LYMM
HIGH SCHOOL

#6

NAME:

Year 8 Knowledge Organisers

Summer Term

(Half term 5 and 6)

LYMM
HIGH SCHOOL

A Knowledge-Rich Curriculum at Lymm High School

Why are we using Knowledge Organisers?

Research around memory suggests that "knowledge is sticky": the more factual knowledge you know, the easier it is to learn more in future! But there is a catch: If knowledge is studied once, and not revisited or revised, it is not stored in long-term memory.

To strengthen your memory, and ensure information is stored permanently in your long-term memory, it must be revisited frequently. This means that after one lesson, or a single test, the knowledge is not fully embedded or learned unless it is studied again.

This is why your knowledge organiser is an important part of revising the essential information you learn in class!

Use of Knowledge Organisers for revision and in class

As part of their home learning, students should be revising what they have learned recently, but also content they were taught previously. Therefore, as part of our strategy to ensure that knowledge is embedded over time, we have developed knowledge organisers, which contain the 'bedrock knowledge' necessary in each subject area. A mastery of this knowledge will ensure that students can progress comfortably to new units of learning, and can be successful in their subjects.

This information will provide the basis of our assessments and exams, and so getting into good revision habits with these resources will ensure students feel as prepared as possible.

Teachers may set specific areas of each knowledge organiser as part of homework tasks on 'Satchel one' – formerly 'Show my Homework' – however students should be using their knowledge organiser for independent revision regularly.

For mastery of your subjects, remember:

"Don't practise until you get it right. Practise until you can't get it wrong!"

As well as supporting revision at home, this knowledge organiser should be kept in students' bags, and brought to school each day so that it can also be used and referred to in lessons.

CONTENTS
(Subjects are arranged alphabetically)

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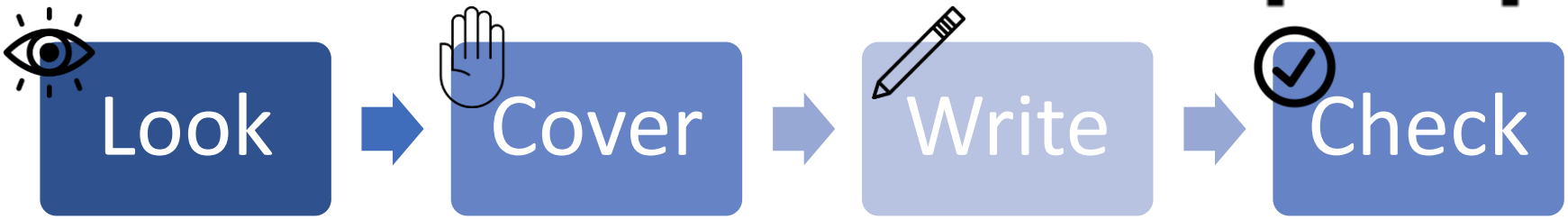
How to use your knowledge organiser:

Recommended strategies *(don't just read or highlight – **get active**!):*



- Create **mind maps**
- Create **flash cards**
- Write out **key points on post-it notes** and place somewhere visible so you see and review them regularly
- **Write your own quiz questions** based on your knowledge organiser – leave until the next morning, next day, or next week to see how well you have retained the information
- **Get someone else to test you**
- **Use key vocabulary** from your KO in sentences
- Use the formulae, vocabulary lists, facts, processes etc on your KO to **help you complete homework tasks**
- **Draw diagrams and flow charts** of key information
- **Summarise each section** into your own words – what are the MOST important facts or details in each box?
- **"Just a minute"** – time yourself for 60 seconds. **Can you talk about this topic or explain it to someone else without stopping for a whole minute?**
- **Draw images/symbol**s to represent the different concepts and vocabulary
- **Teach someone else** about this topic. Research suggests we retain even more information when we teach a topic than when we learn it or revise it.

Tier 2 Vocabulary – General academic vocabulary for success across all subjects

"The limits of my language are the limits of my world" - *Ludwig Wittgenstein*

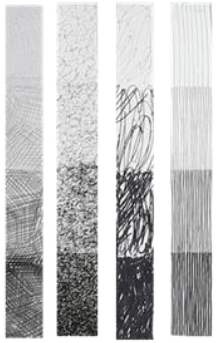
List 1		List 2		List 3	
accelerate (v)	speed up	**Hypothesis (n)**	prediction	**precise (adj)**	exact
arbitrary (adj)	random	**illustrate (v)**	show	**principle (n)**	Belief
assert (v)	state/claim	**implicit (adj)**	Suggested but not directly said	**proceed (v)**	go ahead
authorise (v)	give permission	**inhibit (v)**	prevent	**pursue (v)**	go after
conceive (v)	think	**innovation (n)**	new invention	**react (v)**	respond
context (n)	setting	**method (n)**	approach	**region (n)**	area
contribute (v)	add to	**modify (v)**	change	**require (v)**	need
denote (v)	stand for	**notion (n)**	idea	**restrict (v)**	limit
distinct (adj)	Different/ separate	**obtain (v)**	get	**shift (v)/(n)**	change
establish (v)	set up	**passive (adj)**	not active	**subsequent (adj)**	coming after
entity (n)	a thing/ a being	**perspective (n)**	viewpoint	**transmit (v)**	Communicate/ send
feasible (adj)	possible	**phenomenon (n)**	Remarkable thing	**verbal (adj)**	spoken
fluctuate (v)	vary/change	**precede (v)**	go before	**verify (v)**	check

YEAR 8 KNOWLEDGE ORGANISER - CULTURES

Recording from Observation

Primary source observational drawing: drawing something real in front of you.

Secondary source observational drawing: drawing something from a picture.



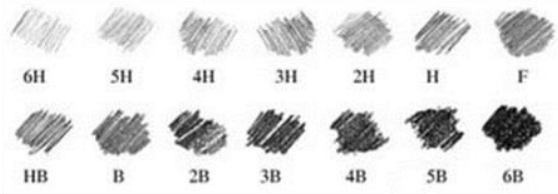
Grades of Pencils

Pencils come in different grades. The softer the pencil the darker the tone.

H = hard, B = black (soft)

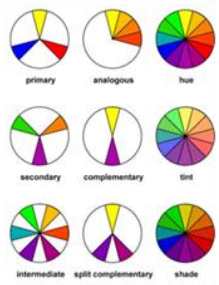
In Art the most useful pencils are B, 2B and 4B.

If your pencil has no grade it is likely to be an HB (hard black in the middle of the scale)



Culture	The ideas, customs, and social behaviour of a particular people or society.
Tone	A tone is produced either by the mixture of a colour with grey, or by both tinting and shading.
Shade	The mixture of a colour with black, which increases darkness.
Tint	The mixture of a colour with white, which increases lightness
Mark making	Different lines, patterns, and textures we create in a piece of art. It applies to any art material on any surface, not only paint on canvas or pencil on paper.
Composition	The position and layout of shapes on the paper
Pattern	A series of shapes and lines put together to make a decorative image. Patterns are often inspired by shapes in their environment.
Rangoli	Designed to be symmetrical. They combine straight lines, curved lines and images like flowers and other things from nature. The symmetry of the designs in a symbol of prosperity, growth and luck.

Colour Theory: When mixing and blending colours and creating colour palettes for your work. Do not forget the colour wheel.



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YEAR 8 KNOWLEDGE ORGANISER - CULTURES

Mixed Media	The use of two or more media together.
Annotation	A note by way of explanation or comment added to a text or diagram.
Artistic Independence	Be able to comment on a piece of artwork and understand how that piece of art work has been created. Identifying what materials have been used and the stages of creation.

Steve Wintercroft

https://wintercroft.com/

- . In 2013, he left the surf industry to launch Wintercroft, an environmentally conscious design company specialising in helping people make Masks from waste card.

Iain Macarthur

Iain Macarthur | Animals, Character, Commercial, Food and Drink, Portraiture and Celebrities | JSR Agency

- A illustrator based in South London, known for his mixture of intricate patterns and wildlife elements.
- First ever comic I looked at was the Batman series. Since then I've been obsessed with drawing odd fantasy drawings and anime characters.

What makes a successful artist research page?

You must include:

- Artists name (title)
- Imagery of the artists work
- Annotation and your own opinion (facts about the artist as well as analysing the artists work)
- Your own drawings or 'mini studies' of the artists work.
- Consider presentation of your page. Try to make your page reflect the artists style (through use of colour or even media you choose to use).

When designing a piece of artwork you must:

- Use primary research (drawings/photographs) as starting points.
- Use artists styles to inspire you.
- Be creative with composition.
- Try and test every section of your piece before you create it.

Remember:

Dotted/dash Line = Mountain

Dotted Line = Valley

Diwali (festival of Light)

- Learn more about this by scanning the QR code

Art

Design and Technology

Year 8 Material Focus: Polymers

Types of Polymers.....

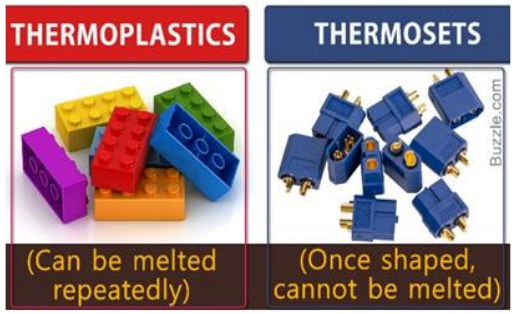
The properties and uses of some common thermosoftening plastics are shown in the table below.

Name	Properties	Principal uses
Polyamide (Nylon)	Creamy colour, tough, fairly hard, resists wear, self-lubricating, good resistance to chemicals and machines	Bearings, gear wheels, casings for power tools, hinges for small cupboards, curtain rail fittings and clothing
Polymethyl methacrylate (Acrylic)	Stiff, hard but scratches easily, durable, brittle in small sections, good electrical insulator, machines and polishes well	Signs, covers of storage boxes, aircraft canopies and windows, covers for car lights, wash basins and baths
Polypropylene	Light, hard but scratches easily, tough, good resistance to chemicals, resists work fatigue	Medical equipment, laboratory equipment, containers with built-in hinges, 'plastic' seats, string, rope, kitchen equipment
Polystyrene	Light, hard, stiff, transparent, brittle, with good water resistance	Toys, especially model kits, packaging, 'plastic' boxes and containers
Low density polythene (LDPE)	Tough, good resistance to chemicals, flexible, fairly soft, good electrical insulator	Packaging, especially bottles, toys, packaging film and bags
High density polythene (HDPE)	Hard, stiff, able to be sterilised	Plastic bottles, tubing, household equipment

The properties and uses of some common thermosetting plastics are shown in the table below.

Name	Properties	Principal uses
Epoxy resin	Good electrical insulator, hard, brittle unless reinforced, resists chemicals well	Casting and encapsulation, adhesives, bonding of other materials
Melamine formaldehyde	Stiff, hard, strong, resists some chemicals and stains	Laminates for work surfaces, electrical insulation, tableware
Polyester resin	Laminated, good electrical insulator, resists chemicals well	Casting and encapsulation, bonding of other materials
Urea formaldehyde	Stiff, hard, strong, brittle, good electrical insulator	Electrical fittings, handles and control knobs, adhesives

Scan the QR code to learn about different types of polymers.....



Scan the QR code to learn how plastic bottles are made.....

Scan the QR code to learn about Bio Plastics.....

2.3 Sustainability of plastics

End of life considerations are important for all products, but as most plastics take so long to biodegrade extra care should be taken to decide how it should be managed.

Many responsible companies producing plastic products conduct a **Life Cycle Assessment** (LCA) which informs them of the environmental impact of manufacturing their products. The information gathered helps them decide how to deal with their product when it has reached the end of its working life.

Almost all plastics are recyclable or biodegradable in some form – however, the difference in the quality of the recycled products varies dramatically.

Thermosetting plastics are generally considered non-recycled although they are frequently ground down and used as a filler material or they are used for **energy recovery** through incineration.

Thermoplastics are much more easily recycled for use as a recycled plastic product. If the plastics are carefully separated into the different types, the resulting material remains high quality and commands a higher price than mixed plastics. It is important to recycle as much as possible, and poorly discarded plastics are becoming a major environmental concern, especially in our countryside, rivers and ocean.

Plastic Resin Identification Codes

1 PETE	2 HDPE	3 PVC	4 LDPE	5 PP	6 PS	7 OTHER
Polyethylene Terephthalate	High-Density Polyethylene	Polyvinyl Chloride	Low-Density Polyethylene	Polypropylene	Polystyrene	Other
Common products: soda & water bottles; cups, jars, trays, clamshells	Common products: milk jugs, detergent & shampoo bottles, flower pots, grocery bags	Common products: cleaning supply jugs, pool liners, twine, sheeting, automotive product bottles, sheeting	Common products: bread bags, paper towels & tissue overwrap, squeeze bottles, trash bags, six-pack rings	Common products: yogurt tubs, cups, juice bottles, straws, hangers, sand & shipping bags	Common products: to-go containers & flatware, hot cups, razors, CD cases, shipping cushion, cartons, trays	Common types & products: polycarbonate, nylon, ABS, acrylic, PLA; bottles, safety glasses, CDs, headlight lenses
Recycled products: clothing, carpet, clamshells, soda & water bottles	Recycled products: detergent bottles, flower pots, crates, pipe, decking	Recycled products: pipe, wall siding, binders, carpet backing, flooring	Recycled products: trash bags, plastic lumber, furniture, shipping envelopes, compost bins	Recycled products: paint cans, speed bumps, auto parts, food containers, hangers, plant pots, razor handles	Recycled products: picture frames, crown molding, rulers, flower pots, hangers, toys, tape dispensers	Recycled products: electronic housings, auto parts,

Year 8 Material Focus: Metals

Types of Metals.....

Scan the QR code to learn where metal comes from.....

FERROUS METALS:

Metals that contain iron and are **magnetic**. They are prone to **rust**.

NAME	PROPERTIES	USES
Mild Steel	Tough. High tensile strength. Can be case hardened. Rusts very easily.	Most common metal used in school workshops. Used in general metal products and engineering.
Carbon Steel	Tough. Can be hardened and tempered.	Cutting tools such as drills.
Stainless steel	Tough, resistant to rust and stains.	Cutlery, medical instruments.
Cast iron	Strong but brittle. Compressive strength very high.	Castings, manhole covers, engines.
Wrought iron	Fibrous, tough, ductile, resistant to rusting.	Ornamental gates and railings. Not in much use today.

NON-FERROUS METALS:

Metals that do not contain iron and are **not magnetic**. They do **not rust**.

NAME	COLOUR	PROPERTIES	USES
Aluminium	Light grey	Ductile, soft, malleable, machines well. Very light.	Window frames, aircraft, kitchen ware.
Copper	Reddish brown	Ductile, can be beaten into shape. Conducts electricity and heat.	Electrical wiring, tubing, kettles, bowls, pipes.
Brass	Yellow	Hard. Casts and machines well. Surface tarnishes. Conducts electricity.	Parts for electrical fittings, ornaments.
Silver	Whitish grey	Ductile, Malleable, solders, resists corrosion.	Jewellery, solder, ornaments.
Lead	Bluish grey	Soft, heavy, ductile, loses its shape under pressure.	Solders, pipes, batteries, roofing.

ALLOYS:

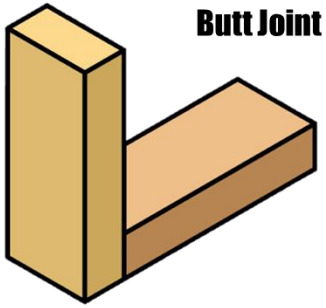
Alloys are mixtures of metal with an element to improve its properties or **aesthetic**. For example brass is a mixture of copper and zinc. Alloys can also be classified as ferrous or non-ferrous.

NAME	COLOUR	PROPERTIES & USES
Brass	Gold	An alloy of copper and zinc, can be cast and machined, used for musical instruments and ornamental hardware
Pewter	Dark grey	Made up of tin (approximately 90 per cent), antimony (7 per cent) and other metals such as copper or bismuth, it has a low melting point (approximately 200°C), often used to make jewellery, candlesticks, outside light fixtures or tankards
Solder	Grey	An alloy of 60 per cent tin and 40 per cent lead, it has a low melting point (approximately 200°C), and is electrically conductive making it ideal for circuit manufacture

Wood Joints

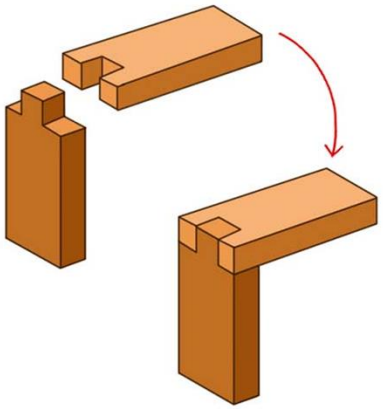
Frame/Box Joints.....

Butt Joint



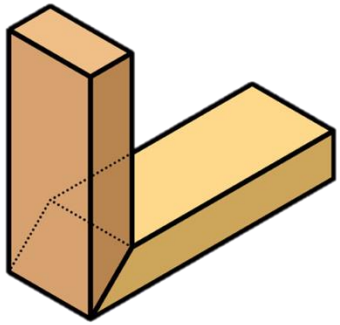
A **butt joint** is a technique in which two pieces of material are joined by simply placing their ends together without any special shaping. A butt joint can be strengthened with dowels, nails and screws.

Comb/Finger Joint



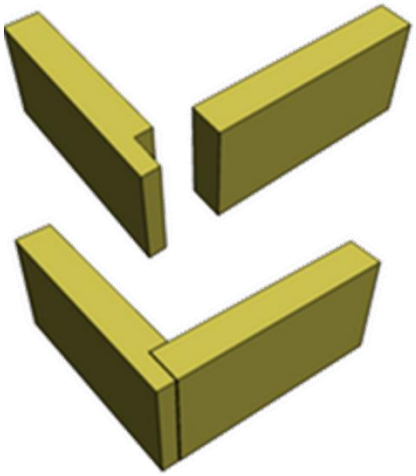
A **finger joint**, also known as a comb joint, is a woodworking joint made by cutting a set of complementary, interlocking profiles in two pieces of wood, which are then glued. The cross-section of the joint resembles the interlocking of fingers between two hands, hence the name "finger joint"

Mitre Joint



A **mitre joint** is a joint made by cutting each of two parts to be joined, across the main surface, usually at a 45° angle, to form a corner, usually to form a 90° angle, though it can comprise any angle greater than 0 degrees.

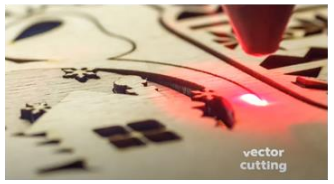
Rebate Joint (Half Lap)



The rebate joint is a very similar to the butt joint but the big difference between the two is that one of the ends of the timber has a groove cut out of it to create much better holding strength.

CAD/CAM (Computer Aided Design/Computer Aided Manufacture)

Laser cutter



Scan the QR code to learn how laser cutters work.....

A drawing is sent from a CAD program such as 2D Design, to the laser cutter.
A laser cutter can cut through acrylic, laser plywood and some metals.

Tools and Equipment.....

Wasting Tools....
Cutting....

Coping Saw

Tenon Saw

Junior hack Saw

Chisel

Shaping....

File

Belt Sander

Disc Sander

Holding....

Metal Vice

Bench Vice

F Clamp/
Screw Clamp

Bench Hook

Finishing....

Wood

Glass Paper (Wood)

Wood Oil

Plastic & Metal

Emery Cloth

Wet & Dry Paper

Joining....

PVA glue
(wood glue)

Manufacturing Processes

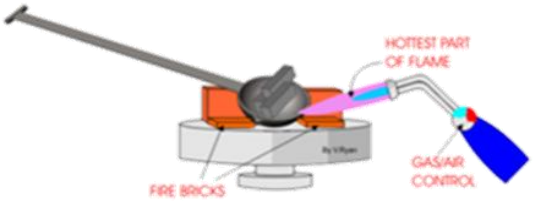
Stages of Pewter Casting.....

Scan the QR code to learn how to cast metal

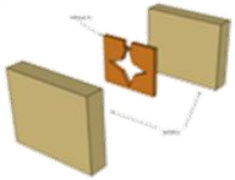
Cut the pewter ingot into small pieces

Use a metal vice & hack saw.

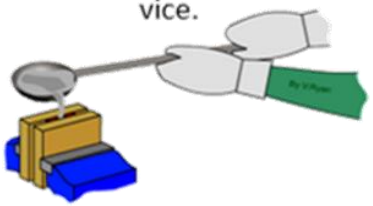
Design and make the mould by hand or by using CAD/CAM.



Place pewter ingots in the ladle and heat the pewter with a gas torch or heat gun. Melt the pewter.

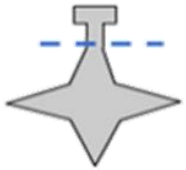


Sandwich the mould between 2 pieces of MDF. Secure in a metal vice.

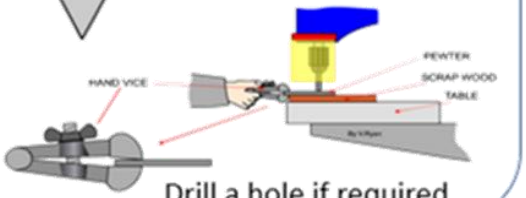


Pour molten pewter into the mould

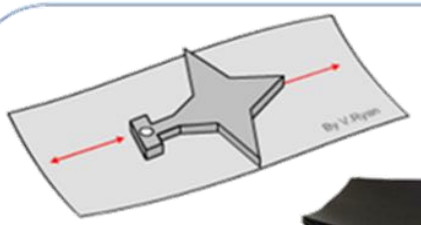
Allow pewter to cool, then remove from the mould. Cut off the excess.



