietnam and South Vietnam. Much like in Korea, North Vietnam is communist and South Vietnam is democratic.

The Domino Theory

The USA were afraid that Communism would spread across Asia if North Vietnam successfully invaded South Vietnam. It could 'knock over' Cambodia, Laos, Thailand and even India. The US supported France in its fight against independence and joined the Vietnam war to stop this domino effect before it began.



Presidential Timeline

Eisenhower (1953-1961) Provided South Vietnam with \$1.6 billion between 1954 and 1960. Did not send troops to fight in Vietnam.	Kennedy (1961-1963) Sent approximately 16,000 US 'advisors' to help train the South Vietnamese army. Continued financial aid.	Johnson (1963-1969) Ramped up the war following the Gulf of Tonkin incident, officially declaring war on North Vietnam. Began 'Operation Rolling Thunder'.	Nixon (1969-1974) Sought an end to the war through 'Vietnamization'; the withdrawal of US and replacement by South Vietnamese. Bombed Cambodia and oversaw the American exit from the conflict.
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Maths



Mathematics – Year 10

In Maths you will receive a separate knowledge organiser.

Your knowledge organiser will help you to:

- Know** which **MET*** skills you should be learning
- Track** when you have learnt, revisited and revised a skill
- Identify** any gaps where you have missed lessons
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Year 10		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6						
		September	October	November	December	January	February	March	April	May	June	July	
		Key Stage 4 Assessment 1	Key Stage 4 Assessment 1	Key Stage 4 Assessment 1	Key Stage 4 Assessment 1	Key Stage 4 Assessment 1 (3 Papers)	Key Stage 4 Assessment 1 (3 Papers)	Key Stage 4 Assessment 2	Key Stage 4 Assessment 2	Key Stage 4 Assessment 2	Revision	Year 10 Mock Exam (3 Papers)	Skills Booster Follow-Up

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Year 10 French Home, Town, Neighbourhood and Region GCSE French Knowledge Organiser

Key Ideas

- Les attractions principales de ma ville
- Les avantages et inconvénients d'où j'habite
- Les avantages et inconvénients d'habiter en ville / à la campagne
- Les problèmes environnementaux où j'habite • Ma maison idéale

Key Vocabulary

Les noms	
un appartement	flat
les attractions	entertainment facilities
la bibliothèque	library
le bowling	bowling alley
la campagne	countryside
la chambre	bedroom
la circulation	traffic
chez moi	at my house
les magasins	the shops
le manque (de)	lack (of)
la pollution	pollution
les transports ¹⁴ en commun	public transport
le village	village
la ville	town

Key Phrases

J'habite dans un petit village/une grande ville dans le nord de l'Angleterre.	I live in a little village/big town in the north of England.
Il y a environ 5000 habitants.	There are around 5000 inhabitants.
J'adore habiter à la campagne.	I love living in the countryside.
Dans ma ville on peut trouver un cinéma et un bowling.	In my town you can find a cinema and a bowling alley.
Il n'y a pas de patinoire.	There isn't an ice rink.
Je voudrais avoir un centre commercial.	I'd like to have a shopping centre.
La pollution est un grand problème à Paris.	Pollution is a big problem in Paris.
Il y a beaucoup de circulation.	There is a lot of traffic.
Les transports en commun ne sont pas fiables.	Public transport is not reliable.
Le manque de magasins à la campagne est frustrant.	The lack of shops in the countryside is frustrating.
Je fais des tâches ménagères pour gagner de l'argent de poche.	I do housework in order to earn pocket money.
Je vais en ville pour faire du shopping/aller au cinéma/trainer avec mes amis.	I go to town in order to go shopping/go to the cinema/hang out with friends



Les verbes

gagner (de l'argent)	to earn (money)
faire le repassage	to do the ironing
faire les tâches ménagères	to do housework
passer l'aspirateur	to vacuum
sortir les poubelles	to take out the rubbish (bins)
trainer	to hang out
visiter	to visit (a place)