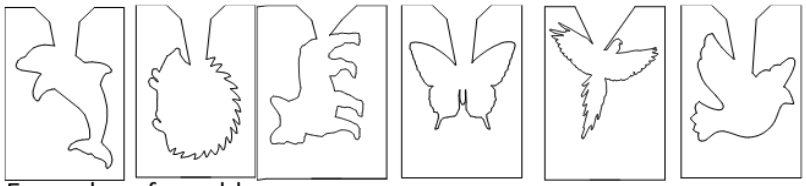
Junior hack saw.



Drill a hole if required.



Smooth the surfaces and the edges with emery cloth & wet and dry paper.

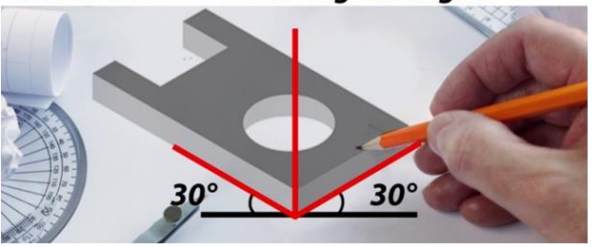


Examples of moulds

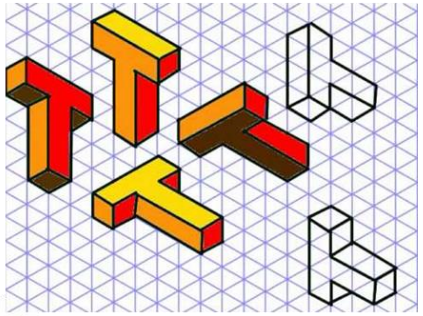
Design and Technology

Isometric Drawing.....

axes are drawn so that the two horizontal axes are drawn at 30 degree angles



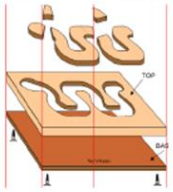
Scan the QR code to learn how to draw simple shapes in isometric.....



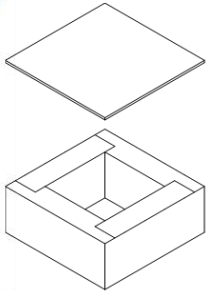
Exploded Isometric.....

Exploded views

Exploded drawings are extremely useful when explaining a design / idea. The drawing opposite is a design for an educational toy (for a young child) has been drawn with all the parts disassembled.
It is important when drawing an exploded view that all the parts line up with each other when disassembled. The vertical guidelines clearly show how the various parts are in line with each other. If an exploded drawing is constructed properly anyone looking at the drawing should be able to see how the various parts go together to form the finished design/object.

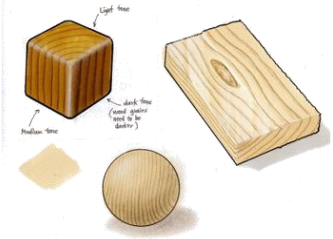


Scan the QR code to learn how to draw simple shapes in exploded isometric.....

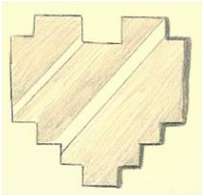


This is the box that you will manufacture.

Shading an object to look like wood....



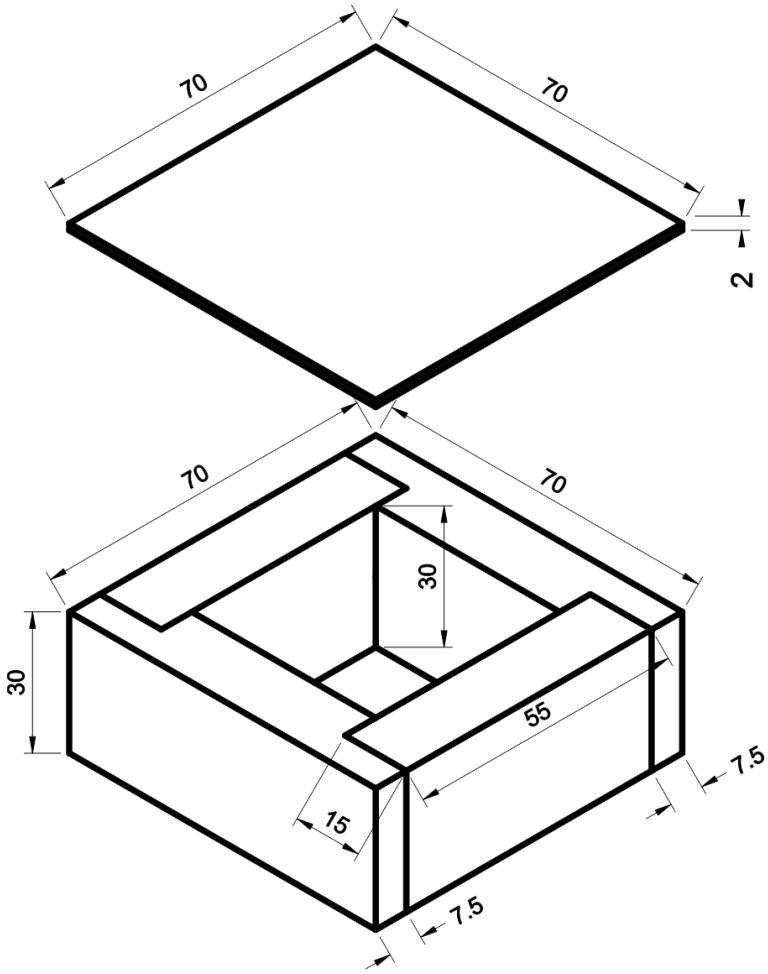
Shading an object to look like metal....



Example of a shaded pewter casting design

Exploded Isometric Drawing of Box

Draw the box in an isometric projection. Use the dimensions given on the drawing. Use isometric paper, a ruler and a pencil to complete the drawing accurately.



All dimensions in mm

Manufacturing Processes

CAD/CAM

(Computer Aided Design/Computer Aided Manufacture)

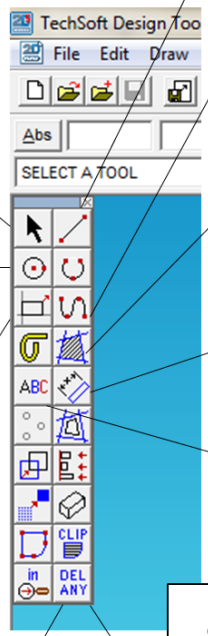
CAD 2D Design.....

The drawing tools are all located on the right hand side of your screen. At the top of your screen here, you will also find the default 'File,' 'Open' and 'Save' buttons.

Remember that 2D Design defaults to mm. If you want to use cm, type cm after a specific value.

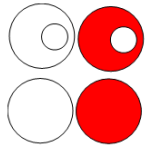
Straight line tool – click to place the start of the line, click to place end of line. Double click to set a specific length.

Select – to select multiple items hold down SHIFT on the keyboard and click the lines you want



Curved line tool – click to place the start of the line, click to place the first bend, second bend, etc. and right click to finish the line

Fill– select the area you want to fill. 'Are there any islands?' Click 'Yes' if you don't want to fill these in, or 'No' if you do.



Island

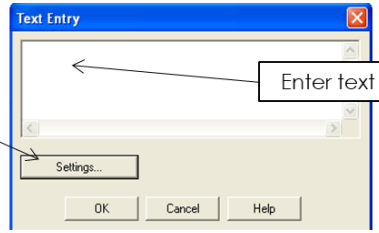
No Island

Draw a Circle – click to place the center, and then click to place a point on the circumference. Double click to set the radius.

Dimensions – Click at the beginning of where you want to measure, then again at the end. This will give you the measurement in millimeters.

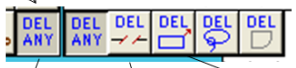
Draw a Rectangle – click to place a corner, and then click to place the opposite corner.

Text – click to place text. The box below appears



Click to change font, size etc.

Deleting – click on a part you want to get rid of and use the DELETE button on the keyboard. To delete part of a shape, right click and hold on the DEL ANY icon, more delete options will appear.



Delete anything

Delete part of a line

Draw a box, and delete the contents

CAD 2D Design.....

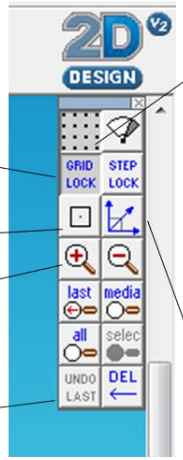
Your grid tools are all located on the left hand side of your screen.

Lock to grid – Keep this on to keep your lines straight and measurements accurate

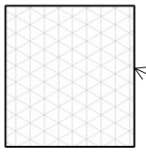
Attach – Use this tool to attach one point directly to another

Zoom in/Out

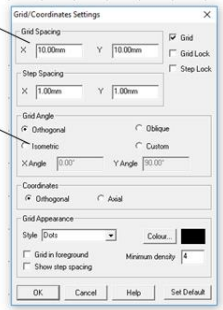
Undo – Undo or Delete your last move.
Remember: You can only undo one last step!



Grid – The grid dots can be present or you can turn them off. Double click and you can change the spacing of the dots. The default is 10mm. You can also change the grid from orthogonal to isometric.



Isometric



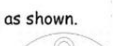
Radial Lock – Allows you to draw straight lines when not attached to the grid.

Using the ARC TOOL

Click on the Arc button. When drawing an arc tool it needs three points, a start, middle and an end.

Click once onto the drawing screen move the pointer up there will be a straight line. Click again move the pointer to the end of the arc click once and the arc will be created.

Create the drawing as shown.

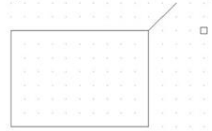


Remember to use the delete part, arc, circle and group functions.

Using the ATTACH TOOL

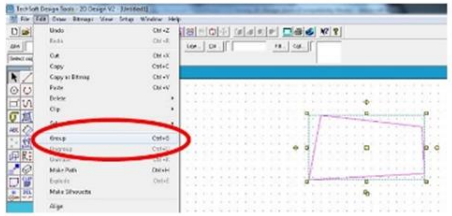
The Attach tool allows you to connect a drawing to a point on the screen.

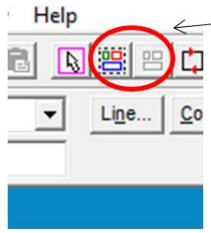
1. Draw a rectangle
2. Press the attach button
3. Press the line button
4. Move near the rectangle and click, the tool will attach your line to the rectangle.



Using the GROUP TOOL

To group the lines together, select Edit from the main tool bar and click on Group.
This combines all four lines into one object.





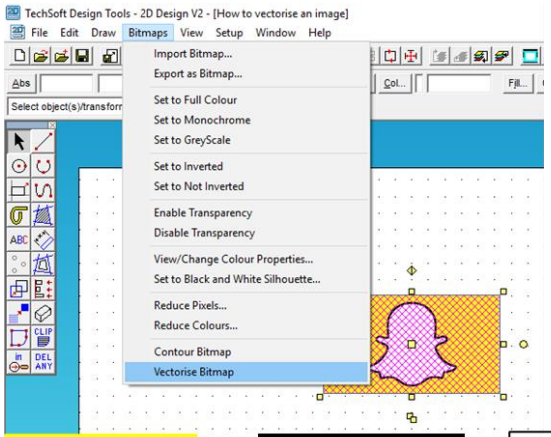
Group – Grouping an object makes it easier to move around and to resize. Use the quick group tool to group and ungroup a collection of objects.

Manufacturing Processes

CAD/CAM

(Computer Aided Design/Computer Aided Manufacture)

How to vectorise an image.....

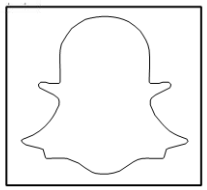


Find an image that you would like to use
To **vectorise**, follow the instructions:

- Go to Bitmaps
- Vectorise Bitmap
- A hand will appear, use this to select the image
- Set to Monochrome
- Slide the luminance bar to get the best quality image
- Then select OK
- Then select OK again
- Select the object
- Select Fill at the top (next to col)
- Select 'No Fill'
- Select OK

1. Bitmap Image

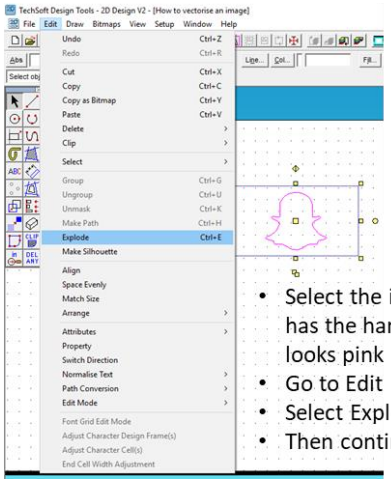
2. Vectorised Image



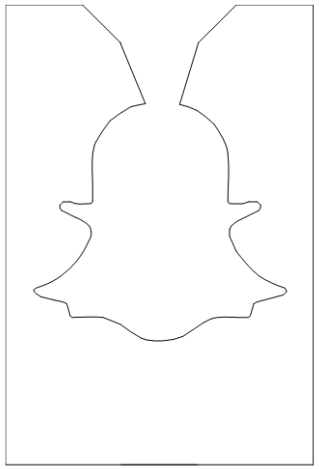
3. Outline Image with no 'fill'

4. Parts of image deleted to create a silhouette

How to delete parts of an image.....



- Select the image so it has the handles and looks pink
- Go to Edit
- Select Explode
- Then continue



Re-size your image to fit into the template that your teacher has given you. You have successfully drawn the design for your mould.

Design and Technology

To Kill a Mockingbird – Harper Lee

Historical and Social Context

Harper Lee was born in Monroeville, Alabama, in 1926. Like Jem and Scout, her father was a lawyer. She studied at the University of Alabama and worked in New York. There she began work on *To Kill a Mockingbird,* in the mid 1950s. It was completed in 1957 and published in 1960 - just before the black civil rights movement in America really took.

The Wall Street Crash and the Great Depression in America: When the Wall Street stock market crashed in October 1929, the world economy was plunged into the Great Depression. By the winter of 1932, America was in the depths of the greatest *economic depression* in its history. The number of unemployed people reached upwards of 13 million. Many people lived in deprived conditions close to famine and many had to move to shacks.

American Slavery: Black people were originally brought from Africa to America during the 17th, 18th and 19th centuries. They were forcibly transported across the Atlantic in slave ships (in which many died) and sold as slaves to work on sugar and cotton plantations in the Caribbean and the southern states of north America. They had no rights and were seen by their white owners as little more than animals or machines. Even after the abolition of slavery in 1865, the blacks were still almost powerless. The whites had too much to lose to allow black people any rights. Nothing was equal: black people had the worst of everything, while whites had the best.

Segregation in 1930s America: In the 1930s, although 50% of the population of Southern towns were black, they had no vote and could not marry whites. The policy of segregation meant that black people had to have their own schools, their own churches, their own football teams, even their own cemeteries.

The Scottsboro Case: In 1931, nine young black men were accused of raping two white women on a train. After a series of bitter trials, four of the men were sentenced to long prison sentences - even though prominent lawyers argued that the accusations were false. It was later discovered that the women were lying.

Key themes

SOCIAL INEQUALITY: discrimination and racial prejudice run rife in Maycomb county, whilst only a couple of characters (such as Atticus) are committed to social equality. The social hierarchy perplexes the children who cannot fathom why everyone seems so keen to segment and despise each other. These social divisions are irrational and they can be particularly harmful and destructive to the community.

MORAL EDUCATION: as a bildunsgroman novel, the story tracks the moral development of Scout and Jem. Atticus is committed to ensuring that his children have a strong social conscience and acts as their moral compass throughout the novel. He teaches them to be kind to everyone and not to join in with the neighbourhood rumours and gossip mongering about Boo Radley. He also defends Tom Robinson, a black man, which many people in Maycomb found to be controversial, but Atticus just wants to do what is morally right and lead a good example for his children.

NATURE VS NATURE: Throughout the novel, questions arise around nature vs nurture in different characters upbringings. Nature is what we think is genetically inherited and nurture is dependant on external factors (e.g. the life experiences someone has had). Mayella Ewell has a troubled home life, and we must assess if this is because of her genetic nature, or if it is because of the circumstances she has been raised in. If Mayella was raised by a different family, would she be a different person?

GOOD AND EVIL: To begin with, Jem and Scout appear to assume that everyone around them is inherently good – they haven't really been exposed to evil – this is reflective of their young age and their sense of innocence in their attitudes to life. However, through events such as the rape case, the children develop a more adult perspective, understanding that evil has far reaching effects and can destroy good, innocent lives to great extents.

PREJUDICE: Prejudice permeates Maycomb society. Almost every character is either prejudiced against others, or the victim of prejudice. There is racial prejudice, class prejudice and prejudice against individuals who don't fit in.

Gold

Justice 	Fair or just behaviour or treatment for all. "A concern for justice, peace, and genuine respect for people" Synonyms: fairness, justness, equity, impartiality, objectivity, neutrality, integrity, righteousness, ethics, morals, morality, virtue, principled.
Conflict 	A serious disagreement or argument. Synonyms: contradictory, incompatible, inconsistent, irreconcilable, incongruous, contrary, opposing, discordant, differing, different, divergent, discrepant, varying, disagreeing
Prejudice 	Preconceived opinion that is not based on reason or actual experience. Examples of prejudice: Racism, sexism, ageism, classism, homophobia, religious prejudice, xenophobia.
Power 	The capacity or ability to direct or influence the behaviour of others or the course of events.
Morality 	principles concerning the distinction between right and wrong or good and bad behaviour. Synonyms: ethics, principles, scruples

English

Plot Part 1
PART ONE **Chapter 1:** Scout Finch recounts the events that led to her brother Jem's broken arm many years earlier. Alongside Atticus, Scout also lives with her older brother Jem and their cook Calpurnia, Maycomb – a tired town in the grips of The Great Depression. A boy called Dill moved into the neighbourhood for the summer, who they befriended. Together, they all try to lure the mysterious Boo Radley out of his house. There are lots of rumours about Boo and his family.
Chapters 2-3: Scout goes to school for the first time, but does not get on well with her teacher, Miss Caroline. When Miss Caroline lends Walter money, Scout protests that she won't get it back (The Cunninghams are a poor family) Scout's hand is slapped with a ruler. To smooth things, Jem invites Walter over for dinner, where Calpurnia scolds Scout for being rude to Walter. Back at school, Miss Caroline cries when a 'cootie' crawls out of Burris Ewell's (a poor boy) hair.
Chapters 4-6: Scout & Jem find 'gifts' in knotholes in a Radley tree (chewing gum & pennies). Dill returns in summer Scout spends more time with a neighbour – Miss Maudie. She tells Scout that most of the rumours about Boo are untrue. Jem and Dill try to lure Boo out of the house. They see a shadow of a man and flee, with the sound of a shotgun behind them. Jem becomes stuck and has to shuffle out of his pants.
Chapters 7-8: Scout also dislikes 2nd grade at school. Jem and Scout find other gifts at the Radley house. Nathan Radley then fills the knothole with cement, he says because 'the tree is dying.' There is a snow day of school, and the children build a snowman of Mr Avery. Atticus is not happy and tells them to disguise it. Miss Maudie's house catches fire, and the neighbours wait outside. A blanket is draped over Scout – it is assumed it must have been Boo.
Chapters 9-11: Atticus is asked to defend Tom Robinson, a black man, in a rape case. It is a case that he can never hope to win, but he does so for his own sense of morality and justice. Scout gets into a fight at school, and then with her cousin Francis, over them calling Atticus a 'nigger lover'. When a mad dog comes into town one day, Atticus shows that he is a great shot with a rifle – shooting it dead from some distance. In C.11, an old lady called Mrs Dubose is offensive to the Finches about Atticus defending Tom, causing Jem to destroy her camellia bushes. She is a mad old lady, and so Atticus is mad. Jem is made to read to her once a day for a month.

Key Characters	
Scout	The narrator and the protagonist of the narrative. This is the tale of her bildungsroman – or coming of age story. Although she is a girl she has a competitive and combative streak that she has to master. Fundamentally she believes in the goodness of people
Jem	Jem is Scouts older brother, Four years older than Scout, he gradually separates himself from her games, but he remains her close companion and protector throughout the novel. Jem moves into adolescence during the story, and his ideals are shaken badly by the evil and injustice that he perceives during the trial of Tom Robinson.
Atticus	Scout and Jem's father, a lawyer in Maycomb descended from an old local family. A widower with a dry sense of humor, Atticus has instilled in his children his strong sense of morality and justice. He is one of the few residents of Maycomb committed to racial equality. When he agrees to defend Tom Robinson, a black man charged with raping a white woman, he exposes himself and his family to the anger of the white community. With his strongly held convictions, wisdom, and empathy, Atticus functions as the novel's moral backbone.
Boo Radley	A recluse who never sets foot outside his house, Boo dominates the imaginations of Jem, Scout, and Dill. He is a powerful symbol of goodness swathed in an initial shroud of creepiness, leaving little presents for Scout and Jem and emerging at an opportune moment to save the children. An intelligent child emotionally damaged by his cruel father, Boo provides an example of the threat that evil poses to innocence and goodness. He is one of the novel's "mockingbirds," a good person injured by the evil of mankind.
Mayella Ewell	Bob Ewell's abused, lonely, unhappy daughter. Though one can pity Mayella because of her overbearing father, one cannot pardon her for her shameful indictment of Tom Robinson.
Tom Robinson 	The black field hand accused of rape. Tom is one of the novel's "mockingbirds," an important symbol of innocence destroyed by evil.
Dill	Jem and Scout's summer neighbor and friend. Dill is a diminutive, confident boy with an active imagination. He becomes fascinated with Boo Radley and represents the perspective of childhood innocence throughout the novel.
Calpurnia	The Finches' black cook. Calpurnia is a stern disciplinarian and the children's bridge between the white world and her own black community.

English

Plot Part 2

Part Two Chapters 12-13: To Scout's disappointment, Dill does not visit Maycomb in the summer, and Jem wants to be more apart from her. Calpurnia takes the children to her 'coloured' church, which is exceptionally poor, yet is collecting donations for the Robinson family.