Les adjectifs

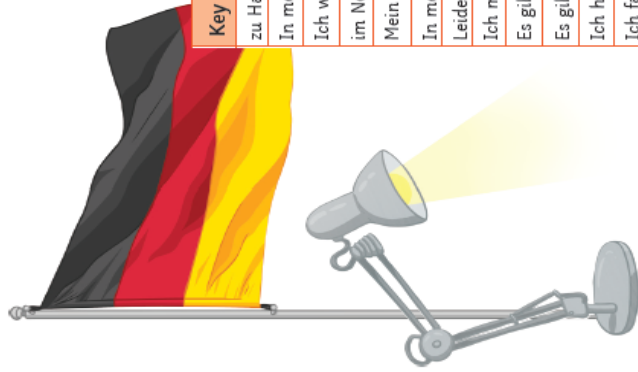
animé(e)	lively
ennuyeux	boring
historique	historic
intéressant	interesting
joli(e)	pretty
propre	clean
sale	dirty

MFL - German

Home, Town, Neighbourhood and Region GCSE Foundation Tier German Knowledge Organiser

Key Ideas

- Meine Gegend – was gibt es?
- Meine Gegend – was gibt es für die Jugend zu tun?
- Meine Gegend – Vorteile und Nachteile
- Das Stadtleben oder das Landleben – Vorteile und Nachteile
- Meine Gegend – Umweltprobleme
- Mein Haus
- Mein ideales Haus
- Hausarbeit – hilfst du zu Hause?



Adjektive		Verben	
bequem	comfortable	abwaschen	to wash up
geräumig	roomy	aufräumen	to tidy up
historisch	historic	bekommen	to receive
hübsch	pretty	besuchen	to visit
interessant	interesting	bügeln	to do the ironing
langweilig	boring	entdecken	to discover
alt	old	freuen (sich auf etwas)	to look forward to
neu	new	spazieren gehen	to go for a walk
ruhig	calm, peaceful	staubsaugen	to Hoover
sauber	clean	umziehen	to move house
schmutzig	dirty	verdienen	to earn
verkehrsreich	busy (with traffic)	wohnen	to live
wichtig	important		

Key Vocabulary

Key Phrases

zu Hause	at home
In meiner Gegend ist es laut.	It's noisy in my area.
Ich wohne in einem kleinen Dorf/in einer großen Stadt.	I live in a little village/big town.
im Norden/Osten/Süden/Westen	in the north/east/south/west
Mein Haus liegt in der Nähe von einem Schwimmbad.	My house is near a swimming pool.
In meiner Stadt gibt es...	In my town there is/there are...
Leider gibt es keine Schlittschuhbahn.	Unfortunately, there isn't an ice rink.
Ich möchte ein neues Einkaufszentrum haben.	I'd like to have a new shopping centre.
Es gibt auch zu viel Verkehr/Verschmutzung.	There is also too much traffic/pollution.
Es gibt gute öffentliche Verkehrsmittel.	There is good public transport.
Ich helfe zu Hause, um Taschengeld zu bekommen.	I help at home in order to receive pocket money.
Ich fahre mit dem Bus ins Stadtzentrum.	I travel by bus into the town/city centre.
Man kann einkaufen gehen/ins Kino gehen/sich entspannen.	You can go shopping/go to the cinema/relax.