Chapters 14-15: Alexandra tells Scout she cannot go back to the coloured church, and tries (unsuccessfully) to convince Atticus to get rid of Calpurnia. Jem and Scout find Dill, who has run away from home. Atticus places himself in front of the Maycomb jail to prevent a lynch mob from getting to Tom. Scout and Jem jump out and Scout speaks to Mr Cunningham, who is in the mob, about his son. Ashamed, Mr Cunningham gets the mob to leave.

Chapters 16-17: The trial begins. People attend from all over, including Mr Dolphus Raymond, a wealthy man who has a relationship with a black woman. Jem, Scout, and Dill sneak into the courthouse and sit on the balcony. Heck Tate, the sheriff, found Mayella Ewell badly beaten, and Bob Ewell told him she was raped by Tom Robinson. No doctor was called, and the bruises were on the right hand side of her face. Atticus questions why no doctor was called (too expensive and 'no need') and confirms Bob is left-handed (a left-hander would normally bruise the right of someone's face).

Chapters 18-19: Mayella is called to testify. She states that she called Tom into the house to break up a dresser, but that once in he took advantage of her. He questions how Tom could have inflicted the bruises, when he has a useless left hand. She yells at the courtroom that they would be cowards not to convict Tom and refuses to be questioned anymore. Tom is then questioned. He declares that Mayella embraced him, at which point her father appeared at the window. Tom's boss (Link Deas, a white man) confirms Tom is a good man.

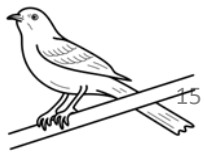
Chapters 20-22: They encounter Mr Dolphus Raymond. He explains that he pretends to be drunk to give an explanation for his lifestyle – he actually just prefers black people to whites. When they return to the courtroom, Atticus is making his closing comments –citing the prosecution's shaky evidence. The children return after supper and hear the jury return a guilty verdict. Jem is horrified by the guilty verdict, and no longer has faith in the people of Maycomb. The next day, the black population delivers an avalanche of food to the Finch household. The children then hear that Bob Ewell has spat at their father that morning, vowing to seek revenge.

Chapters 23-25: Bob Ewell's threats are worrisome to everyone except for Atticus himself. Atticus feels that Tom has a chance of acquittal, but if not he will be executed by electric chair. Atticus states that in an Alabama court, they were lucky to get the court to actually deliberate. One day in August, at Aunt Alexandra's missionary circle, Atticus reveals that Tom has attempted to escape and was shot dead. The missionary circle reconvenes as if nothing is wrong. Mr Underwood writes a long editorial condemning his death, but others think that it is typical for a black man to do something irrational like try to escape.

Chapters 26-27: School starts again. Teachings at school on the theme of equality frustrate Scout, as the same teachers have been known to be prejudiced against blacks in the town. After Bob Ewell loses a job, everyone connected with the case (Judge Taylor, Helen Robinson, Link Deas) begins to be harassed in some way – e.g. by being followed or seeing shadows lurking around their homes.

Chapters 28-31: On the way home from the Halloween event, the children are pursued by a mysterious assailant. Jem tries to protect Scout but is dragged away. When the noise of the struggle has ceased, she sees a prone man lying in the street and a man carrying Jem back home. The Dr is called - Jem has a broken arm. Heck Tate appears and tells Atticus that the prone man is dead – it is Bob Ewell. As Scout explains what happened, she turns to the rescuer and realises it is Boo Radley. They listen to Heck and Atticus discussing what to do – although Heck knows that Boo killed Ewell, they agree that the story is Ewell fell on his own knife.

Methods	
Simile	A descriptive technique that compares one thing with another, usually using 'as' or 'like'.
Symbolism	Using an object to represent an idea or concept
Personification	Describing an inanimate object as having human feelings.
Pathetic fallacy	A device in which emotions are given to a setting, an object or the weather, usually to convey a particular mood.
Zoomorphism	A technique in which animal attributes are imposed upon non-animal objects, humans, and events.
Foreshadowing	A structural feature where the writer hints/indicates of a future event.
Biblical illusions	Words/situations that make reference to the bible.
Irony	Expressing meaning that usually signifies the opposite.
Hyperbole	Exaggerated statements, usually not meant to be taken literally.



1. Food Hygiene

What is food hygiene?

Food hygiene is about preventing food poisoning. Food poisoning bacteria grow very quickly in food if it is not handled properly, cooked properly or stored properly.

There are laws which control how food manufacturers can prepare and sell food. Statistics show that you are more likely to get food poisoning from a home -made meal than you are from a bought one.

Food poisoning

The illness resulting from eating food or drinking food/drinks containing poisonous substances including bacteria, viruses, pesticides, or toxins.

Usually need millions of bacteria to cause a food poisoning illness.

The multiplication of bacteria within the food plays an important part in the disease

How bacteria grow

In ideal conditions where there is Moisture, Food and Warmth (37degrees centigrade is ideal), bacteria can double every 10 to 20 minutes. They do this by dividing in to two. This is called *Binary Fission*

In order to grow and multiply germs need:

- Time
- Moisture
- food
- Warmth

Food poisoning is more likely to affect people with lowered resistance to disease than healthy people who might show mild symptoms or none at all.

Food poisoning is more likely to affect people with lowered resistance to disease than healthy people who might show mild symptoms or none at all.

Vulnerable people

The following are particularly vulnerable to food poisoning: -

- Elderly or sick people
- Babies
- Young children
- Pregnant women

Pathogenic Bacteria	Source	Symptoms	Average Onset Time
Salmonella 	Raw meat Poultry and eggs Pests and pets Human and animal intestines Dirt and refuse	Vomiting Nausea Diarrhoea Abdominal pain	12 - 36 hours after eating
Staphylococcus aureus 	Human nose, throat, ears, skin Septic wounds Animals and raw milk	Vomiting Abdominal pain Low temperature	1 – 7 hours after eating
Clostridium perfingens 	Raw meat and poultry Soil, dirt and refuse Raw vegetables Pests and pets Human and animal intestines	Diarrhoea Abdominal pain	12 - 18 hours after eating
Clostridium botulinum 	Soil Marine sediment Raw fish and meat Animal intestines	Paralysis Breathing and swallowing difficulty Diarrhoea followed by constipation	12 – 36 hours after eating
Bacillus cereus 	Dust and soil Cereal, rice and pasta	Nausea Vomiting Abdominal pain Diarrhoea	1 - 5 hours or 8 –16 hours depending on the form of the food poisoning

High risk foods

These foods tend to be high in protein and are moisture. They can include food like: raw and cooked **meat**, including **poultry** such as chicken and turkey, and foods containing these, such as **casseroles**, curries and lasagne. **dairy products**, such as custard and dairy-based desserts like custard tarts and cheesecake. eggs and egg products, such as quiche. smallgoods such as hams and salamis.

The 4C's for Good Food Safety

- Cooking
- Cleaning
- Chilling
- Cross contamination

Core temperatures:

Food Hygiene and Safety:

Before Cooking:

1. Put your apron on
2. Roll your sleeves up
3. If you have long hair tie it back with a bobble
4. Wash your hands with warm and soapy water
5. Dry your hands – moisture harbours bacteria

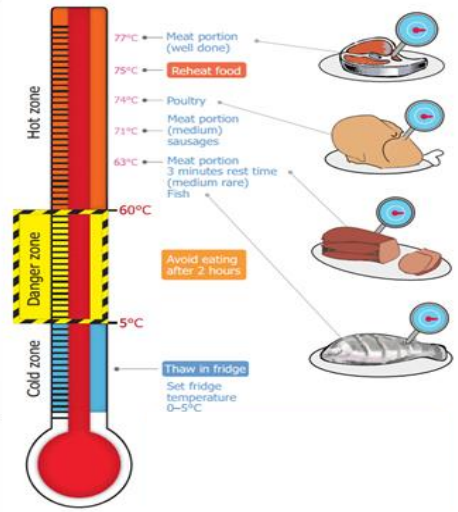
When Using The Cooker:

1. Turn pan handles in away from edge of cooker
2. Always turn hob off when not in use
3. Never leave food cooking on the hob unattended
4. Be careful not to let food boil dry
5. Never touch an electric hob when turned off, it may still be hot
6. Don't leave metal spoons in pans when cooking as they can become very hot.
7. Always use oven gloves when removing food from the oven

The Tidy Tick List:

You should work as a team to make the food room clean and sparkling!

✓Clean and dry dishes
✓No streaks and residue left on the glass bowls
✓Clean dry work surfaces
✓Clean sparkling hobs
✓Clean cupboard doors and drawers
✓Clean and dry sinks with no suds or residue food



Food Technology

2. Commodities - Meat, Poultry,

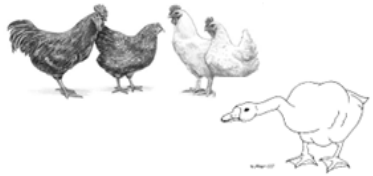
MEAT Meat is an important food commodity which provides nutrients essential for health. It is the muscle tissues of dead animals and birds are classified as meat and poultry, whereas the edible internal organs are called Offal. Game refers to wild animals

Beef		British reared breeds such as Aberdeen Angus, Longhorn and Hereford have traditionally been considered to provide the best beef in the world.
Organic Beef		Organic beef and beef from rare breeds, is the most expensive to buy as the highest farming standards will have been needed at all stages of the animal's life.
Wagu Beef		Wagu meat comes from a group of Japanese breeds whose meat is renowned for its high level of fat marbling.
Veal		Veal meat comes from the male calves of cows bred for dairy, slaughtered when they are a few months old.
Meat from sheep		Lamb is sheep under one-year-old. Hogget is a lamb older than one year. Mutton is the meat of older sheep.
Meat from Pigs	**Pork**	This is all the meat that comes from pigs. To add extra choice pork can be cured and smoked.
	Ham	This is a specific cut of the thigh part of the pig which has been cured and or salted.
	Bacon	This is produced by curing pork with salt or in brine solution. After maturing it is sold as unsmoked bacon. It can be smoked to add extra flavour to the bacon. The meat is usually darker in colour and has a distinctive flavour.
	Gammon	This is cured whole leg of pork. It is cut into slices and eaten hot as gammon steaks. It could be eaten cold as ham. Some hams may be cured and smoked such as 'honey roast'. This adds a distinctive flavour and extends the shelf-life of the product.

Other sources of meat can include:

Horsemeat	
Goat	
Rabbit	
Venison	

Poultry



Offal: Meat is the edible internal organs are called Offal.

Know your fish cuts

Suprême Délice

Paupiette Gougons

3. Commodities Fish

Classification	Type	Examples
White	White fish have less than 5 per cent fat (oil) in their flesh, which is why their flesh appears white. Instead, they have oil in their liver. Examples of white fish are: cod, haddock, halibut, whiting, coley, plaice and Dover sole. White fish are round (e.g. cod, haddock and whiting) or flat (e.g. plaice and sole).	
Oily	have between 10 and 20 per cent fat (oil) in their flesh, which makes their flesh quite dark. Examples of oily fish are mackerel, herring, pilchard, sprat, sardines and salmon.	
Shell	**Shell fish** are found in the sea. Shellfish are divided into: **Crustaceans** – these have a shell and legs. Examples include prawns, scampi, lobster, and crab. **Molluscs** – these have a shell but no legs and they often fix themselves to rocks. Examples include cockles, mussels, winkles and oysters. **Squid** and **Octopus** - are also classed as molluscs—even though their shell is inside! Fish produced in fresh water include trout and carp	

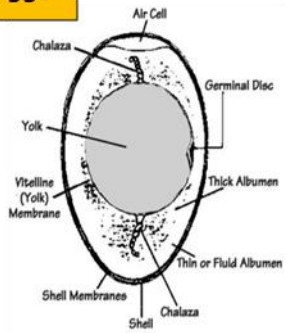
Ways of preserving fish. Salting - If enough salt is used, then the fish may keep for up to a year.
Smoking - Fish can be smoked using different techniques. Hot smoked fish are moist, lightly salted and fully cooked. They can be eaten without further cooking. Cold smoked fish are generally saltier in flavour and have less moisture. Cold smoking does not cook the fish. It merely adds a smoked flavour. Smoked fish and salted fish such as kippers and bloaters should have a firm flesh, shiny skin and a good 'smoky' smell. **Pickling -** Pickling fish was originally conceived as a way to preserve it. It is a common technique in Scandinavia.
Pickling is now used widely to add flavour and sharpness. **Canning -** Produces a moist, flaky product and makes the bones edible. Oily fish and shellfish such as tuna, salmon, and prawns can be canned in brine, tomato sauce or oil which adds flavour to the fish.
Drying - Fish are laid out to be dried.
Freezing - Packaged in blocks or freeze in water brushing glaze on top.

Cuts of fish:
Large fish (e.g. cod, coley, haddock) are cut into fillets, steaks or cutlets.
Small and medium fish (e.g. herrings, mackerel, rainbow trout) are usually sold whole and can be filleted by removing the backbone, tail, head and fins.
Very small fish (e.g. sprats and whitebait) can be fried and eaten whole.

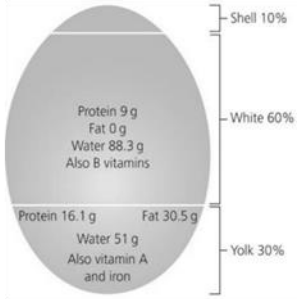
Food Technology

4. Commodities Eggs

Eggs are an important food commodity which provides nutrients essential for health. Eggs provide a variety of different textures, colours and flavours to dishes. Eggs can be used in a variety of different ways.



Nutrients in an egg



Organic	These are more expensive as hens have to have access to organic land and eat an organic diet.
Free Range:	The hens are reared in large barns with daytime access to outside runs. There are no feeding guidelines (by products and GM foods to increase productivity and profit margins)
Barn:	The hens are reared in barns with no outside access. They are provided with perches, platforms, nest boxes and litter areas. Areas can be quite crowded with up to 16,000 hens in a barn—depends on the keeper.
Caged;	This makes up approximately 78% of the market. Hens are crammed into a cage so small they can't stretch their wings. The space they have is about the size of an A4 (this page) piece of paper. They cannot follow their natural behavior patterns. Their bodies suffer through lack of exercise. Birds can lay dead for days before they are taken out of the cage. Debeaking, brittle bones, tumors and pecking are common.

How to grade Eggs

All eggs sold at grocery stores must meet strict standards. Only those of high quality reach the consumer. Eggs must be checked for interior quality by candling, a process where eggs are passed over a strong light to show the shell and interior.

Grade A: Thick white Round, well centered yolk Small air cell (less than 5mm deep)Clean, un-cracked shell with normal shape

Grade B: Mostly used for commercial baking or go to hospitals, restaurants, etc. very few are sold at retail stores. Yolk is slightly flattened; white is thinner Shell is un-cracked and may have a rough texture; and/or be slightly soiled and stained.

Grade C: The lowest egg grade, these are used in the production of processed egg products only. They are not sold in retail stores Yolk is flattened and may be oblong in shape; white is thin and watery. Shell may be cracked and/or stained

Storing eggs

Eggs should be stored in the fridge or a cool place away from strong smelling foods. Eggs should be stored blunt end upwards. They should be removed an hour or so before use, because cold eggs do not whisk well.

Eggs stay in good condition if stored correctly for two to three weeks. Eggs cannot be frozen whole but the whites and yolks can be frozen separately in containers. Always use eggs by the best before date. Eggs can be preserved by pickling.

Labelling Eggs

Cooking methods for Meat, Fish & Eggs

The structure of a hen's egg

The shell: consists of an outer cuticle (a transparent, protective coating, a true shell and inner membranes. The shell is porous (pores are tiny holes), and therefore allows the developing chick to obtain oxygen. At one end of the egg, the membranes separate into an air space, to supply the chick with oxygen.

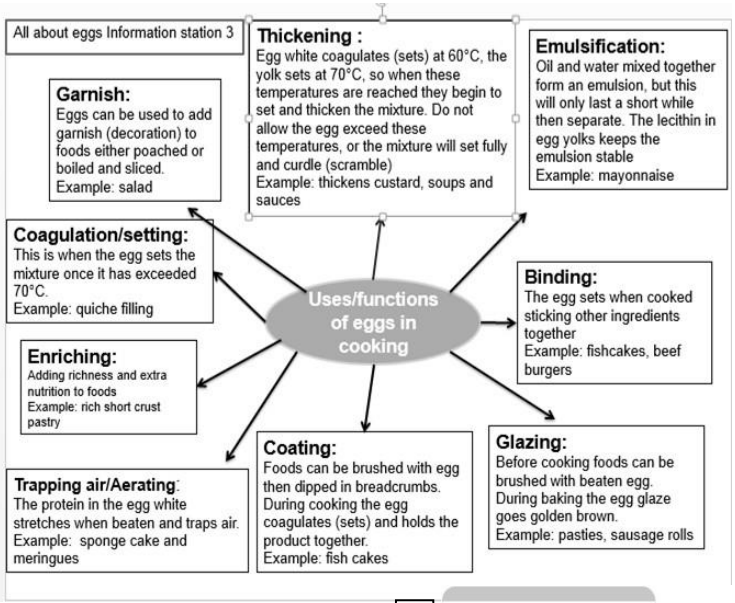
The air space: increases in size as an egg gets older, because water is lost from the egg and air is drawn in. The fresher the egg, the smaller the air space. This is why fresh eggs sink in water and rotten eggs float.

The yolk: full of goodness (vitamins A, D, E & K) and has a higher concentration of protein than the white.

The white: contains riboflavin and other B vitamins and a small trace of fat

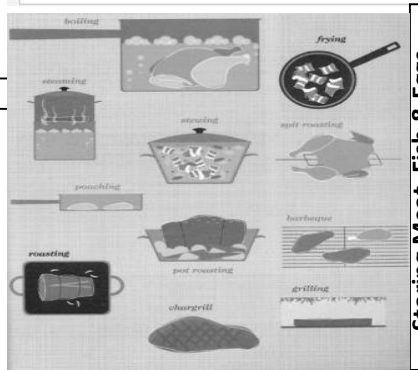
The anchors/chalazae: white strands attached to the thick albumen which anchor the yolk in the middle of the egg.

Functions of eggs

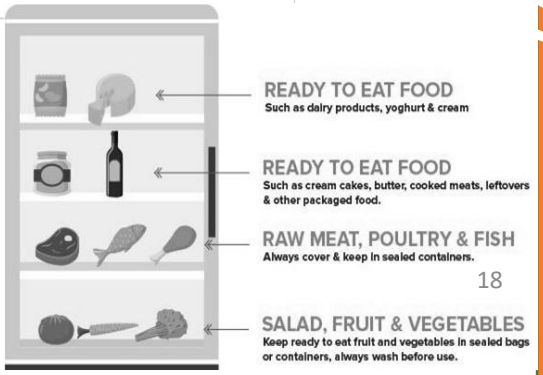


Sizing Eggs

Size	Weight
SMALL	53g + under
MEDIUM	53-63g
LARGE	63-73g
EXTRA LARGE	73g+ over



Storing Meat, Fish & Eggs



Food Technology

EU Law

Under EU law, all meat and poultry for human consumption has to show traceability. Under the law, traceability means the ability to track any food, feed, food-producing animal or substance that will be used for consumption through all stages of production, processing and distribution.

Red Tractor

The Red Tractor logo gives information on where the food has been farmed, processed and packed. Food given to animals on farms displaying the Red Tractor logo is safe from them to eat with no risk of contamination to the meat or milk produced. The animals' health and welfare is regularly checked.

Farmers under this scheme must also use responsible farming methods not to pollute land and minimise the impact of their farming methods on wildlife, fauna and flowers.

Red Tractor Farm Assurance | DAIRY FARMS

RSPCA Assured

Previously *Freedom Food*, this is the RSPCA's ethical food label dedicated to animal welfare. The RSPCA Assured label makes it easy to recognise products from animals that have had a better life. It is found on the packaging of meat and dairy products which have met animal welfare

Animal Welfare

There are symbols on packaging to show that meat and poultry have met welfare standards. Animal welfare refers to the well- being of animals and covers areas such as the animals' access to fresh water and a diet to maintain full health. It also gives assurance that animals are reared free of any discomfort, pain, injury or disease, and are provided with adequate shelter and a comfortable resting area.

5. Commodities – Milk

Milk is an important food commodity which provides nutrients essential for health. Milk is considered nature's most perfect food. A variety of different foods can be made from milk.

Milk is a pale liquid produced by the mammary glands of mammals. It is the primary source of nutrition for infant mammals (including humans who breastfeed)

How milk is used:

As a drink on its own or flavoured – for its nutritional content.

Added to cereal to improve the nutritional content, it changes the texture

As an essential ingredient in batter, sauces and custards—it allows Gelatinisation., combining with egg to coagulate into a soft product.

In baked products such as cakes, biscuits and bread, providing moisture to help them rise and produces a soft texture as it stops starch and fat clumping together.

The fat is separated from the rest of the milk to make cream

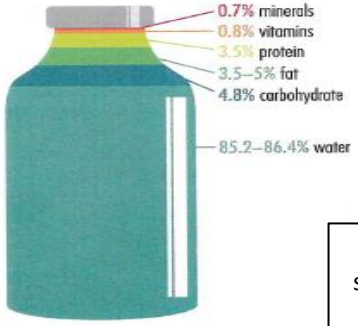
When acid is added it curdles and becomes solid or semi-solid, making cheese

Cream is churned (moved around quickly—beaten) to make butter

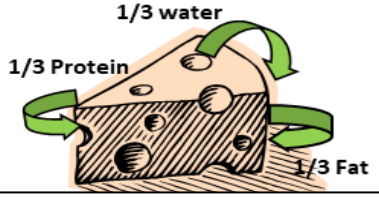
Yoghurt is fermented milk. A bacteria culture is added. This breaks down the protein and makes it coagulate

Where does Milk come from?

Milk can come from, a cow, a goat, a sheep and even a horse. Milk can also be made from soya beans, rice and wheat.