Key Verbs

Infinitiv	Präsens	Vergangenheit	Futur
gehen – to go	ich gehe; er/sie geht; wir gehen	ich bin gegangen; er/sie ist gegangen; wir sind gegangen	ich werde gehen; er/sie wird gehen; wir werden gehen
sein – to be	ich bin; er/sie ist; wir sind	ich bin gewesen; er/sie ist gewesen; wir sind gewesen	ich werde sein; er/sie wird sein; wir werden sein
fahren – to go/travel	ich fahre; er/sie fährt; wir fahren	ich bin gefahren; er/sie ist gefahren; wir sind gefahren	ich werde fahren; er/sie wird fahren; wir werden fahren
helfen – to help	ich helfe; er/sie hilft; wir helfen	ich habe geholfen; er/sie hat geholfen; wir haben geholfen	ich werde helfen; er/sie wird helfen; wir werden helfen

Substantive	
die Aussicht	view
das Badezimmer	bathroom
die Bibliothek	library
die Bowlingbahn	bowling alley
das Dorf	village
der Dachboden	attic
die Dusche	shower
der Garten	garden
die Geschäfte	shops
die Fußgängerzone	pedestrianised area
das Klima	climate
die Küche	kitchen
die Menge	a lot, plenty
das Rathaus	town hall
das Reihenhäuser	terraced house
das Schlafzimmer	bedroom
das Schloss	castle
das Sportzentrum	sports centre
die Stadt	town
die Umweltverschmutzung	pollution
der Verkehr	traffic
der Wohnblock	block of flats
die Wohnung	flat
die öffentlichen Verkehrsmittel (pl)	public transport

Music

	Job Roles
Musician	Plays the musical instruments
Composer/songwriter	Writes the music/lyrics
Record producer	Manages the recording of an artist's music
Conductor	Guides the orchestra/choir
Live Sound Technician	Manages equipment and operates sound desk during live performance
Roadie	Sets up/packs away equipment
Instrument Technician	Looks after/fixes instruments
Artistic Manager	Organises tours and gigs, manages marketing of artist, negotiates fees and contracts
Venue Manager	Books artists, venue health and safety, supervises running of venue ensuring high standard of service for artists and audience
Studio Manager	Book sessions, maintains equipment and facilities, promotes the studio, recruits and pays staff.
Promoter	Identify performance opportunities, promotes/publicises artists, events and venues
Marketer	Develop strategies and tactics to market and sell the record label's albums.
A&R	Responsible for talent scouting and overseeing the artistic development
Sound Engineer	Setting up required equipment, editing and mixing recorded tracks, enhancing the sound to achieve a high quality recording.
Session Musician	Musicians hired to perform in recording sessions/live performances
Mastering Engineer	Prepares recorded music for use in distribution such as CD/vinyl record or streaming quality.
Manufacturer	
Music Journalist/blogger	Attend shows/concerts, listen to artists/new talent and Write reviews.
Broadcaster	Interviews artists and present music shows/discusses trends.
Software Programmer	Creates apps, musical programmes/software and music games.
DJ	Plays recorded music and creatively mixes tracks.
Retailer	Shops/online stores that sell the artists music/albums.
Distributor	The middleman between the artist/record labels and the store.

Employment types
Full Time
Part Time
Freelance
Self-Employed
Permanent
Casual

Venues

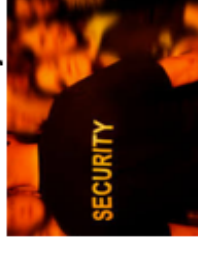


Health and

Safety



Security



AGENCIES



UNIONS



TRADE BODIES



Major Labels



Community

Opportunity

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Enjoyment

Success

BTEC SPORT UNIT 2 (COURSEWORK) - KNOWLEDGE ORGANISER

PRACTICAL PERFORMANCE IN SPORT - LEARNING AIM A

RULES/LAWS	Rules and laws of a sport regulated by the national or international governing body for the sport. For e.g. Football Association (FA) or FIFA.
APPLICATION OF THE RULES/LAWS	When a goal is scored when a player is in an offside position in football or a forward pass in rugby, the official will apply a consequence according to the rules/laws of the sport.
REGULATIONS	Laws relating to players, equipment, playing surface, facilities, health and safety, time, officials (referee, umpire, judge, starter, timekeeper).
SCORING SYSTEMS	The method of scoring goals or points, method and/or requirements of victory.
ROLES OF THE OFFICIAL	The roles of umpires, referees, referees' assistants, judges, timekeeper, starters, table officials, third umpire, fourth official.
RESPONSIBILITIES OF THE OFFICIALS	The appearance, equipment, fitness, qualifications, interpretation and application of rules, control of players, accountability to spectators, health and safety (equipment, facilities, players), fair play, use of technology, effective communication (voice, whistle, signals).
TECHNICAL DEMANDS	These are the skills and techniques required to meet the demands of the sport.
TACTICAL DEMANDS	Decision making and strategies (attacking/defensive) to overcome an opponent, including using personal strengths.
SAFETY	Controlled environments that adhere to 'rules', health and safety guidelines, and consider appropriate risk management strategies in physical activity and sport.
ISOLATED PRACTICES	Skills and techniques demonstrated independently without any pressure or external forces, completed successfully and without fault.
CONDITIONED GAMES	Small-sided games with a condition set for e.g. a limited number of touches, a set number of defenders or attackers.
COMPETITIVE PRACTICES	Full-sided games. Appropriate opposition with match officials.
BODY COMPOSITION	Ratio of fat mass to fat free mass. Percentage of fat, bone and muscle in bod
SPEED	Distance divided by the time taken
AEROBIC ENDURANCE	Cardiorespiratory system working for long periods of time supplying oxygen and nutrients to working muscles.
MUSCULAR ENDURANCE	Muscle is able to contract over period time against a light to moderate resistance.
FLEXIBILITY	Range of motion in all joints of body, moving fluidly allowing complete range of movement
MUSCULAR STRENGTH	Maximum force that can be generated by a muscle or muscle group

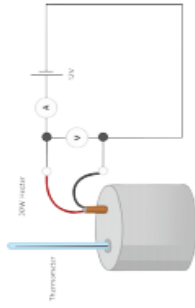
AQA Physics (Combined Science) Unit 6.1: Energy

Required Practical

Investigating Specific Heat Capacity

independent variable – material
 dependent variable – specific heat capacity
 control variables – insulating layer, initial temperature, time taken

$$\Delta E = m \times c \times \Delta\theta$$



Method:

- Using the balance, measure and record the mass of the copper block in kg.
- Wrap the insulation around the block.
- Put the heater into the large hole in the block and the block onto the heatproof mat.
- Connect the power pack and ammeter in series and the voltmeter across the power pack.
- Using the pipette, put a drop of water into the small hole.
- Put the thermometer into the small hole and measure the temperature.
- Switch the power pack to 12V and turn it on.
- Read and record the voltmeter and ammeter readings – during the experiment, they shouldn't change.
- Turn on the stop clock and record the temperature every minute for 10 minutes.
- Record the results in the table.
- Calculate work done and plot a line graph of work done against temperature.

Equations

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

$$E_p = mgh$$

$$E_e = \frac{1}{2}ke^2$$

$$\Delta E = m \times c \times \Delta\theta$$

$$P = \frac{E}{t}$$

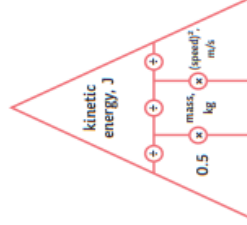
$$P = \frac{W}{t}$$

Kinetic and Potential Energy Stores

Movement Energy

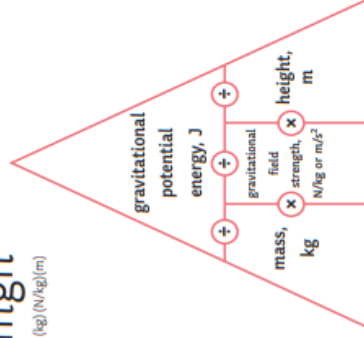
$$\text{kinetic energy} = \frac{1}{2} \times \text{mass} \times \text{speed}^2$$

$$E_k = \frac{1}{2}mv^2 \quad (\text{J})$$



When something is off the ground, it has gravitational potential energy
 gravitational potential energy = mass x gravitational field strength x height

$$E_p = mgh \quad (\text{J})$$



When an object falls, it loses gravitational potential energy and gains kinetic energy.