Types of Milk	Description
Whole milk	Milk with nothing added or removed. Fat content: 3.9%.
Semi-skimmed milk	The most popular type of milk in the UK. Fat content: 1.5%
Skimmed milk	Milk that has had most of the fat removed. Fat content: 0–0.5% (average 0.1%)
1% fat milk	Offered to consumers who like the taste of semi-skimmed, but want milk with a lower fat content.
Organic milk	Milk from cows that have been grazed on pasture that has no chemical fertilisers, pesticides or agrochemicals used on it.
UHT milk	Milk that has been heat treated to give it a longer shelf life. Once opened it must be treated in the same way as fresh milk.
Lacto-free milk	Milk that has had the milk sugar (lactose) removed, making it suitable for those who have an intolerance to lactose.
Soya milk	Made from the liquid of cooked soya beans. It is suitable for vegans and substitute milk for those who are allergic to dairy food.
Goat's milk	Another substitute milk for people allergic to cow's milk.
Evaporated milk	A concentrated, sterilised milk product. It has a concentration twice that of standard milk. Evaporated milk is heat treated and then evaporated under reduced pressure, at temperatures between 60ºC and 65ºC The evaporated milk is poured into cans, which are then sealed. At this point the cans are moved to a steriliser where they are held for 10 minutes.
Condensed milk	Concentrated in the same way as evaporated milk, but with the addition of sugar.
Dried milk powder	Produced by evaporating the water content of milk using heat.
Almond and coconut milk	An alternative for vegans or people with allergies



6. Commodities – Dairy Produce

Cheese can be described as a solid or semi-solid form of milk. It is sometimes referred to as a fermented dairy food. It is made from cows', ewes', goats' or buffalo milk.

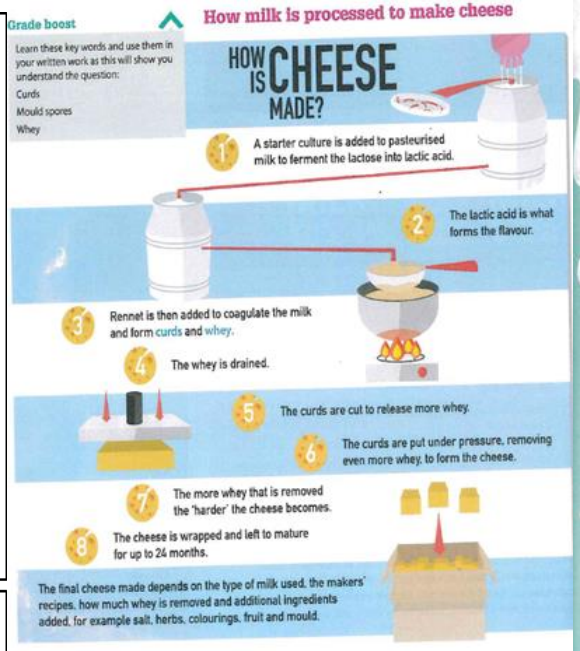
Ways to preserve milk - Heat treatments Pasteurised A mild heat treatment. It only kills pathogenic bacteria to make it safe to drink. It extends the shelf life. It needs to be kept chilled. There is no change in flavour or nutritional value. The fat (cream) rises to the top.

UHT or Long life Milk is sterilised—heated to 100°C for 20 minutes to kill all bacteria. It also destroys the B vitamins. Milk is homogenised. Milk is packaged using aseptic packaging.

Evaporated Milk Evaporated milk is a concentrated, sterilised milk product. It has a concentration twice that of standard milk. The process of producing evaporated milk involves standardising, heat treating and evaporating the milk under reduced pressure, at temperatures between 60ºC and 65ºC. It is then homogenised and cooled. The evaporated milk is poured into cans, which are then sealed. At this point the cans are moved to a steriliser where they are held for 10 minutes. A cooling stage follows and the cans are then labelled and packed.

Condensed Milk Condensed milk is concentrated in the same way as evaporated milk, but with the addition of sugar. It is not sterlised but is preserved by the high concentration of sugar. It can be made from whole milk, semi skimmed or skimmed milk. The heat treatment used consists of holding standardised milk at a temperature of 110- 115ºC for one to two minutes. The milk is then homogenised, the sugar added and the sweetened milk is then evaporated at low temperatures (between 55-60ºC). The concentration of the condensed milk is now up to 3 times that of the original milk. The milk is then cooled rapidly to 30ºC and packaged. Sweetened condensed milk is commonly used in the sugar

Dried Milk Powder Milk powder is produced by evaporating the water from the milk using heat. The milk is homogenised, heat treated. Skimmed milk powder can be mixed easily with water; however whole milk isn't easily reconstituted due to its



Uses of Cheese

Cheese can:

- provide flavour (e.g. when making a white sauce adding cheese gives improved flavour)
- be used to make both sweet and savory dishes.
- provide colour (e.g. when sprinkled on top of dishes and grilled or baked it will turn an attractive brown colour)
- provide texture (e.g. when melted in can provide a soft, moist and stringy texture)
- increase the nutritional value of a dish

Soft cheeses have the most moisture

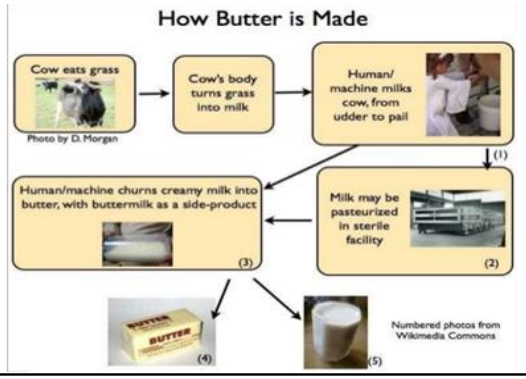
- Some soft cheeses are left to ripen such as Brie and Camembert
- Cottage cheese has a bacteria added to it that makes it clump together in lumps
- Ricotta is a soft whey cheese - low in fat
- Moulds grow on the outside and help to soften the curds inside

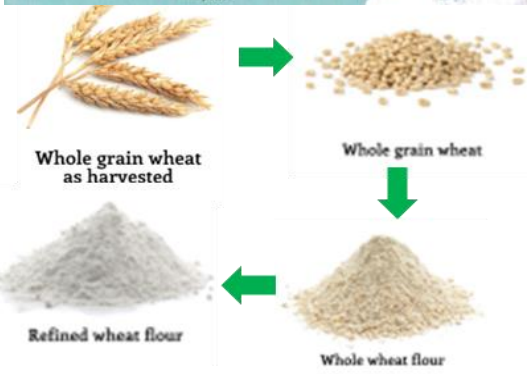
Semi- hard cheeses are 'pressed' cheeses - but not pressed as much as hard cheeses! are examples

- Lancashire, Wensleydale, Caerphilly, Edam, Gouda Port Salut, St Paulin
- Feta cheese is preserved in a brine solution
- Mozzarella is a cheese that is cooked during its process. This gives it its stringy texture

Hard cheeses have the least moisture. Examples are: Cheddar, Leicester, Double Gloucester, Cheshire Gruyère, Emmental, Parmesan, Parmesan is the hardest cheese of all!

Butter is made from the fat found in the cream.





How should cream be stored:
All fresh cream must be stored in a refrigerator at 5'C. sterilised/long life/ UHT cream has a long shelf life and can be stored, unopened, in a kitchen cupboard. However once opened this cream must be treated the same as fresh cream.

Cream is derived from the fat found in all fresh milk. Cream is the concentrated fat, which has been skimmed from the top of milk. **Types of cream:** Single cream, Double cream, Whipping cream, Clotted cream, Ultra heat treated (UHT) cream. Cream is used to add a creamy texture and flavour to dishes. The correct cream must be used for specific tasks because different types of cream have different properties – for instance single and clotted creams cannot be whisked for pipping whereas whipping and double cream will aerate when whisked.

Yoghurt is made from milk. It is made by adding harmless edible bacteria to the milk, which causes it to ferment. This means the carbohydrate (sugar) in the milk, which is lactose, is converted into lactic acid by the bacteria. The lactic acid will set the milk's protein, which will thicken it. The lactic acid will also give the yoghurt its characteristically tangy flavour. **Different yoghurts** can be made from different types of milk. Some yoghurt will include additional ingredients such as sugar, which is used to sweeten it (e.g. fruit and other flavours such as honey or vanilla).**Examples of types of yoghurt: Set yoghurt**: is set in the pot in which it is sold. Has a firmer texture than other yoghurts. **Live yoghurt:** this has been fermented with live culture bacteria that are still living. **Greek (strained) yoghurt:** made from cows' or ewes' milk. It can be quite a thick yoghurt and is higher in fat. **Nutritive value of yoghurt:**Yoghurt will provide the following nutrients: Protein,Fat Calcium ,Carbohydrates, Vitamins, Water **Storage of yoghurt -** Store in the refrigerator between 1 and 5°C. Use before the use-by date.

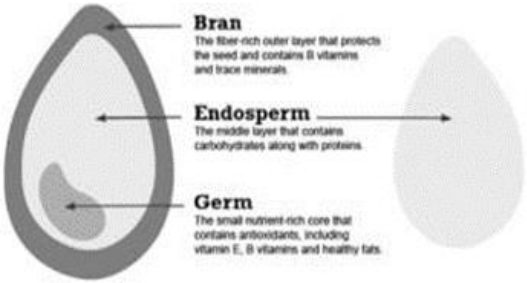
Bread is a staple food in much of the world. It is made from strong flour, yeast, salt and water. Fat is often added to extend the shelf life of bread. Sugar is added for sweetness and to add colour.

6. Commodities – Dairy Produce

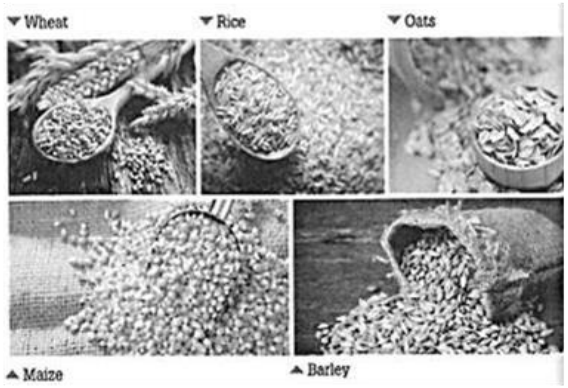
7. Commodities: Cereals

A 'wholegrain' is made up of three elements:
- a fibre-rich outer layer – the bran
- a nutrient-packed inner part – the germ
- a central starchy part – the endosperm.

Whole Grain vs. "White" Grain



Cereals provide a valuable source on energy in the diet, as well as other nutrients if the wholegrain is used. These include: Fibre, Protein, Carbohydrates, VitaminE, B vitamins, Fat, Iron.



How cereals are processed:
Processing the flour after milling
After the milling process, different grades of flour are produced by sifting, separating and regrinding the flour several times. These grades are combined as needed to produce different types of flour.
Small amounts of bleaching agents (to make the flour white) and oxidizing agents (to enhance the baking quality of the flour) are usually added to the flour after milling.
Nutrients calcium, iron and B group vitamins are added to. This is called fortification. Baking powder will be added to make self-raising flour. **Flour:**Flour comes from different types of cereals, e.g. rye and wheat. **Wheat flour** is one of the main flours produced. There are different strengths of wheat flour depending on its uses: **Strong flour** is used in bread making and comes from winter wheat, which is a hard **Wholemeal flour** is made from the whole wheat grain, nothing is added or taken away. It is referred to as having 100% extraction rate. It is a good source of dietary fibre. **Brown flour** usually contains about 85% of the original grain. Some bran and germ have been removed. **White flour** usually contains around 70-72% of the wheat grain. Most of the bran and wheat germ have been removed during the milling process. **Granary flour** is made by adding malted wheat (which has been toasted and flaked), to any type of flour but usually it is added to wholemeal or brown flour. **Stoneground flour** is wholemeal flour ground in a traditional way between two stones. **Organic flour** is made from grain that has

Pasta is made from strong wheat known as durum wheat. This type of wheat contains more protein than common wheat. During the milling process the wheat produces semolina. This is the coarsest grade of the starchy endosperm. To make pasta, water is added to form a dough, which can be shaped or extruded (forced though an opening in a shaped plate and then cut to a specific size) to produce the type of pasta required. Other ingredients that can be added during the making of the pasta dough include eggs, oil, salt and various flavourings. Different shapes, sizes and styles of pasta are widely available to buy in shops. Various colours of pasta re also sold: Green pasta is made using spinach, which provides the colour as well as some flavour. Red pasta is made using tomato paste. Squid ink pasta or black pasta is dark grey, almost black in colour and is made using, as the name suggests, squid ink. This can sometimes give the pasta a mild seafood flavour. Dried pasta is popular due to its long shelf life and versatility. It can be combined with many other ingredients. Fresh pasta must be stored in a refrigerator. Fresh and homemade pasta can be frozen Homemade pasta must be allowed to dry and then stored in an airtight container in the refrigerator. Cooked pasta should be stored in an airtight container in the refrigerator. Rinsing with cold water after cooking will stop it sticking together.

Rice is one of the most popular staple foods eaten by the world's population.
- It is a very versatile commodity because it can be used to make both sweet and savour dishes
- Rice is served as part of a meal to provide bulk and a feeling of fullness.
- It is quick to cook
- It is a good store cupboard ingredient as it has a long shelf life and is easy to store.
- Rice can be quite bland in flavour. This can be improved by cooking it with flavoursome ingredients such as garlic and herbs, or by cooking the rice in stock instead of water.

Varieties of rice:
There are many different varieties of rice available in supermarkets and it is sold in a variety of different forms, for example boil-in-the-bag, easy cook and pre-cooked. Rice can be short grain or long grain and most types are available as brown or white rice.

Year 8 Half-Term 5 French Knowledge Organiser

Module 4: Le monde est petit + Module 5: Le sport en direct

Module 4: Unit 3 Routine

Je me lève.	*I get up.*
Je prends le petit déjeuner.	*I have breakfast.*
Je me douche.	*I have a shower.*
Je me coiffe.	*I do my hair.*
Je m'habille.	*I get dressed.*
Je me lave les dents.	*I clean my teeth.*
Je quitte la maison.	*I leave the house.*
Je me lave.	*I have a wash.*
Je me couche.	*I go to bed.*

Module 4: Unit 4 Moving house

j'ai déménagé	I moved house
beau / belle / bel	beautiful
nouveau / nouvelle / nouvel	new
vieux / vieille / vieil	old
un appartement	a flat
une maison	a house
un salon	a living-room
un bureau	an office
une cuisine	a kitchen
une chambre	a bedroom
un collège	a school
un gymnase	a gym
une cantine	a canteen
un copain / une copine	a friend
un(e) voisin(e)	a neighbour
un(e) petit(e) ami(e)	a boyfriend/ girlfriend
vivre sans toi	to live without you

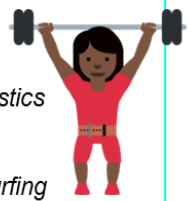
Module 4: Unit 5 – A new region

Où est-ce que tu es en vacances?	*Where are you on holiday?*
Je suis en Corse.	*I'm in Corsica.*
C'est comment?	*What is it like?*
C'est très joli.	*It's very pretty.*
À quelle heure est-ce que tu te lèves?	*What time do you get up?*
Je me lève à ...	*I get up at ...*
Où est-ce que tu prends le petit déjeuner?	*Where do you have your breakfast?*

Module 5 – Point de départ

Dans ma ville / mon village, il y a …	*In my town / my village, there are/is …*
beaucoup de possibilités sportives.	*lots of sporting opportunities.*
peu de possibilités sportives.	*few / not many sporting opportunities.*
une salle de fitness	*a gym*
On peut jouer au / à la / à l' / aux …	*You can play …*
On peut faire du / de la / de l' / des …	*You can do …*
le basket / le billard	*basketball / snooker*
le cyclisme / le vélo	*cycling*
le foot(ball) / le footing	*football / jogging*
le handball / le hockey	*handball / hockey*
le judo / le patin à glace	*judo / ice skating*
le rugby / le ski / le tennis	*rugby / skiing / tennis*
le tennis de table	*table tennis*
le ping-pong	*table tennis*
le volleyball	*volleyball*
la danse / la gymnastique	*dance / gymnastics*
la musculation	*weight training*
la pétanque / les boules	*boules*
la voile / la planche à voile	*sailing / windsurfing*
l'athlétisme / l'équitation	*athletics / horse riding*
les arts martiaux	*martial arts*
Je suis membre d'un club.	*I am a member of a club.*
Je m'entraîne deux fois par semaine.	*I train twice a week.*
Mon héros sportif …	*My sporting hero is …*
Mon héroïne sportive est …	*My sporting heroine is …*
Il/Elle a gagné.	*He/She won.*
Il/Elle a marqué un but.	*He/She scored a goal.*

Sports in my town



Je prends le petit déjeuner dans le jardin.	*I have breakfast in the garden.*
Qu'est-ce qu'on peut faire ici?	*What can you do here?*
On peut faire des randonnées.	*You can go for walks.*
Qu'est-ce que tu fais pendant la journée?	*What do you do during the day?*
Je vais à la plage.	*I go to the beach.*
Qu'est-ce qu'on doit faire l'après-midi?	*What must you do in the afternoon?*
On doit faire la sieste.	*You must take a siesta.*
Quel temps fait-il?	*What's the weather like?*
Il fait chaud.	*It is hot.*
Qu'est-ce que tu vas faire le weekend prochain?	*What are you going to do next weekend?*
Je vais faire un pique-nique.	*I am going to have a picnic.*
Qu'est-ce que tu as fait le weekend dernier?	*What did you do last weekend?*
Je suis allé(e) ...	*I went ...*
C'était comment?	*How was it?*
C'était intéressant.	*It was interesting.*

Module 5 – Unit 1

Less or more?

Je trouve le tennis …	*I find tennis …*
amusant(e).	*fun.*
compliqué(e).	*complicated.*
divertissant(e).	*entertaining.*
fatigant(e).	*tiring.*
intéressant(e).	*interesting.*
passionnant(e).	*exciting.*
relaxant(e).	*relaxing.*
violent(e).	*violent.*
ennuyeux / ennuyeuse.	*boring.*
difficile.	*difficult.*
facile.	*easy.*
À mon avis / Pour moi … le footing est plus facile que la natation.	*In my opinion / For me … jogging is easier than swimming.*
la voile est moins amusante que le ski.	*sailing is less fun than skiing.*

French

The POWER of the INFINITIVE

You can add an infinitive to these phrases to:

1) give an **opinion** *or*
2) use a modal verb
3) say something in the near **future** tense

Opinion phrases:

J'aime – I like	J'aime **jouer**. – I like **to play**.
J'adore – I love	J'adore **chatter**. – I love **to chat**.
Je déteste – I hate	Je déteste **regarder** la téle. – I hate **to watch** the TV.

Modal verbs:

Je veux – I want	Je veux **aller**. – I want **to go**.
Je peux – I can	Je peux **jouer**. – I can **play**.
Je dois – I have to	Je dois **aider** – I have to help

Near future:

Je vais – I am going	Je vais **aller**. – I am going to go.
	Je vais **manger**. – I am going to eat.

rigoler	to laugh/joke
surfer	to surf
tchatter	to chat (online)
télécharger	to download
téléphoner	to phone
tourner	to turn
traîner	to hang around
travailler	to work
trouver	to find
visiter	to visit
voyager	to travel

Regular –*re* verb infinitives

attendre	to wait for
entendre	to hear
perdre	to lose
rendre visite	to visit
vendre	to sell

Regular –*ir* verb infinitives

applaudir	to clap
choisir	to choose
finir	to finish
vomir	to vomit

Reflexive verb infinitives

s'appeler	to be called
se blesser	to get injured
se coiffer	to do hair
se coucher	to go to bed
se doucher	to shower
s'entraîner	to train
s'habiller	to get dressed
se laver	to have a wash
se lever	to get up

je **me** / tu **te** / il **se** / elle **se** / on **se**
nous **nous** / vous **vous** / ils **se** / elles **se**

The PRESENT TENSE regular verb patterns

To use the regular infinitive verbs to talk about things happening now, you must take the *er, ir,* or *re* off the infinitive and add the correct ending (in bold below) so that it matches the person doing the verb.

regarder	finir	attendre
je regard**e**	je fin**is**	j'attend**s**
tu regard**es**	tu fin**is**	tu attend**s**
il/elle/on regard**e**	il/elle/on fin**it**	il/elle/on attend
nous regard**ons**	nous fin**issons**	nous attend**ons**
vous regard**ez**	vous fin**issez**	vous attend**ez**
ils/ells regard**ent**	ils/ells fin**issent**	ils/ells attend**ent**

Irregular verbs

aller	to go	je vais	I go /am going
avoir	to have	j'ai	I have
boire	to drink	je bois	I drink
découvrir	to discover	je découvre	I discover
dormir	to sleep	je dors	I sleep
courir	to run	je cours	I run
être	to be	je suis	I am
faire	to do	je fais	I do
lire	to read	je lis	I read
partir	to leave	je pars	I leave
prendre	to take	je prends	I take
venir	to come	je viens	I come
voir	to see	je vois	I see

Year 8 Half Term 6 French Knowledge Organiser

Revision and culture

The Perfect Past tense

The perfect tense is used to say what you did or have done. e.g. 'I went to France.' or 'I have been to France.'

To form the perfect tense, most verbs need the present tense of ***avoir*** (to have) and a **past participle.**

You make the past participle by:
For *–er* verbs, taking the *–er* off the infinitive, and adding *é*
For *-ir* verbs, taking the *–ir* off the infinitive, and adding *i*
For *–re* verbs, taking the *–re* off the infinitive and adding *u*

regarder (to watch)	choisir (to choose)	perdre (to lose)
j'ai regardé – I watched	j'ai choisi – I chose	j'ai perdu – I lost
il a regardé – he watched	il a choisi – he chose	il a perdu – he lost

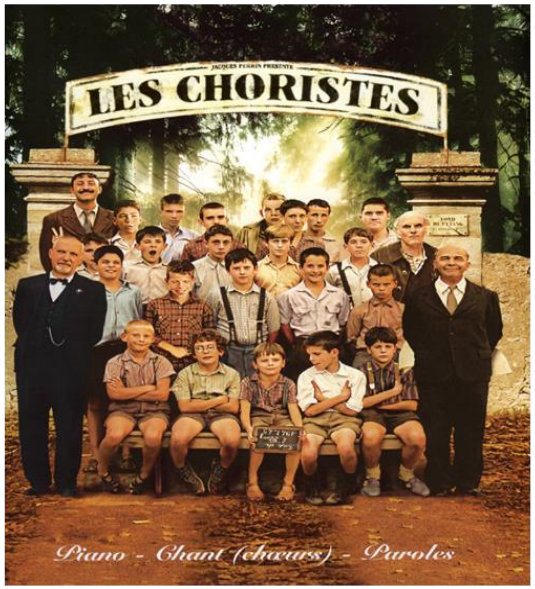
Some verbs use ***être*** (rather than *avoir*) to form the perfect tense. The past participles of these verbs must agree with the subject.

aller (to go)	partir (to leave)	descender (to go down)
je suis allé(e) – I went	je suis parti(e) – I left	je suis descendu(e) – I went down
elle est allé**e** – she went	elle est parti**e** – she left	elle est descendu**e** – she went down
nous sommes allé(e)**s** – we went	nous sommes parti(e)**s** – we left	nous sommes descendu(e)**s** – we went down

avoir	
J'ai	I have
Tu as	you have
Il a/elle a	he/she has
on a	we have
Nous avons	we have
Vous avez	You have
Ils ont	they have
elles ont	they have (all fem.)

être	
Je suis	I am
Tu es	you are
Il est/elle est	he is /she is
on a	we are
Nous sommes	we are
Vous êtes	You are
Ils sont	they are
elles sont	they are (all fem.)

French Infinitive	English Infinitive	Present tense	Perfect Past Tense
aller	to go	je vais	je suis allé(e)
avoir	to have	j'ai	j'ai eu
boire	to drink	je bois	j'ai bu
être	to be	je suis	j'ai été
faire	to do	je fais	j'ai fait
lire	to read	je lis	j'ai lu
partir	to leave	je pars	je suis parti(e)
prendre	to take	je prends	j'ai pris
venir	to come	je viens	je suis venu(e)
voir	to see	je vois	j'ai vu



Questions

qu'est-ce que	what
quoi	what
quel	which
quand	when
comment	how

Recurring vocabulary

il y a	there is
il n'a pas	there is not
c'est	it is
ce n'est pas	it is not
et	and
mais	but
parce que	because
car	because
aussi	also
très	very
assez	quite
trop	too
ma/mon/mes	my
ta/ton/tes	your
sa/son/ses	his/her

Les Choristes – film study

l'homme porte	the man is wearing
le garçon porte	the boy is wearing

French

Year 8 - Africa

Perceptions of Africa

A perception is what we picture a place to be like even though we may not have been there.

Our perceptions might be influenced by:

- The News
- Friends and Family
- Social media

How does this image represent Africa?

What perceptions do you have of Africa?

Geography of Africa

Africa is a **continent** made up of **54 countries**.

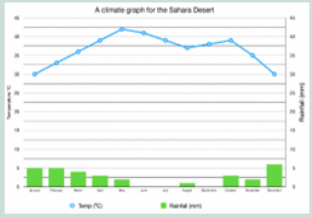
The River Nile - longest river in the world runs through from the Mountains in Ethiopia to the Mediterranean sea in the north.

Over 2000 languages are spoken in Africa.

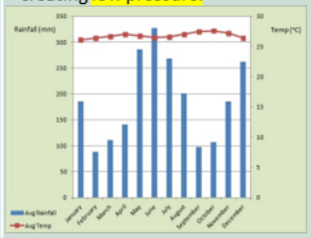
The sheer size of Africa means a variety of different biomes can be found within the continent. Varied biomes results in varied wildlife. Mountain regions can be found in the north and east, Deserts in the north and south. The largest desert is the Sahara which runs east to west across the continent. The Kalahari and Namib can be found on the south west coast. Tropical rainforests lie on and 5 degrees north and south of the equator. Grasslands encircle the rainforests to the north, east and south.

Contrasting Climates

Deserts have hot and dry climates. E.g. the Sahara desert in Northern Africa. Here, dry air is sinking creating high pressure.



Rainforests have hot and wet climates. E.g. Congo Rainforest in Western Africa, along the equator. Here, moist air is rising creating low pressure.

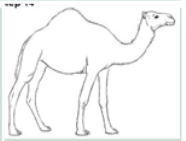


This climate graph shows the climate of the Sahara. Temperatures peak at over 40 degrees and drop to just below 30 degrees. However, at night time temperatures in the desert can drop below freezing due to lack of cloud cover. Precipitation does occur in the desert during some months of the year, but its very low amounts.

By contrast equatorial climates shows very different characteristics. Precipitation occurs all year round and have high monthly amounts. Temperatures are high but have a very low range, approx. 30 degrees throughout the year.

Desert Animal and Plant Adaptations

Camels have many adaptations to help them survive in Deserts. Fat stored in hump provides three weeks of food. Nostrils can close during sandstorm. Broad flat hooves spread weight so it doesn't sink into the sand.



Cacti are common in the desert as they have adapted to the hot and dry conditions. Thick waxy skin to reduce water loss. Fleshy large stems that store water. Extensive root system to soak up rain when it does fall. Spikes rather than leave to reduce water loss and protect the plant from predators.

Desertification

Desertification is when land turns into desert due to climate change and human activities. This is a huge problem in Africa as lots of farmers rely upon the land to make living. It is a particular problem in the Sahel region. The red areas on the map show the areas most at risk of Desertification.

Causes of Desertification

Deforestation:

- Trees are chopped down for fire wood.
- The soil is looser as there are no roots and is dried out easily
- The land turns into desert.

Over Grazing:

- More cattle are allowed to graze on the land
- This leaves the ground bare.
- The sun and wind dry out the land and it turns to sand.

Climate Change has led to hotter, drier climates in areas of Africa. This means a reduced amount of vegetation can establish, stabilise soil and trap moisture.

Effects of Desertification

As the soil is less stable it is more likely to be eroded by wind. As soils become infertile, fewer crops can be grown and so food shortages can lead to famine. People are forced to migrate to other areas in search of fertile soils. Native animals also die out as vegetation loss impacts local food chains.

Responding to Desertification

Afforestation – Planting new trees stabilises soils and prevents soil erosion.

Integrated farming – Limiting the number of animals kept and encouraging famers to grow crops alongside animals. Animal waste can be used to fertilise crops.

Drought resistant crops – Famers can use crops which are able to withstand drought and grow in drier conditions.

Population growth – A slower population growth would reduce the pressures on farmland. Educating people about contraception may help to reduce population growth.

The battle for Africa's Mineral Wealth

Conflict diamonds- Sierra Leone. **-** UN definition- "...diamonds that come from areas controlled by forces against fair and internationally recognised governments, and are used to fund military action against those governments."

Positives of diamonds in Sierra Leone:-

- Increases countries economy so they can spend more money on infrastructure, services etc.
- Creates jobs.
- Diamond sales generate in Sierra Leone $125 million every year, 50% of all money the country takes.

Negatives of diamonds in Sierra Leone:-

- Government couldn't control the diamond mines, so the rebels (RUF) took control of big parts of the country and started a civil war.
- Thousands were killed and many children were forced to fight.

Who is to blame for the problems? Smuggler/General Taylor/Sierra Leone government/consumer/RUF

Geography

Year 8 - Climate Change

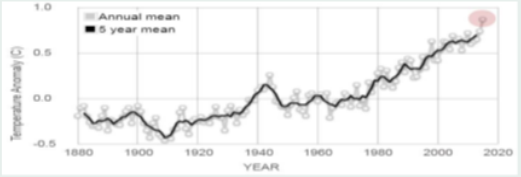
Types of Energy sources

Non renewable (can only be used once and will eventually run out)	**Renewable** (can be used over and over again)
Oil, Coal and Gas (fossil fuels) Nuclear	Wind, Solar, Wave, Hydroelectricity, Tidal, Biofuel

Climate Change

Climate change is a large-scale, long-term shift in the planet's weather patterns and average temperatures. Earth has had tropical climates and ice ages many times in its 4.5 billion year history.

Climate Change is not down to one single factor. It is caused by a number of different Human and Physical factors. Climate change is often incorrectly considered to be a fairly recent phenomena solely down to humans. However studies of past climates show that it has always occurred and is not only caused by human activity.



The term global warming is used to describe the recent increase in temperature of our planet. (Graph shows temp. increase since 1980.)

Natural Causes:

Orbital Change – the Earth has natural warming and cooling periods caused by Milankovitch cycles or variations in the tilt and/or orbit of the Earth around the Sun (Wobble, roll and stretch theory).

Volcanic Eruptions - When volcanoes erupt, they release a mixture of gases and particles into the air. Some of them, such as ash and sulphur dioxide, have a cooling effect, because they reflect sunlight away from the earth. Others, such as CO_2, cause warming by adding to the greenhouse effect.

Solar Flares - Sometimes areas of the Sun will suddenly appear much brighter. These bright spots are called solar flares. They are areas where a large amount of energy is released to the surface of the Sun. A huge amount of heat then escapes from the sun's surface.

Human Causes:

Population growth – An increased in the number of people leads to an increase in CO_2 emissions. Contributing to the greenhouse effect.

Deforestation – Trees absorb CO_2 in photosynthesis and act as sponges for CO_2. Removing trees has led to more CO_2 in the atmosphere.

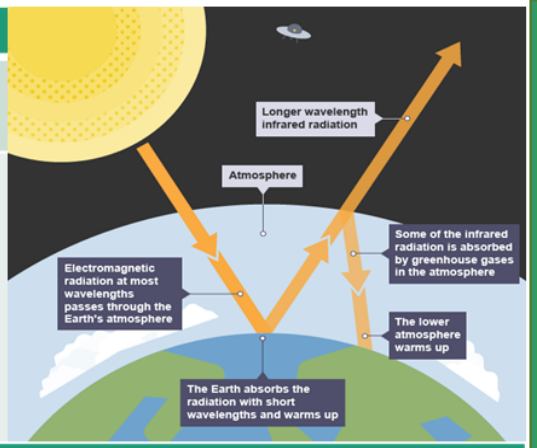
Fossil Fuel Consumption – The consumption of fossil fuels (coal/oil /gas) releases large amounts of carbon emissions in the atmosphere which means more heat being trapped.

Agriculture – Trees are often removed to make more land suitable for farming. Cattle ranching produces large amounts of methane.

What is the Greenhouse Effect?

The **greenhouse effect is a naturally occurring effect.** It happens when thermal energy is trapped in the earths lower atmosphere by greenhouse gases such as carbon dioxide (CO_2), methane, nitrous oxide.

-Energy from the sun bounces off the earth's surface as some of this energy is absorbed by the gases forming the atmosphere. Roughly 30% of this absorbed energy is then radiated back towards the earth.
-This effect causes the earth's average temperature to be around 15°C.
-Without the natural greenhouse effect, the earth's average temperature would be around -18°C. This would be far too cold to sustain many forms of life.
-Due to human actions such as population growth, deforestation, fossil fuel consumption and agricultural practices, **there has been a build up of greenhouse gases within the atmosphere (acting like blanket) which has led to less heat escaping.** This is known as the **Enhanced Greenhouse Effect** and has led to an increase in average global temperatures and climate change.



Effects Of Climate Change

The potential effects of climate change are wide and varied. When examining them we should consider the; social, economic and environmental impacts.
Social – impacts upon people
Economic – impacts upon the economy
Environmental- impacts upon the environment e.g. Wildlife

Negative Effects

- Ice sheets are melting
- Sea levels rising
- Reduced rainfall in the Amazon rainforest
- Stronger hurricanes in the Caribbean
- Ski resorts in the Alps close down due to lack of snow
- Increased flooding in Bangladesh
- Increased threat of bush fires in the USA
- Species migration changes
- Melting Permafrost in Russia's Tundra environments

Positive Effects

- Increased rice crops in China
- South Australia can grow more crops

Politics and Energy

Countries rely on other countries to get energy resources e.g. Gas and Oil. Many European countries get a large % of their Gas from Russia e.g. Finland, Latvia and therefore need to maintain a positive relationship with them to continue their gas supply. In recent years Gas has been cut off to parts of Europe because of tensions and political issues with Russia.

Responding to Climate Change

There are two main categories when we look at responses to climate change.
Adaptation is when we change our lives and respond in order to cope with any changes happening due to climate change.
Mitigation is when we plan ahead and try to tackle the causes of climate change

Adaptation	Mitigation
- Building more flood defences - Changing the types of crops grown - Using drought resistant food crops - Turning ski resorts into mountain bike resorts	- Renewable energy = wind turbines, solar panels - Afforestation - Waste recycling - Electric cars - Insulating homes - International agreements

Impacts of oil extraction on different countries

Dubai, United Arab Emirates.
Before 1966 it was a small, poor fishing village. In 1966 they discovered oil. This stimulated the economy and the city grew enormously. Oil provides 1/3 of all of Dubai's money. The remaining 2/3 of the money is linked to oil indirectly, particularly through tourism. Money made through the oil industry has been spent on developing the huge infrastructure projects and tourist resorts/attractions. This is a sustainable approach, allowing Dubai to continue to develop once the oil runs out.

Niger Delta, Nigeria.
Though oil provides 98% of Nigeria's money, it has many negatives. One of the main negatives is that Shell oil who drill the oil in Nigeria allow oil spills to pollute the environment on a daily basis. This creates job losses as fisherman lose their jobs as all the fish die, and local vegetation e.g.- mangroves are poisoned as well. Local terrorists groups are active in the area fighting against the oil companies that pollute the environment. However, Shell does provide local people with jobs, electricity, water and healthcare.

Fracking in the UK

Fracking, is a technique for recovering gas from shale rock. It involves drilling into the earth and directing a high-pressure mixture of water, sand and chemicals at a rock layer, to release the gas inside. This technique is controversial in the UK due to the small tremors it can create, but it could be used here in the future to help resolve our energy issues.

Geography

Year 8 Half-Term 5 German Knowledge Organiser

Unit 5: Gute Reise – meine Zuhause und meine Stadt

Wo wohnst du?	***Where do you live?***
Ich wohne...	*I live…*
in einem Dorf	in a village
in einer Großstadt	in a city
in einer Stadt	in a town
an der Küste	on the coast
in den Bergen	in the mountains
auf dem Land	in the countryside
in einer Wohnung	in a flat
in einem Einfamilienhaus	in a detached house
in einem Doppelhaus	in a semi-detached house
in einem Reihenhaus	in a terraced house
auf einem Bauernhof	on a farm

Die Zimmer	**Rooms**
ein Schlafzimmer	a bedroom
ein Badezimmer	a bathroom
die Toilette	the toilet
die Küche	the kitchen
das Wohnzimmer	the living room
der Keller	the cellar
das Esszimmer	the dining room
der Garten	The garden
die Garage	the garage

Möbel in meinem Zimmer	**Furniture in my room**
ein Bett	a bed
eine Lampe	a lamp
einen Kleiderschrank	a wardrobe
eine Kommode	a chest of drawers
einen Fernseher	a TV
eine Spielkonsole	a games console
einen Schreibtisch	a desk

Grammar

Using Es gibt (there is / there are) OR ich habe (I have)

After these 2 phrases, you need to use THE ACCUSATIVE in GERMAN

Es gibt <u>einen</u> Garten /ich habe <u>einen</u> Kleiderschrank

Ich habe <u>eine</u> Toilette / es gibt <u>eine</u> Kommode

Es gibt <u>ein</u> Badezimmer / ich habe <u>ein</u> Bett

Prepositions and what they do

Prepositions are the little words which describe the position of an object / person:

Auf = on top of
In = in(side)
Unter = under
Zwischen = between

when you use one of these words, the word for „the“ changes:

der (m) = dem
die (f) = der
das (n) = dem
die (pl) = den

Was machst du zu Hause?	***What do you do at home?***
machen	to do
fernsehen (sep)	to watch TV
schlafen	to sleep
kochen	to cook
essen	to eat
arbeiten	to work
lernen	to learn
spielen	to play
tanzen	to dance
singen	to sing
radfahren (sep)	to ride a bike

Present tense reminder:

Take the infinitive e.g machen

Chop off the –en

Add the endings:

ich machE	I do
du machST	you do (informal)
er machT	he does
sie machT	she does
wir machEN	we do
sie machEN	they do
Sie machEN	you do (formal)

German

Year 8 Half-Term 5 German Knowledge Organiser

Unit 5: Gute Reise – meine Zuhause und meine Stadt

In der Stadt	***In town***
Es gibt …	*There is .../There are ...*
Es gibt ein/eine/einen …	*There is/are a ...*
Es gibt kein/keine/keinen …	*There isn't/aren't ...*
in der Nähe von …	*near to*
in der Nähe …	*nearby*
der Bahnhof(-¨e)	*railway station(s)*
der Imbiss(-e)/die Imbissstube(-n)	*snack stand(s)*
die Kegelbahn(-en)	*bowling alley(s)*
das Kino(-s)	*cinema(s)*
die Kirche(-n)	*church(es)*
der Marktplatz(-¨e)	*market square(s)*
der Park(-s)	*park(s)*
das Schloss(-¨er)	*castle(s)*
das Schwimmbad(-¨er)	*swimming pool(s)*
die Eisbahn(-en)	*ice rink(s)*
der Fischmarkt(-¨e)	*fish market(s)*
das Kindertheater(-)	*children's theatre(s)*
der Radweg(-e)	*cycle path(s)*
das Sportzentrum (die Sportzentren)	*sports centre (sports centres)*
der Stadtpark(-s)	*city/town park(s)*
der Wasserpark(-s)	*water park(s)*

Verkaufsgespräch	***Sales conversation***
Ich gehe einkaufen.	*I am going shopping.*
Ich möchte …	*I would like …*
Ich möchte … kaufen.	*I would like to buy …*
Haben Sie …?	*Do you have …?*
Kann ich dir helfen?	*Can I help you?*
Sonst noch etwas?	*Anything else?*
alles zusammen	*all together*

Souvenirs	***Souvenirs***
der Aufkleber	*sticker*
das Freundschaftsband	*friendship bracelet*
die Kappe	*(baseball) cap*
der Kuli	*biro*
das Kuscheltier	*cuddly toy*
die Postkarte	*postcard*
der Schlüsselanhänger	*key ring*
die Tasse	*mug/cup*
das Trikot	*(football) shirt*
Wie viel kostet …?	*How much does ... cost?*
Wie viel kostet das?	*How much does it cost?*
Es kostet €16.	*It costs 16 Euros.*

GENERAL "TRANSFERABLE" VOCABULARY

Hallo = hi	prima = great
Guten Tag = good day	toll = great
Bitte = please	wunderbar = wonderful
Danke schön = thank you	sehr gut = very good
Auf wiedersehen= goodbye!	gut = good / well
Tschüss = bye!	nicht gut = not good
	Schlecht = bad

0 null		
1 Eins	am ersten	on the first
2 Zwei	am zweiten	on the second
3 Drei	am dritten	on the third
4 Vier	am vierten	on the fourth
5 Fünf	am zehnten	on the tenth
6 Sechs	am neunzehten	on the 19th
7 Sieben	am zwanzigsten	on the 20th
8 Acht	am einunddreißigsten	on the 31st
9 Neun		
10 Zehn		
11 Elf		
12 Zwölf		
13 Dreizehn		
14 Vierzehn		
15 Fünfzehn		
16 Sechzehn		
17 Siebzehn		
18 Achtzehn		
19 Neunzehn		
20 Zwanzig		
21 Einundzwanzig		
22 Zweiund zwanzig		
30 Dreißig		
31 Einunddreißig		

und = and
aber = but
oder = or
auch = also

Die Tage der Woche = days of the week

Montag = Monday
Dienstag = Tuesday
Mittwoch = Wednesday
Donnerstag = Thursday
Freitag= Friday
Samstag = Saturday
Sonntag = Sunday
das Wochenende = the weekend

Die Monate (months)

Januar = January
Februar = February
März = March
April = April
Mai = May
Juni = June
Juli = Juli
August = August
September = September
Oktober = October
November = November
Dezember = December

German

Year 8 Half-Term 5 German Knowledge Organiser

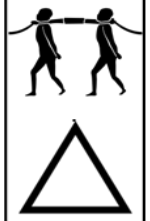
Unit 5: wo ich wohne Sentence Builders

Wo wohnst du? Where do you live?	Ich wohne in… I live in…	…einer Stadt/auf den Land/in den Bergen/an der Küste/in einer Großstadt/in einem Dorf in einem Bungalow/in einem Einfamilienhaus/in einem Doppelhaus	Ich finde es… toll/ruhig/schön/beschäftigt/ friedlich/klein/groß/kalt/ warm
Was gibt es in deinem Haus? What's in your house?	In meinem Haus gibt es… In my house there is…	ein Schlafzimmer/ein Badezimmer/ein Wohnzimmer/eine Toilette/ eine Küche/eine Garage/ einen Garten	Ich mag mein Haus (nicht), weil es _____ ist I (don't) like my house because it's _____
Was gibt es in deinem Zimmer? What's in your room?	In meinem Zimmer gibt es… In my room there is…	Ein Bett/eine lampe/einen Schreibtisch/eine Kommode/ einen Kleiderschrank/einen Fernseher/eine Spielkonsole	Ich mag mein Zimmer (nicht), weil es _____ ist I (don't) like my room because it's _____
Was gibt es in deine Stadt? What's in your town?	In meiner Stadt gibt es einen/eine/ein… In my town there is a… aber es gibt keinen/keine/kein… but there's not a…	Bahnhof/Bushaltestelle/Kino/ Eisbahn/Kegelbahn/ Imbissstube/Kirche/ Marktplatz/Park/Schloss/ Sportzentrum/Schwimmbad	Ich mag meine Stadt (nicht), weil es _____ ist I (don't) like my town because it's _____

German

Timeline of main events1823	
14th – 16th century	The Mali Empire and the kingdom of Benin are among the dominant powers in West Africa trading gold, copper and ivory with Arab, African and even European nations.
15th-16th century	British and European traders arrive in Africa and begin to traffic African people to the Americas in the beginning of Transatlantic Slavery.
1787-1794	The abolitionist, Thomas Clarkson travels 3,000 miles around Britain educating people about the horrors of Slavery
1789	A former enslaved person, Oladuah Equiano publishes his book, "The interesting narrative" which tells of the true horrors of the middle passage and plantation life.
1791	The Haitian Revolution begins in the French colony of Saint Domingue, led by Toussaint L'ouverture, an organised and skilled military leader and former enslaved person.
1804	Following L'ouverture's death, the rebels in Saint Domingue are victorious and Haiti becomes an independent country.
1807	Transatlantic Slavery is made illegal, the British West African Squadron is set up to monitor illegal enslavement and trafficking.
1823	The Anti Slavery Society is set up in London, although trading enslaved people is now banned, enslavement has survived in British colonies.
1831	A serious revolt in Jamaica convinces many British traders that enough is enough, slavery is starting to look like too risky a way of making money, it is also becoming a less profitable and efficient way of growing crops.
1833	Slavery is abolished completely, however, it has persisted to this day. Cocoa farms and Coltan mines in African and South America still use enslaved workforces. Construction workers in Qatar and even some workforces in the UK at hand car washes and nail bars are given so few rights and such poor pay, they are effectively enslaved.