Stretching an object will give it elastic potential energy.

elastic potential energy = $\frac{1}{2} \times$ spring constant \times extension²

$$E_e = \frac{1}{2}ke^2 \quad (\text{J})$$

Transferring Energy by Heating

Heating a material transfers the energy to its thermal energy store – the temperature increases.

E.g. a kettle: energy is transferred to the thermal energy store of the kettle. Energy is then transferred by heating to the water's thermal energy store. The temperature of the water will then increase.

Some materials need more energy to increase their temperature than others.

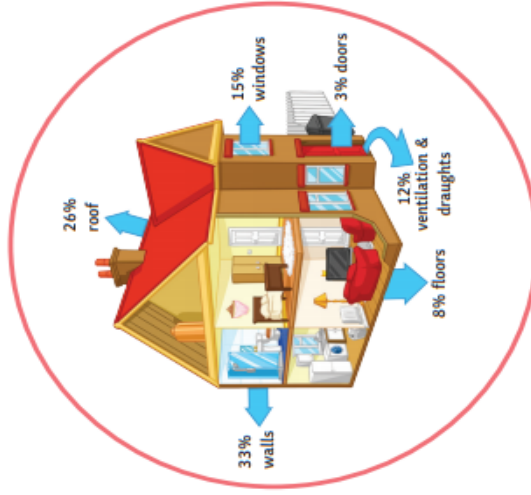
change in thermal energy = mass x specific heat capacity x temperature change

$$\Delta E = m \times c \times \Delta\theta \quad (\text{J})$$

Specific heat capacity is the amount of energy needed to raise the temperature of 1kg of a material by 1°C.

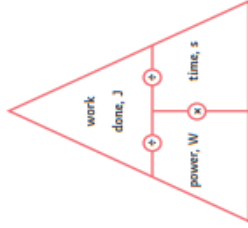
Insulation – reduces the amount of heat lost. In your home, you can prevent heat loss in a number of ways:

- thick walls;
- thermal insulation, such as:
- loft insulation (reducing convection);
- cavity walls (reduces conduction and convection);
- double glazing (reduces conduction).



power = work done ÷ time

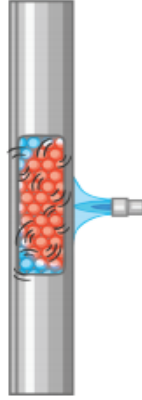
$$P (W) = W (J) \div t (s)$$



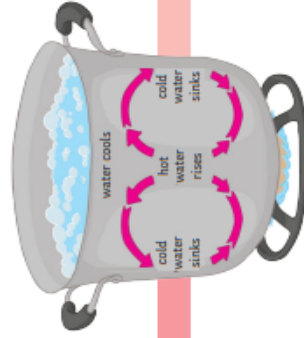
Energy Transfer

Lubrication reduces the amount of friction. When an object moves, there are frictional forces acting. Some energy is lost into the environment. Lubricants, such as oil, can be used to reduce the friction between the surfaces.

Conduction – when a solid is heated, the particles vibrate and collide more, and the energy is transferred.



Convection – when a liquid or a gas is heated, the particles move faster. This means the liquid or gas becomes less dense. The denser region will rise above the cooler region. This is a convection current.



Energy Stores and Systems

Energy Stores	Moving objects have kinetic energy.	have	kinetic energy.
thermal	All objects have thermal energy.		
chemical	Anything that can release energy during a chemical reaction.		
elastic potential	Things that are stretched.		
gravitational potential	Anything that is raised.		
electrostatic	Charges that attract or repel.		
magnetic	Magnets that attract or repel.		
nuclear	The nucleus of an atom releases energy.		