What were West African Kingdoms like before the the arrival of Europeans? In the 14th Century, **West Africa was dominated by the Mali Empire, which had grown by trading salt, gold and slaves. In the 14th Century, the Empire was ruled by Mansa Musa, thought to be history's richest person.** Mansa Musa, famously gave away so much gold on his pilgrimage to Mecca in 1326 that he caused a spell of inflation in the economy of Cairo. **Musa helped spread Islam throughout his West African territories, building mosques, universities and developing the city of Timbuktu into a centre of learning and culture.** After his death in the late 14th Century, the Mali Empire went into decline. Mali people did not use written history, instead they passed on stories and traditions through Griohs, special singers and storytellers who mixed myth and history together in songs which are still performed today, this means that Mali history is difficult to understand for Western historians. Close to Mali, was the Kingdom of Benin, which rose in prominence and wealth in modern day Nigeria from around 900-1900. **Benin was one of the earliest African kingdoms to trade with Europeans, contacting Portuguese traders in the 14th Century. In the late 1800s the British brutally destroyed Benin city and conquered the territory of the entire kingdom, coveting their access to valuable resources like gold and ivory.** The British stole the Benin Bronzes, important decorative metal artworks that told the countries history through sculpted images. Many of these stolen treasures have still not been returned to their homeland.

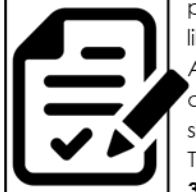


How did the Transatlantic triangle function?: Europeans wanted more tobacco to smoke, sugar for tea and coffee, and cotton to make cloth. So they sent **guns, hardware and cloth to West Africa in exchange for enslaved people that would then be shipped to the West Indies and North America** to work on the plantations to meet the European demand for their crops. These crops would then be shipped back to England and Europe, and the triangular trade would begin again. **The Middle Passage**: An estimated 12-15 million Africans were shipped across the Atlantic, on a route known as the Middle Passage. 10-20% of enslaved people died on this journey due to the horrendous conditions on the ships. **People were stored below decks as cargo, lying down and shackled together. In total, 2 million died on the journey**. Few people in Europe would have known how enslaved people were treated on the Middle Passage.

How were enslaved people treated on plantations?: Enslaved people were auctioned to work on plantations, which were huge farms that focus on growing just one crop. Plantations across the Americas grew rice, sugar, cotton and tobacco. **Fit and healthy Africans were made into field slaves; planting and harvesting crops**, while the young, elderly or sick would be given work cleaning, guarding or driving away birds. **Sugar plantations were especially brutal, as sugar cane begins to lose it's sweetness as soon as it is cut, meaning the enslaved people were driven to work as fast as possible**. The people in charge were called overseers, often an enslaved person would be promoted to this role, a strategy devised by plantation owners to turn the enslaved against each other. **Domestic slaves cooked and cleaned in their owners home, often these were women and were sadly, were often subjected to sexual abuse**. Punishments for disobedience included floggings, mutilation and being tied up and left to die. Living conditions were poor, enslaved people lived in wooden shacks that were overcrowded and often didn't have floors. It was common for many families to live together in the same shack.

How did the British Government protect slavery?: British pro slavery Conservative politicians fought and campaigned to maintain and protect the trade. Some Christians claimed that an Old Testament story called **"The Curse of Ham"** taught that some people were cursed to work for others, also a letter written by the apostle, Paul was understood as saying that servants should be obedient to their masters. **Both of these passages are now understood to have been misread (probably on purpose) by those who benefitted from slavery**. The discredited science of **phrenology** was also popular in the 19th century, claiming that African people were naturally less intelligent than Europeans and that this could be proven by the shape of a person's skull. Finally, **many rich English people benefitted from slavery**, and used their wealth and influence to fight against it's abolition. Edward Colston for example, donated £71,000 to charity and founded schools and churches in the city of Bristol. He was given a statue in the city and for many centuries, it was argued that his charitable work was only possibly because of his role in enslavement, until 2020, when his statue was forcibly removed and dumped in a river by anti slavery protestors.

How did enslaved people resist?: There were thousands of smaller acts of resistance against enslavement that are not recorded in historical evidence, such as **pretending not to understand instructions, working intentionally slowly or taking more food than allowed**. Enslaved people also used cultural resistance through language, music and dance, to keep alive aspects of their African heritage including the creation of **"slave hollers"**, songs that would be sung during working hours to create a sense of unity and togetherness. **Violent resistance also took place, the Maroons** were a group of former enslaved people who had escaped. They lived in the Blue Mountains of Jamaica and assisted others in escaping and joining their community. They were led by a woman known as 'Nanny'. They caused such a problem for the British that soldiers were sent in to try to defeat them. Eventually, they were imprisoned and shipped to British colonies in Nova Scotia (Canada) and Sierra Leone (West Africa). **The Haitian Revolution (1791-1804):** From 1793-1802, Toussaint Louverture led a revolt in Saint-Domingue (modern day Haiti). He was a former enslaved person who had been granted his freedom by his master. He was organized and skillful as a military leader and turned untrained rebels into a serious fighting force. He was imprisoned by the French in 1802 and died a year later. Despite this, **the revolution continued and the enslaved people defeated their colonial rulers in 1804. Haiti was declared their country.**



How did abolitionists fight against slavery?: The slave trade in Britain was abolished in 1807 and slavery itself was banned in 1833. One of the reasons was due to the **Enlightenment**, when some writers and philosophers began to question old traditions and ideas, as well as the idea that people have a right to liberty and equality. One man was **Granville Sharp**, a lawyer who campaigned from 1787 and set up the Abolition Committee of 12 influential men. Another important figure was **Thomas Clarkson:** He realized the campaign needed public support and so he needed to educate people about the horrific realities of the slave trade. He interviewed over 20,000 people connected with the slave trade and recorded their stories. These were made public with a huge propaganda campaign. **Between 1787 and 1794, he travelled 35,000 miles around Britain, holding meetings and giving lectures.** Many people were shocked and appalled by what they heard. **Olaudah Equiano** published his autobiography in 1789, he was a former enslaved person and gave an honest account of the middle passage and life on a plantation which helped the public understand that enslaved people were not just property. Numerous anti-slavery societies were formed by nonconformist groups who used religious arguments in favour of abolition. People proudly wore abolition medallions and brooches. **Members of the public put pressure on MPs, most commonly through petitions** that were sent to Parliament. By 1792, Parliament received over 500 different abolition petitions per year. Many also campaigned **through the use of a sugar boycott. This added economic pressure onto MPs.**

How and why was Transatlantic slavery made illegal?: Slavery could not be abolished without Parliament passing a law. **William Wilberforce** was an MP who was against slavery. He was a powerful speaker and skillful politician who worked to convince other MPs to join the abolition cause. However, he was met with a lot of opposition in Parliament. **Some MPs were plantation owners themselves and profited from the trade triangle.** Others feared abolition would ruin the British economy. Yet Wilberforce introduced an abolition bill every year between 1790 and 1806, but they kept being defeated. MPs needed to be convinced that change had to happen. The final push: It became impossible for MPs to ignore the public outcry against the transatlantic trade. Many MPs came round to the idea, although many would have done so to protect reputations and positions. **In 1807, Wilberforce again introduced a bill to parliament to abolish the trade. After a 10-hour debate, the bill passed.** The British transatlantic trade was abolished. The British navy quickly established the **West Africa squadron** to stop ships illegally trafficking enslaved people from Africa. Still, those who were already enslaved were not yet free, and campaigners continued to fight to abolish slavery completely. In 1823, **the "Anti Slavery Society"** was set up in London, their work, along with a book called **"Capitalism and Slavery"** by Eric Williams, arguing that slavery was no longer profitable, and **a serious revolt in Jamaica in 1831**, led to the final abolition of slavery in 1833.

KEY TERMS	
Transatlantic slavery	A form of slavery that exited C15-C18 and involved trafficking African people to the Americas to grow crops for trade to enrich European empires.
Enslaved person	A person who has been enslaved, a more accurate and humanising than the label, "slave."
Plantation	A large farm that focused on growing one crop, e.g. sugar, cotton, tobacco. Plantations often used enslaved workforces.
Middle Passage	The middle leg of the transatlantic triangle, from Africa to the Americas.
Cat o Nine tails	A whip used to punish disobedience on board middle passage ships, had nine pronged tails and could caused agonising punishment.
Speculum Oris	A torture device used to force feed enslaved people , many would go on hunger strike.
Phrenology	A discredited pseudoscience claiming that a person's character could be judged by the shape of their skull, used to justify the enslavement of African people.
The curse of Ham	A wilfully misinterpreted section of the Old Testament, used to claim that some men were destined to work for others and in turn, to justify enslavement.
Slave Holler	A song created by enslaved people to sing on plantations, often involving call and response lyrics, built a sense of culture and community among the enslaved.
Boycott	Refusing to fund or buy a certain product or service as a protest against it.
Abolition	The act of abolishing something, i.e. making it illegal.

Year 8 History Knowledge Organiser Democracy and Women's Rights

'Angel in the House': Despite the 1884 Act which expanded the franchise, only one in three men had the right to vote. For some men and all women, equality was a long way off. For women living in Victorian England they had a very clear role. The role of a woman was to be subservient to men and fulfil the role if a house wife and mother. In the mid 19th century, married women were not recognised as being legally separate people from their husbands. Therefore, all the property owned before her marriage became his as did all of her earnings once she was married. Many women led a very sheltered life controlled by their husbands. Women's

Changes in society: Increased prospectus for women: The lives of women had been dictated to by having little freedoms or opportunities. However, in the late 1800s during the peak of the Industrial Revolution, job prospects for women began to increase. Women worked in clerical and office jobs particularly in government departments as well as in shops as shop assistants. The Education Acts of 1870, 1880 and 1891 meant that elementary education became free and compulsory, thus creating jobs for teachers and ensuring girls could read and write.

Leisure and Fashion: Women who worked wanted to have fun in their time off. Following the Factor Act of 1874 and the Bank Holidays Act of 1871, women began to participate in more leisure activities. The production of the bicycle in 1885 was a turning point for women, not only because it became a hobby, but women could not travel freely wherever they wanted. Cycling also impacted women's fashion. The stereotypical bustles worn by women were not safe to wear whilst cycling. Women began to wear shorter skirts and even loose-fitting knee length trousers.

Campaigns: The NUWSS organisation was established in 1897 with the aim to gain votes for women. Led by the Suffragists, this organisation used legal means to get the vote through holding meetings, marches and creating pamphlets. In 1903 was the emergence of the WSPU led by Emmeline Pankhurst with the same desire to get women the vote. This organisation used very different methods, such as holding public demonstrations, chaining themselves to railings, refusing to pay taxes and even hid in the Houses of Parliament so that they could disrupt debates. The WSPU used more militant action and in 1910 began attacking property, smashing the windows of shops, offices and government buildings as well as burnt down houses.

Key Individuals

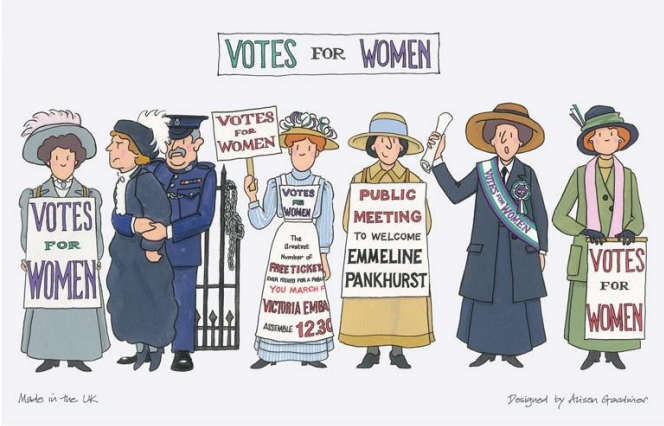
			
Emmeline Pankhurst WSPU	Christabel Pankhurst WSPU	Emily Wilding Davison WSPU	Millicent Fawcett NUWSS
Led the WSPU from October 1903. Took more militant action such as window smashing, arson and hunger strikes. Arrested numerous times, went on hunger strike and was force fed. Died in 1928.	Became a speaker for the WSPU in 1905. She trained as a lawyer but could not practice as a woman. Arrested with her mother. Fled England in 1912 for fear of being arrested again. Unsuccessfully ran for Parliament in 1918.	Joined WSPU in 1906. 3 years later, left job as a teacher and became a suffragette full time. Frequently arrested for a number of crimes including setting fire to a post box. By 1911, become increasingly militant.	Leading suffragist and led NUWSS from 1897-1919. Played a key role in getting women the vote. Dedicated to using constitutional means, and argued that militancy was counter-productive.

Suffrage	The right to vote in political elections.
Suffragette	A campaigner for women's suffrage willing to undertake militant action or break the law.
Suffragist	A campaigner for women's suffrage who believes in constitutional methods of campaigning.
WSPU	Women's Social and Political Union which was formed when Emmeline Pankhurst found disillusionment with the progress of the NUWSS - 'Deeds not Words' was their slogan.
NUWSS	The National Union of Women's Suffrage Societies was formed in 1897 and brought together many smaller suffrage organisations. The NUWSSS's methods was non-confrontational and constitutional.
Militant	Aggressive and violent behaviour in pursuit of a political cause, favouring extreme or confrontational campaign methods.
Petition	A formal written request or application, especially one signed by many people to a particular individual, for example, the government.
Pacifist	An individual who disagrees with war on principle.
Enfranchisement	To be granted the vote or the state of having a vote.
Constitutional	A peaceful legal way of campaigning.
Manifesto	A public declaration or proclamation stating the aims and methods of a campaign group.
Arson	The act of deliberately setting fire to a property with a view to causing extensive damage.
Cat and Mouse Act	Permitted suffragettes on hunger strike to be released but re-arrested once well again to complete their sentence.

History

Key Events

1897	NUWSS formed. Millicent Fawcett is leader
1903	WSPU is formed by Emmeline Pankhurst and daughters.
1905	Militant campaign begins - Christabel Pankhurst and Annie Kenney arrested.
1908	Mass rally in London - 300,000 to 500,000 activists attend. Window smashing using stones with written pleas on them.
1909	Hunger strike and force feeding starts. Marian Wallace Dunlop becomes the first hunger striker.
1913	Militant bomb and arson campaigns and increasing arrests which results in the passing of the 'Cat and Mouse Act' under which hunger strikers are temporarily released then rearrested to prevent them dying in police custody.
1913	Emily Wilding Davison attempts to pin a Suffragette scarf onto the King's Horse at the Derby. She is struck by the horse and dies four days later.
1914	World War One starts. Suffragette leaders urge women to join the war effort. NUWSS continues to campaign for recognition for their work.
1918	The Representation of the People Act is passed, allowing men over 21 and women over 30 to vote.



Significance of WWI

World War One: Before the outbreak of WWI, women were expected to carry out the traditional role of a mother and housewife. When war broke out in August 1914, the WSPU and NUWSS stopped their campaigning and supported the war effort. When conscription was introduced in 1916 and more men joined the armed forced, women were called upon to fill the roles of men. Women across England joined the Women's Land Army to work with farmers. Women also worked in the armed services as nurses, cooks, clerks and ambulance drivers. Women also worked in gas works, breweries, for bus, train and tram companies and even as chimney sweeps and in laboratories. In 1915 there was a munitions crisis and the government began a campaign to get women to work in munitions factories. A highly dangerous job, women showed their support for the war and by 1918 950,000 women worked in munitions factories.

Road to Democracy

Consequences of WWI: Despite women's efforts throughout WWI, many women returned to domestic roles once men returned home. However, there were significant gains for women. There was an increase in women entering prestigious jobs, for example, 77 women had became barristers by 1927. The growth in industry provided more jobs for women particularly in the Midlands and the South East. **Finally, in 1928 the Equal Franchise Act gave he vote to all women.**

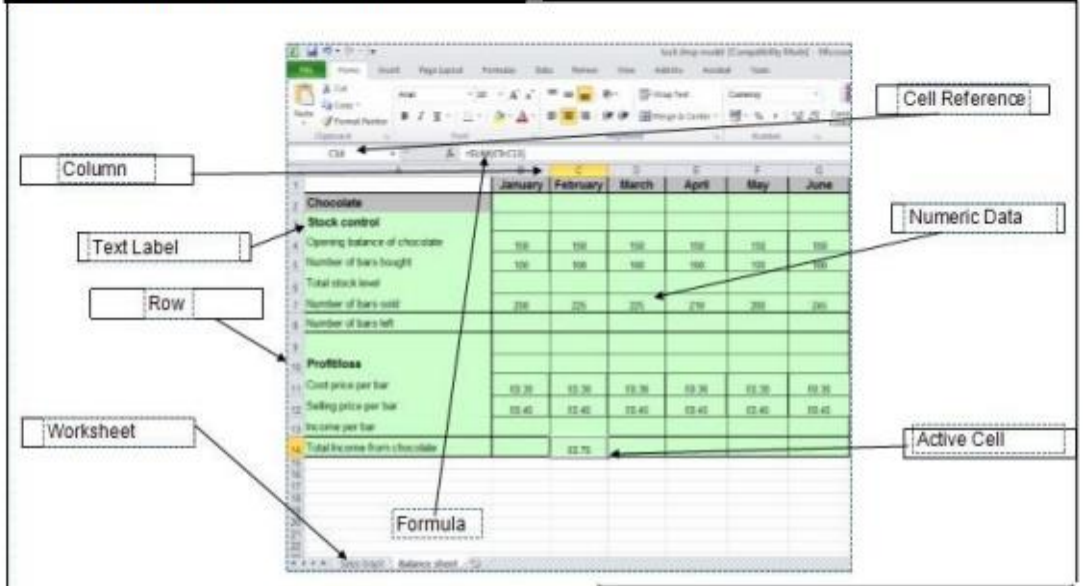
History

Knowledge Organiser - Spreadsheets

Spreadsheets are used to store information and data. Once we have our data in a spreadsheet we can perform powerful calculations, make graphs and charts and analyse pattern/trends in the data. Once the data is formatted it becomes information.

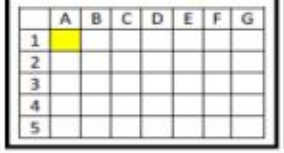
Other uses for spreadsheets –

- Modelling and Planning
- Finance and Budgeting
- Predictions / Simulations
- Calculations
- Creating charts and graphs



Golden rule: every formula always starts with an =

Cell references begin with a letter, and finish with a number. EG: A1



A range is a selection of cells. EG: A2:F4

Operators	
+	Adds two numbers / cells
-	Subtracts one cell or number from another
*	Multiplies two numbers/cells
/	Divides one number / cell from another one
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to

At Home Imagine that you are creating a spreadsheet to keep track of your spending – include pocket money, money received as gifts etc.

• Could you use a function to calculate how long it would take you to save up for something that you want? Could you create a test for someone else who has completed this unit to check their knowledge of the key terms learnt? Could you create your own 'house style'? What font would you use? What colour scheme?

What is a Function?	A **function** is a standard routine used to perform common tasks. It represents a complex formula that uses reserved words e.g. VLOOKUP, IF. A **function** performs a specific set of operations on its input values to produce a single output value.
What is a Formula?	Using **formulas** in **spreadsheets** can allow you to quickly make **calculations** and get totals of multiple cells, rows, or columns in a **spreadsheet**.
Conditional Formatting	is a tool that allows you to apply **formats** to a cell or range of cells, and have that **formatting** change depending on the value of the cell or the value of a formula. For example, you can have a cell appear bold only when the value of the cell is greater than 100.

Common Formulas/Functions	
= SUM	Adds a range of cells together
= AVERAGE	Finds an average for a range of cells
= MIN	Returns the smallest value in range
= MAX	Returns the highest value in a range
= COUNT	Counts cells if they meet a condition

IF	one of the logical **functions**, to return one value **if** a condition is true and another value **if** it's false. For example: **=IF**(A2>B2,"Over Budget","OK") **=IF**(A2=B2,B4-A4,"")
Count IF	=COUNTIF (Where do you want to look?, What do you want to look for?)
Auto SUM	**Excel automatically** enters a formula (that uses the **SUM**function) to **sum** the numbers
= COUNT	Counts cells if they meet a condition

IT : Computer Science

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Knowledge Organiser Computer Science Programming

IT : Computer Science

Selection is used to allow the program to make a choice and take a different path.

The keywords used in Python are:

if - checks if the **condition** is true, if so the program runs the indented code below it.

elif - if the first if fails then this elif condition is checked, there can be multiple of these.

else - if all if and elif statements are not true the the code indented below else will run.

Example:

```
colour - input("Enter your favourite colour");
if colour == "Red":
        print("Reminds me of tomatoes");
elif colour == "Blue":
        print("Reminds me of the sea!");
else:
        print("If it ain't Red or Blue then I ain't interested");
```

Variables are simply a place on the computer's memory that is given a name in order for it to remember it.

In Python you create a variable by writing the name of the variable followed by an =.

Examples:
name = "Spongebob"; age = 14

To **print** out a statement or a **variable** we use the code below:

Printing a new message:

```
print("Hello World");
```

Printing the value of a variable:

```
print(x);
```

Printing a message with variables included:

```
print("Hello",name,"your are",age,"years old today");
```

Key Words:

Algorithm: A set of instructions or code used to solve a problem.

Syntax: The rules of the programming language that need to be followed in order for it to work.

Variables: Data that is stored in memory that is likely to change.

Program: Code compiled together to perform a specific function.

String: A Variable data type that can store a combination of letters, characters and numbers.
Integer: A Variable data type that can store whole numbers.
Float: A Variable data type that can store decimal numbers.
Boolean: A Variable data type that stores either TRUE or FALSE.

To allow your Python program to get information from the user you will need to use the **input** command. Make sure you use the correct command for what you are asking for.

String inputs (such as a name):

```
input("Enter your name");
```

Integer Inputs (for whole number responses):

```
int(input("What is your age?"));
```

Float Inputs (for decimal number responses):

```
float(input("What is your shoe size?"));
```

Plotting Quadratic Graphs:

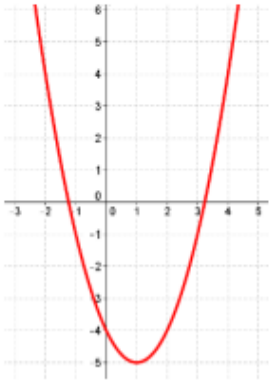
$y = x^2 - 2x - 4$

When $x = -2, y = (-2)^2 - (2 \times -2) - 4 = 4$

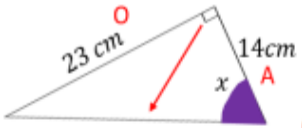
x	-2	-1	0	1	2	3	4
y	4	-1	-4	-5	-4	-1	4

Coordinates are (-2, 4), (0,-4) etc.

Plot these coordinates on a coordinate grid and plot a **SMOOTH** curve.



Trigonometry and Finding Angles:



$\tan(x) = \frac{O}{A}$

$\tan(x) = \frac{23}{14}$

$(\tan^{-1})$ $(\tan^{-1})$

$x = \tan^{-1}(\frac{23}{14})$

$x = 58.7°(3sf)$

Solving Quadratics by factorising:

$x^2 - x - 42 = 0$

We require 2 numbers that **add to make the coefficient of x (-1)** and **multiply to make the constant term (-42).** The two numbers are -7 and 6. We then factorise the quadratic:

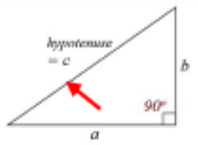
$(x - 7)(x - 6) = 0$

Either: $x - 7 = 0$ or $x + 6 = 0$

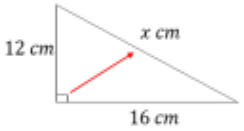
$(+7)$ $(+7)$ (-6) (-6)

Solutions: $x = 7$ or $x = -6$

Pythagoras' Theorem:



$c^2 = a^2 + b^2$



$a^2 + b^2 = c^2$

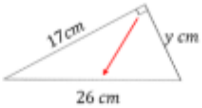
$12^2 + 16^2 = x^2$

$144 + 256 = x^2$

$x^2 = 400$

$(\surd)$ $(\surd)$

$x = 20cm$



$a^2 + b^2 = c^2$

$y^2 + 17^2 = 26^2$

$y^2 + 289 = 676$

(-289) (-289)

$y^2 = 387$

$(\surd)$ $(\surd)$

$y = \sqrt{387}\ cm$ or $y = 19.7cm(3sf)$

Sequences

Find the first 3 terms of the sequence given by: $n(n - 4)$

Remember: $n(n - 4) = n \times (n - 4)$

$n = 1, \Rightarrow 1 \times (1 - 4) = 1 \times -3 = -3$

$n = 2, \Rightarrow 2 \times (2 - 4) = 2 \times -2 = -4$

$n = 3, \Rightarrow 3 \times (3 - 4) = 3 \times -1 = -3$

Solving Simultaneous Equations using Elimination:

$3x + 5y = 14$ (1)

$7x + 2y = 23$ (2)

Make the coefficient of x or y the same to eliminate one of the vaiables

$(1) \times 7 \Rightarrow 21x + 35y = 98$

$(2) \times 3 \Rightarrow 21x + 6y = 69$

Subtract the two equations together as the signs of x are **the same**

$29y = 29$

$(\div 29)$ $(\div 29)$

$y = 1$

To find our x value, we need to substitute $y = 1$ into either equation. Using equation 2:

$7x + (2 \times 1) = 23$

$7x + 2 = 23$

(-2) (-2)

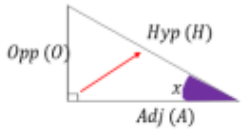
$7x = 21$

$(\div 7)$ $(\div 7)$

$x = 3$

Solution: $x = 3, y = 1$

Trigonometry and Finding Sides:

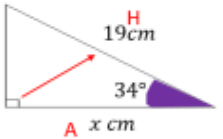


$\sin x = \frac{O}{H}$

$\cos x = \frac{A}{H}$

$\tan x = \frac{O}{A}$

Use the word **SOHCAHTOA** to help you remember!



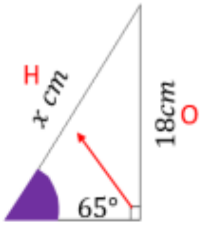
$\cos(34) = \frac{A}{H}$

$\cos(34) = \frac{x}{19}$

$(\times 13)$ $(\times 13)$

$x = 19 \times \cos(34)$

$x = 15.8cm(3sf)$



$\sin(65) = \frac{O}{H}$

$\sin(65) = \frac{18}{x}$

$(\times x)$ $(\times x)$

$x \times \sin(65) = 18$

$(\div \sin(65))$ $(\div \sin(65))$

$x = \frac{18}{\sin(65)} = 19.9cm(3sf)$

Maths

8A Half-term 5

8B Half-term 5

Plotting Linear Graphs:

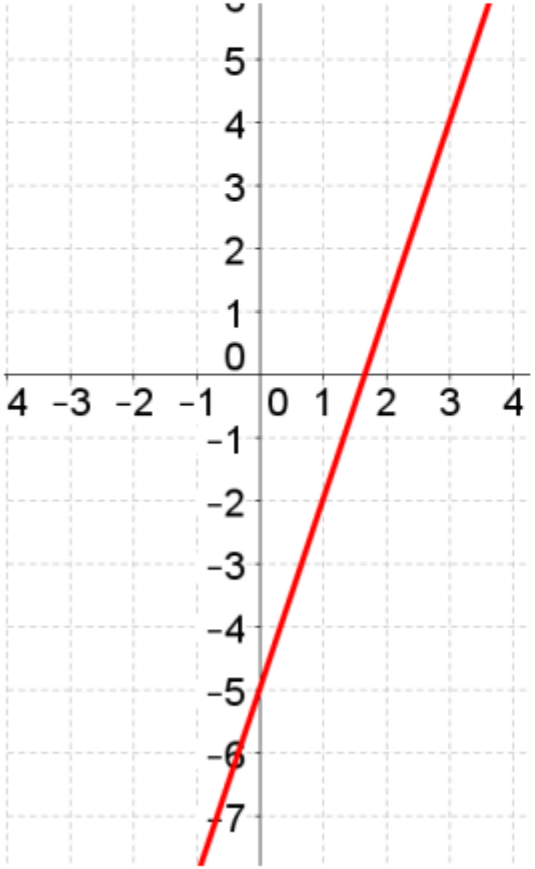
$y = 3x - 5$

When $x = 2, y = (3 \times 2) - 5 = 1$

x	-3	-2	-1	0	1	2	3
y	-14	-11	-8	-5	-2	1	4

Coordinates are (-3, -14), (-2,-11) etc.

Plot these coordinates on a coordinate grid and join them together to form a **STRAIGHT LINE**

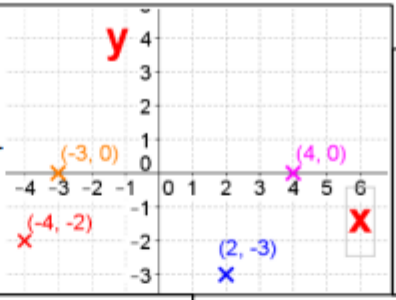


Coordinates

(x, y)

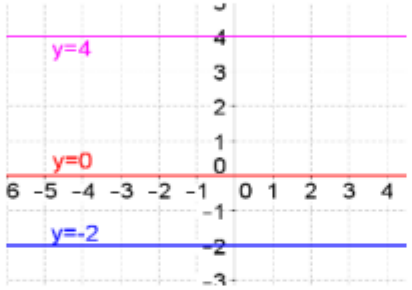
x value: Along the Corridor

y value: Up the stairs



Horizontal Line Graphs

$y = 4, y = -2, y = 0$ *etc.*



Vertical Line Graphs

$x = 3, x = -1, x = 0$ *etc.*

Generating Sequences

Find the first 3 terms of the sequence with nth term: $3n^2 - 7$

$n = 1, \Rightarrow (3 \times 1^2) - 7 = -4$

$n = 2, \Rightarrow (3 \times 2^2) - 7 = 5$

$n = 3, \Rightarrow (3 \times 3^2) - 7 = 20$

Finding the nth term

Find the nth term of:

$$5, 11, 17, 23, \ldots$$

The sequence goes up in 6 just like the 6 times table. We write the 6 times table, $6n$. However, our sequences if 1 less than the 6 times table. Therefore, the nth term is: $\boldsymbol{6n - 1}$

The 50th term of the sequence is:

$$(6 \times 50) - 1 = 299$$

Arithmetic Sequences: Add or subtract the same number each time (The common difference)

2, 11, 20, 29, … Common difference = 9

14, 11, 8, 5, … Common difference = -3

Geometric Sequences: Multiply by the same number each time (The common ratio)

5, 10, 20, 40, … Common Ratio = 5

12, 6, 3, 1.5, … Common Ratio = 0.5

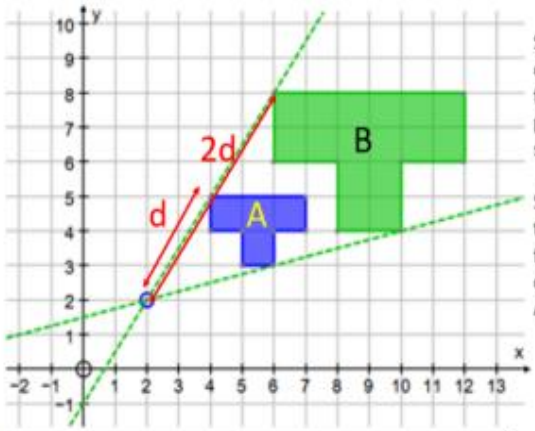
1, −3, 9, −27, … Common Ratio = -3

Fibonacci Sequence: Add the 2 previous terms together to get the next.

1, 1, 2, 3, 5, 8, 13, 21, 34, …

Maths

Enlargements



Shape A has been enlarged by a scale factor 2 about the point (2,2) to obtain shape B

Shape B is also twice the distance from (2,2) compared to Shape A

Maps and Scales

The map to the left has a scale of 1:1000
This means that 1cm on the map represents 1000m in real life.

The blue line is 3.03cm. In real life the distance between the 2 points is given by

×3.03 1cm:1000m ×3.03

3.03cm: 3030m

Buckingham Palace and Sloan Square are 3.03km apart.

Compound Measures

$Speed(S), Distance(D)\ and\ Time\ (T)$

$$S = \frac{D}{T}, \quad D = S \times T, \quad T = \frac{D}{S}$$

$Pressure(P), Force(F), and\ Area\ (A)$

$$P = \frac{F}{A}, \quad F = P \times A, \quad A = \frac{F}{P}$$

$Density(D), Mass(M)\ and\ Volume(V)$

$$D = \frac{M}{V}, \quad M = D \times V, \quad V = \frac{M}{D}$$

Units:

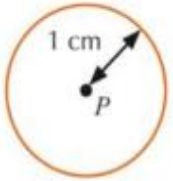
Speed: m/s, km/h, mph

Pressure: N/m^2, N/cm^2

Density: kg/m^3, g/cm^3

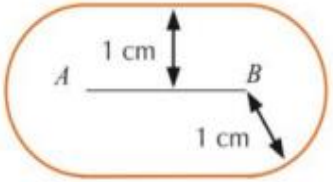
Loci

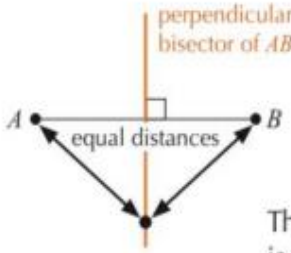
A **locus** (plural **loci**) is a **set of points** which satisfy a particular condition. The types of loci you need to know are the sets of points that are a **fixed distance away** from a point or a line (or another kind of shape), and the sets of points that are **equidistant** (i.e. the **same distance**) from two points or two lines.



The locus of points that are a fixed distance, e.g. 1 cm, from a **point** P is a **circle** with radius 1 cm centred on P. To construct this, set your **compasses** to the given distance and draw a circle around the point.

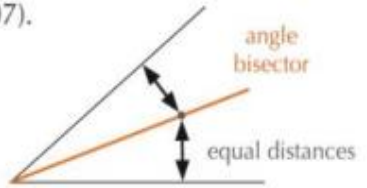
The locus of points that are a fixed distance from a **line** AB is a 'sausage shape'. To construct this, use your compasses to draw the ends, which are **semicircles**, then join them up with your ruler.





The locus of points equidistant from **two points** A and B is the **perpendicular bisector** of AB (see page 307).

The locus of points equidistant from **two lines** is their **angle bisector** (see page 308).



8A

Half-term 6

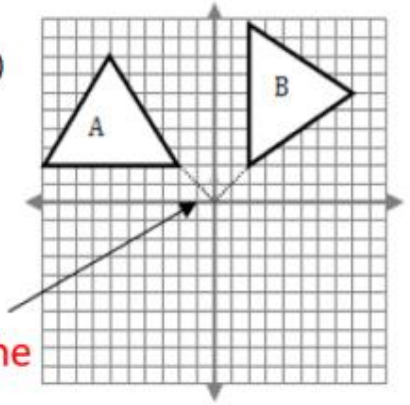
Maths

Rotations

Angle (90°, 180° or 270°)

Direction (Clockwise or Anti-Clockwise)

Centre of Enlargement



Shape A has been rotated 90° Clockwise about the Origin (0,0)

Conversion Graphs

We use Conversion Graphs to convert from one unit to another

This graph converts between UK pounds (£) and USA dollars ($) for a certain conversion rate.

Use the graph to convert £3 into dollars.

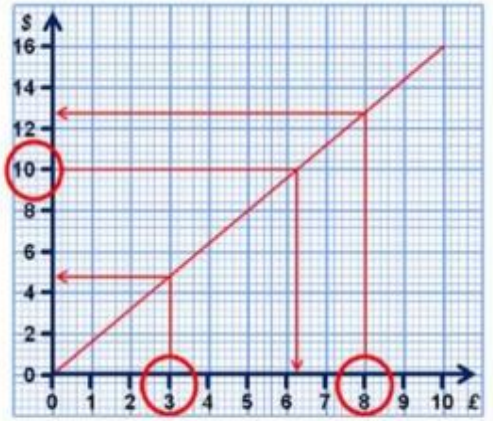
£3 = $4.80

Use the graph to convert £8 into dollars.

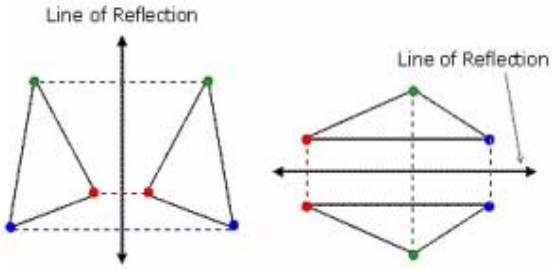
£8 = $12.80

Use the graph to convert $10 into pounds.

$10 = £6.25

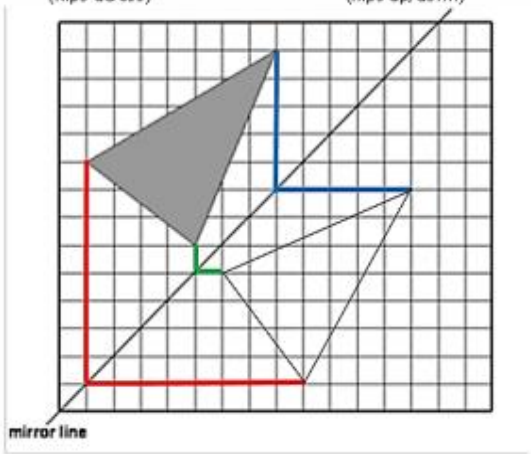


Reflections



Horizontal Reflection (flips across)

Vertical Reflection (flips up/down)

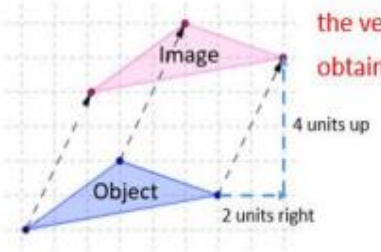


8B

Half-term 6

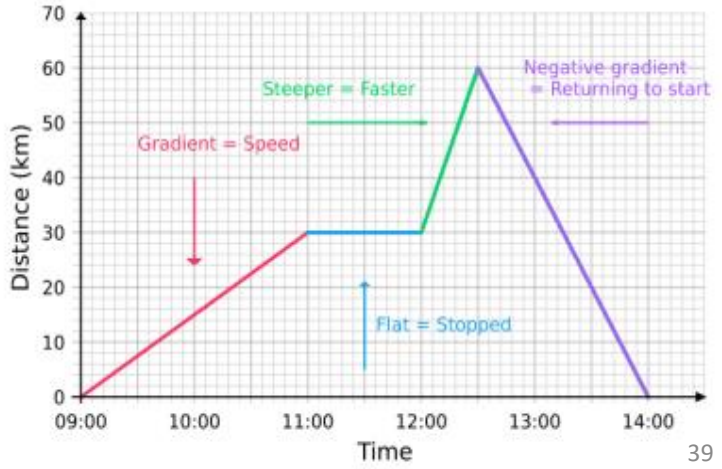
Translations:

Translation Vectors: $\binom{x}{y}$ ↔ ↕



The object has been translated by the vector $\binom{2}{4}$ to obtain the image

Distance Time Graphs



Maths

Y8 Music HT5&6 – The Blues Harmony/Tonality and Structure

Harmony – the chords that sit underneath a melody

Tonality - The type of harmony in a piece of music. Can be major or minor

Key – the group of notes/pitches that the music revolves around

Tonic – the note that the pitches are centered around 'the home note'

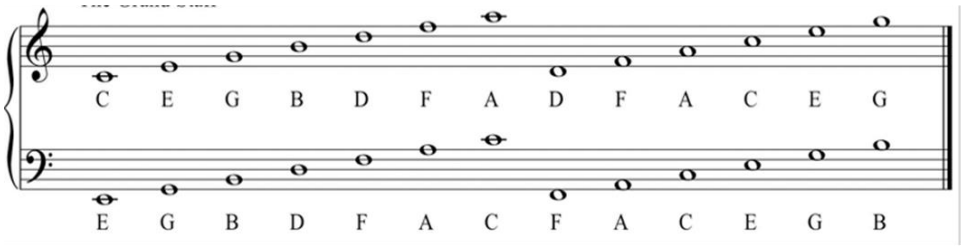
Chord – Notes played together on a piano or a guitar

Chord numbers – each chord has a Roman numeral to describe it's relationship to the tonic

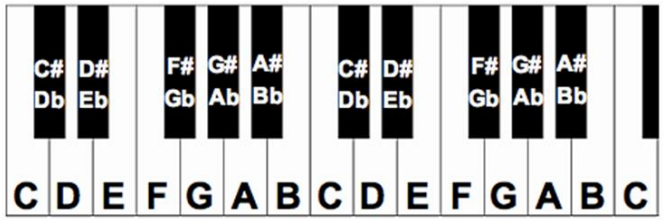
Structure a description of the sections of a piece of music:

- **Verse:** A repeated section of a song that usually features a new set of lyrics on each repetition.
- **Chorus:** A repeated section that contains the main musical or lyrical ideas of the song.
- **Instrumental:** A part of the song with no singing, such as a guitar solo.
- **Intro:** Short for introduction, this is a short instrumental passage at the start of the song.
- **Bridge** Connects different sections eg verse and chorus
- **Middle 8** A section that has a different melody to the verse and chorus
- **Outro** short ending section, usually instrumental

Y8 Music HT5&6 – The Blues Harmony/Tonality and Structure



Piano keyboard diagram



A **semitone** *(or half step)* is the distance in pitch between a note and its nearest neighbour on a piano keyboard. For example, C is next to C sharp/D flat.

A **tone** *(or whole step)* is an interval of **2 semitones added together**. For example, the interval between C and D is a tone because the note C sharp/D flat is between them.