Energy can be transferred in the following ways:
 mechanically – when work is done;
 electrically – when moving charge does work;
 heating – when energy is transferred from a hotter object to a colder object.

Conservation of Energy

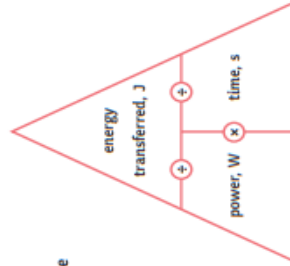
Energy can never be created or destroyed, just transferred from one form to another. Some energy is transferred usefully and some energy gets transferred into the environment. This is mostly wasted energy.

Power

Power is the rate of transfer of energy – the amount of work done in a given time.

power = energy transferred ÷ time

$$P (W) = E (J) \div t (s)$$

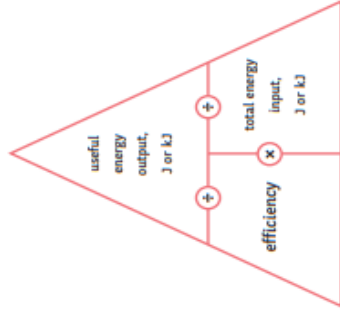


Efficiency

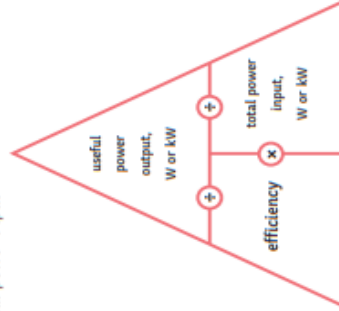
When energy is transferred, some energy is wasted. The less energy that is wasted during the transfer, the more efficient the transfer.

There are two equations to calculate efficiency:

$$\text{efficiency} = \frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$$



$$\text{efficiency} = \frac{\text{useful power output}}{\text{total power input}}$$



Some energy is always wasted. Nothing is 100% efficient.

Efficiency

Non-renewable – coal, oil, gas - they will all run out, they damage the environment, but provide most of the energy.

Renewable – they will never run out, can be unreliable and do not provide as much energy.

Energy Resource	Advantages	Disadvantages
solar – using sunlight	Renewable, no pollution, in sunny countries it is very reliable.	Lots of energy needed to build, only works during the day, cannot increase power if needed.
geothermal – using the energy of hot rocks	Renewable and reliable as the rocks are always hot. Power stations have a small impact on environment.	May release some greenhouse gases and only found in specific places.
wind – using turbines	Renewable, no pollution, no lasting damage to the environment, minimal running cost.	Not as reliable, do not work when there is no wind, cannot increase supply if needed.
hydroelectric – uses a dam	Renewable, no pollution, can increase supply if needed.	A big impact on the environment. Animals and plants may lose their habitats.
wave power – wave powered turbines	Renewable, no pollution.	Disturbs the seabed and habitats of animals. Unreliable.
tidal barrages – big dams across rivers	Renewable, very reliable, no pollution.	Changes the habitats of wildlife, fish can be killed in the turbines.
biofuels	Renewable, reliable, carbon neutral.	High costs, growing biofuels may cause a problem with regards to space, clearance of natural forests.
non-renewable – fossil fuels	Reliable, enough to meet current demand, can produce more energy when there is more demand.	Running out, release CO ₂ , leading to global warming, and also release SO ₂ which causes acid rain.

Trends in energy resources – most of our electricity is generated by burning fossil fuels and nuclear. The UK is trying to increase the amount of renewable energy resources. The governments are aware that non-renewable energy resources are running out; targets of renewable resources have been set. Electric and hybrid cars are also now on the market.

However, changing the fuels we use and building renewable power plants cost money. Many people are against the building of the plants near them and do not want to pay the extra in their energy bills. Hybrid and electric cars are also quite expensive.