Triads have a ratio of semitones - +4, +3. To construct a triad, start with the play-skip-play-skip-play to get the note names, then use the ratio to check if any black keys are used

Christian Practices
Religion, Philosophy & Ethics

Key Terms	Definition
Sacraments	Outward signs of blessings from God. Each sacrament involves an important ceremony.
Baptism	A ceremony which welcomes someone into the church and blesses them by God removing their sin.
Pilgrimage	A journey religious people take to a holy place or a place of religious significance.
Priest	A priest is the leader of a Church. Other names for a priest are vicar, minister or pastor.
Incarnation	Means "made flesh" - God was made flesh in the person of Jesus.
Resurrection	Means being raised from the dead. Christians believe Jesus resurrected.
Saviour	Jesus is believed to be the savior – it is through His teachings, death on the cross and forgiveness of sins that Christians can go to heaven

"Whoever believes and is baptized will be saved" Jesus

"Love the Lord your God... (and) love your neighbour" Jesus

"For God so loved the world that he gave his one and only son, that whoever believes in him shall.. Have eternal life" John (Bible)

Roles of the Church

A Church, with a capital C, is a community of Christians. Many Christians believe they have a role to play when they belong to a Church. Christians may participate in activities such as...

- Attending church services
- Attending Bible discussion or prayer groups
- Supporting Christian youth clubs
- Attend social gatherings that encourage others to join the Church community
- Supporting outreach work such as running food banks or offering advice to those in need
- Charity work
- Volunteer in the church as a deacon or in the choir

christian aid

There are many Christian organisations and charities that aim to help people in need. One that works on a global level is Christian Aid. Christian Aid helps people across the world, sometimes those in need as a result of wars or natural disasters.

Christians should support charities as Jesus said the Greatest Commandment is to "Love God... (and) Love your neighbour"

Sacraments

Sacraments are outward signs of blessings from God. Each sacrament involves an important ceremony. In the Catholic Christian churches there are seven sacraments but in most Porestant Christian Churches there are only two.

Sacraments celebrated by all Christians

Baptism

- Baptism is about the process of leaving behind sin and entering a new life. Many Christians (including Catholics) perform baptism on babies as a way of welcoming them into the faith and making sure they are beginning their life journey without original sin.
- During the baptism, the individual will be washed with holy water as a symbol of getting rid of sin.
- Baptists (a type of Protestant) do not baptise babies. This is because they believe people should be old enough to choose to be baptised and should be able to make the baptismal vows themselves.

Eucharist

- **The first Eucharist was performed when Jesus shared bread and wine with his disciples the night before he was crucified (at the Last Supper).**
- **Catholic Christians** believe that during a Echarist service the bread and wine become the body and blood of Christ as a miracle (transubstantiation)
- **Protestant Christians** believe that the Eucharist (often called sharing Holy Communion) is a commemoration of the Last Supper – it is a time for spiritual reflection but no miracles take place.

Sacraments of Catholic Christians

- Confirmation is when a Christian confirms the promises made at their Baptism are still true, they do this publicly in church
- Marriage is when a couple promise (vow) to be faithful to one another and God for the rest of their lives
- Reconciliation is when a Christian asks a priest to forgive their sins in the name of God
- Anointing of the sick is when someone is blessed by a priest through prayer and holy water, whilst unwell
- Holy orders is when a man dedicates his life to serving God and the Church by becoming a priest, this is done publicly with the blessing of a bishop

Festivals

Christmas

- **Mo**st Christians celebrate Christmas on 25 December. However, **Orthodox** Christians use a different calendar, meaning they celebrate Christmas on 7 January.
- **Advent** is the period leading up to Christmas. It begins four Sundays before Christmas. In church during this time, many Christians are reminded of Old Testament **prophecies** about the coming of Jesus. Christians will often focus on the teachings from Jesus of love, hope, Joy and peace.

Why celebrate Christmas?

•Christmas is a time to remember that when Jesus was born, God became human. This allowed God to save humanity from sin. Without the **incarnation** of Jesus, Christianity could not exist.
•Christmas is a time for Christians to remember that they are part of a global community, despite differences within Christianity.
•Christmas is a time when families can bond and show love to one another. It reminds Christians that Jesus was born as a member of a human family who showed him love and loyalty.

Easter

Easter is an important festival that remembers and celebrates the last days of Jesus and his resurrection. The events of this week are known as **Holy.**
Jesus predicted that he would be arrested and killed for what he taught his followers to believe, he also predicted that he would resurrect from the dead. Everything he predicted came true in Holy Week proving to his followers he was Son of God, King of the Jews, God incarnate.

Why celebrate Holy Week?

•Holy Week shows Christians that Jesus was admired, **persecuted**, mocked and crucified all in one week. This reminds Christians of the range of experiences that people go through across the world.
•Christians are reminded of the suffering Jesus faced and the sacrifice he made for them.
•Easter is a time for Christians to remember that if they follow the teachings of Jesus, after death they will be united with God in Heaven.
•**The Bible** emphasises the idea that having faith in the resurrection of Jesus is a central part of Christian belief.

Pilgrimage

A pilgrimage is a journey religious people take to a holy place or a place of religious significance. Pilgrimage can be a physical journey but it can also represent an individual's journey of faith.

In the Bible it mentions that even Jesus went one spiritual journeys each year – *"Every year Jesus' parents went to Jerusalem for the Festival of the Passover. When he was 12 years old, they went up to the festival, according to the custom. After the festival was over, while his parents were returning home, the boy Jesus stayed behind in Jerusalem, but they were unaware of it"*

Walsingham is a village in Norfolk that became a pilgrimage site in 1061 after Richeldis de Faverches had a vision of the house in Nazareth where Mary lived. A copy of the house was made, and thousands of people visit this site each year.

Jerusalem is a particularly important pilgrimage location, as this is where the events of Jesus' last days occurred.

Why go on pilgrimage?

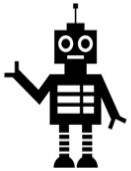
- To feel connected to God and deepen one's understanding of their faith
- Meet a diverse range of people who share a similar faith
- To spend time outside of one's normal routine to focus on their religion

Why not go on pilgrimage?

- Some Protestant Christians (such as John Calvin) believe pilgrimage can lead to celebrating relics of religious people or creating shrines which shouldn't be the focus of worship, such things distract from God

Speakers Corner
Religion, Philosophy & Ethics

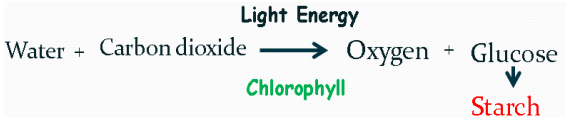
Religious Studies

Should we buy 'fast fashion'?	Can you be moral and rich?	Should we promote AI?	Should animals have rights?	Should we bring back the death penalty?
Fast fashion is a way for clothing to be produced cheaply and in high quantities. • Because people want cheap clothes companies pay very little to the makers. • Because fashion trends move on so quickly, clothing is often disposed off quickly too which harms the environment	More than a billion people live on less than $1 a day One in three people don't have safe dinking water **YET** The wealthiest person in the world has more wealth than most poor countries and all the people in the world living in poverty combines	Artificial intelligence describes a computer that can carry out tasks normally done by humans. As AI progresses it is possible that superintelligence can be programmed into robots. This could lead to ethical problems such as – if a self-driving car crashes and kills someone, who is held responsible?	French philosopher Rene Descartes believed animals are no more than complicated biological robots free for us to use as we require. However, Peter Singer (Humanist) believes we are just another evolved animal and any right we have should be given to animals too.	The death penalty was abolished in 1969 however, it exists in many countries still to this day. There are 92 countries with the death penalty although not all use them. Only 18 men had the death penalty in the USA last year
Arguments for… - People don't have much money to buy clothing so this is an affordable way to do it - The quality of clothing is lower now, things don't last as long so we need a high turnover of clothes 	**Arguments for…** - Yes because many rich people do good things e.g. Bill Gates set up the Gates Foundation - Wealthy individuals have often worked hard for their wealth 	**Arguments for…** - Yes because scientific and technology advancements are good for society, they can make life easier and reduce problems or suffering 	**Arguments for…** - Yes because animals have emotions and suffer mentally and physically too - Intelligent animals such as apes and dogs are aware of suffering making it even greater - We are just another animal, why should we have more rights?	**Arguments for…** - Yes because it can protect society - The Bible teaches "an eye for an eye" and the Quran states that in some cases the death penalty is allowed - It can help the victims family move on and feel like justice is done
Arguments against… - Not paying people properly for the clothes they make encourages child labour and unfair working and living conditions - People should be less greedy and pay more because it is fairer, companies should make less profit too - It is wrong to harm the environment which fast fashion does in the creation and disposal of clothing	**Arguments against…** - Jesus said "it is easier for a camel to go through the eye of a needle than for a rich person to enter heaven" - The rich should receive much higher taxes, it redistributes the wealth - Some extreme wealth is immoral - The positive impact a wealthy person could have is huge	**Arguments against…** - No because ethically, if things go wrong, we wouldn't have anyone to blame - Humans are the current dominant species on the planet, we don't want AI "taking over" - We cannot know all the potential dangers	**Arguments against…** - Most animals don't have the ability to understand the pain and thus don't suffer like humans do - Animals can be killed humanely - Animals don't have souls - Without testing drugs on animals we wouldn't have many of the life saving drugs that we do today 	**Arguments against…** - No because if a judge makes a mistake we cannot bring someone back to life - There is no forgiveness or turning one's life around if they are dead - Killing someone for acts such as murder doesn't teach that murder is wrong 

Y8 Bio T3- Plants

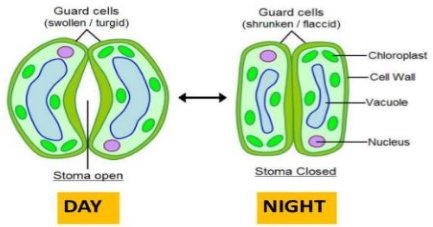
Photosynthesis

- It's a chemical process plants & algae use to make their own food (**glucose**)
- Photosynthesis takes place in the **CHLOROPLASTS** of plant cells.
- Light energy is absorbed by a green pigment called **CHLOROPHYLL**.
- Glucose is stored as starch



- A leaf is broad and flat to capture lots of sunlight.
- Veins carry water to the leaf and take food from the leaf to the rest of the plant.
- Certain plant cells contain chloroplasts filled with chlorophyll.
- Small holes called stomata in the underside of a leaf allow gases in and out.

When are stomata open and when are they closed?



Factors affecting photosynthesis

The rate of photosynthesis is limited by:

- Light intensity
- Temperature
- Availability of carbon dioxide.

These are known as limiting factors. Temperature affects the enzymes in plants.

Transpiration

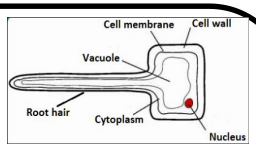
Transpiration is the movement of water through a plant.

- Water is absorbed through the roots by osmosis
- Water is transported up the xylem vessels
- Water evaporates through the stomata in the leaves.

Transpiration is affected by:

- Wind
- Temperature
- Rate of photosynthesis

Plant tissues



Root hair cells

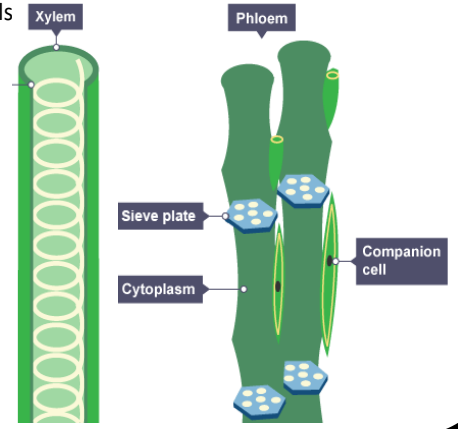
- Large surface area to absorb water by osmosis

Xylem

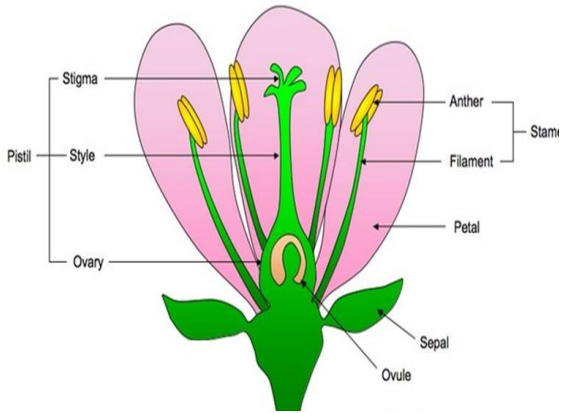
- Continuous hollow tube made up of dead cells.
- Transport water upwards.

Phloem

- Transport sugar up and down the plant.
- Made of living cells – sieve tubes and companion cells



Pollination

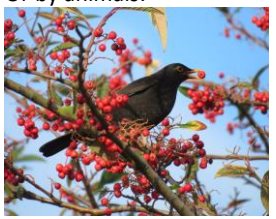


Pollen is transferred from the anther (male organ) of one plant to the stigma (female organ) of another plant. The pollen then fertilizes the ovule in the ovary. Pollen can be transferred by insects or by the wind.

Seed dispersal

Seeds can be dispersed by the wind:

Or by animals:



Seeds need to be dispersed away from the parent plant so as to not cause competition for light, minerals, space or water.

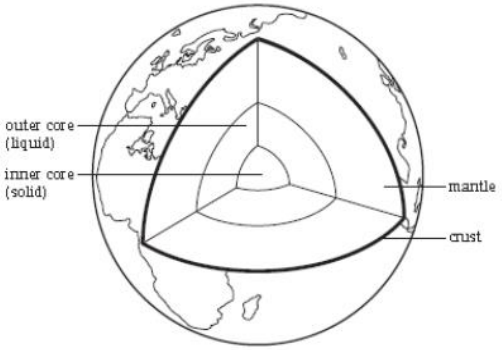
Science - Biology

Year 8 Chemistry T3 - Earth Science

Science - Chemistry

The structure of the Earth

The earth is made up of 4 layers, the inner core, outer core, mantle and crust.



The crust is split up in to large pieces called tectonic plates. These plates are moved around by the mantle which flows due to convection currents. Movements at plate boundaries can cause earthquakes and volcanoes.

Weathering

Rocks can be worn away by water or by changes in temperature.

Chemical weathering happens when rainwater reacts with minerals in the rock. Rainwater is slightly acidic, because it contains dissolved gases.

Physical weathering can happen in different ways. The minerals in a rock expand if it gets hot, and contract if it cools. These changes in size can produce strong forces. If the rock is heated and cooled over and over again the forces can make cracks in the rock. Physical weathering can also happen if water gets into a crack in the rock and freezes. Water expands when it turns into ice, and makes the crack wider. This kind of physical weathering is called **freeze–thaw action**.

Biological weathering is when rocks are broken up or worn away by plants and animals. For example, plant roots can grow into cracks in rocks and make the cracks bigger.

Types of rock

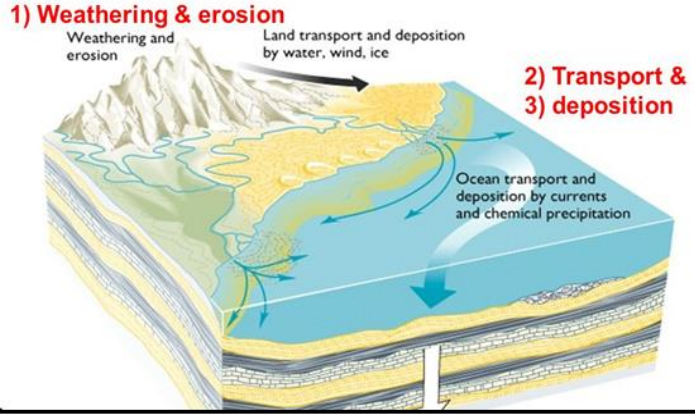
Type of rock	How it's formed	Description	Examples
Igneous	Molten rock is called **magma**. If the molten rock flows out of volcanoes it is called **lava**. **Igneous rocks** are formed when molten rock cools down. If it cools quickly if forms rocks with small crystals, if it cools slowly it forms rocks with large crystals.	Hard with interlocking crystals, not usually porous	Granite Basalt Pumice
Sedimentary	Layers of sediment collect and the bottom layers get squashed. The grains of sediment are forced closer together (**compacted**) and the water is squeezed out from between the grains. Minerals in the sediment 'glue' the grains of rock together (**cementation**). Eventually, **sedimentary rock** is formed.	Rounded grains, often soft and crumbly, often porous	Sandstone Limestone Chalk Conglomerate Shale
Metamorphic	Sedimentary or igneous rocks can be changed by heat or pressure into new kinds of rock, called **metamorphic rocks**.	Hard with interlocking crystals, often in bands of different colours, not usually porous	Marble Quartzite Slate

Erosion and transport

Rock can be weathered into smaller pieces. This is called **erosion**. The bits of rock can be **transported** away by streams, rivers and wind. Pieces of rock bump into each other while they are being transported, and bits get knocked off them. This is called **abrasion**. The bits of rock carried by a river are called **sediment**.

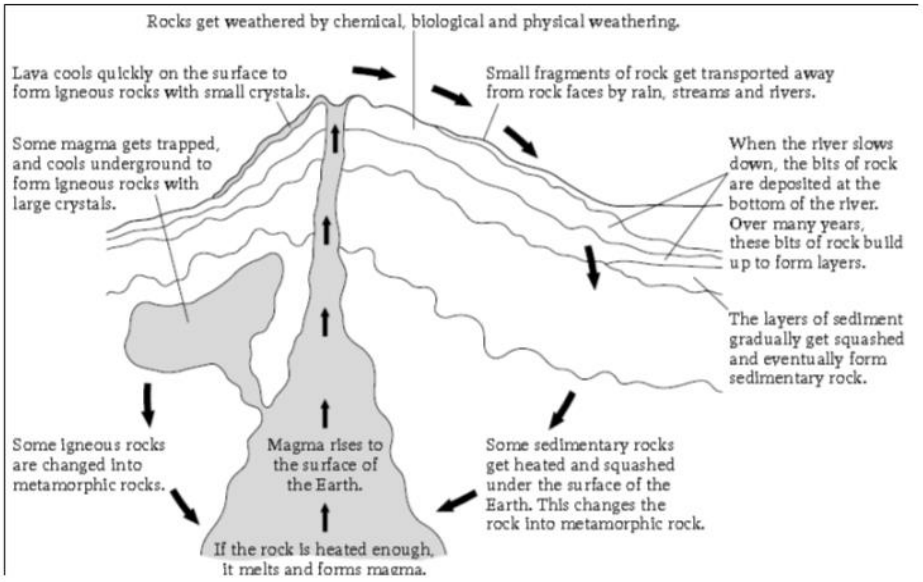
Fast moving water can move larger pieces of rock than slow moving water. Rivers slow down when they flow into a lake or the sea. The slow moving water cannot carry all of the sediment, so some of it is **deposited** on the bottom. Sediments often form layers.

Layers of sediment can also form when sea water evaporates and leaves salts behind.



The rock cycle

The Earth is continually changing. Rocks are weathered and eroded and new rocks are being formed. The processes which make rocks, weather them and change them are linked together in the **rock cycle**.



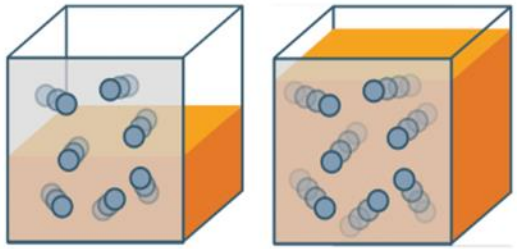
Y8 Phys T3- Energy

Science - Physics

Internal energy and temperature

Particles in substances are always moving. They store kinetic energy.

If we heat a substance up, the particles gain more kinetic energy and move around more.



Cooler object | Hotter object

Temperature is a measure of how much kinetic energy is stored in the particles of a substance. Higher temperatures means the particles have more kinetic energy and are moving faster.

The Law of conservation of energy states energy can not be created or destroyed. Energy is simply transferred from one store to another.

Energy is measured in Joules (J).

Energy Stores

Different forms of energy are stored by substances:

Chemical energy (stored in chemicals such as fuels)

Gravitational energy (stored in objects raised above the ground)

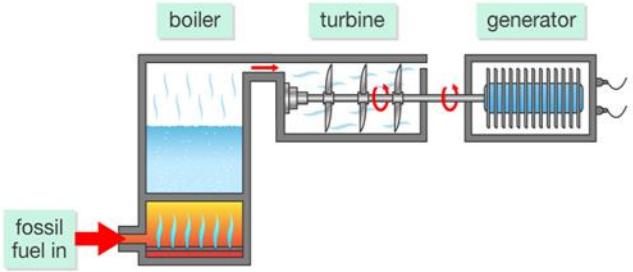
Elastic energy (stored in stretched or compressed objects)

Kinetic energy (stored in moving objects)

Nuclear energy (stored in the centre of atoms)

Thermal energy (stored in all substances)

A coal power station works on the basis of burning coal in order to heat water and produce steam. When steam is generated, it turns a turbine, which turns a generator, which generates electricity.



When fossil fuels are burnt they produce greenhouse gases such as carbon dioxide and sulphur dioxide. Fossil fuels are also non-renewable, meaning that we are using them faster than they are being replaced.

There are environmental risks associated with the over use of fossil fuels, including climate change, acid rain, melting of ice caps due to global warming.

Energy Transfers

Energy can be transferred from one store to another. For example, in a bow and arrow, the elastic energy stored in the bow is transferred into kinetic energy stored in the arrow as it flies.

Energy can be transferred from one store to another by:

A force

Heating

Electricity

Elastic energy (stored in the bow) → Force → Kinetic energy (stored in the arrow)

Alternative energy sources usually refer to energy sources that are not based on traditional methods of burning fossil fuels. A lot of research is going in to alternative energy sources that can reduce and even eliminate our dependence on fossil fuels. Most alternative energy is renewable, meaning we will not run out of the energy source. Some alternative energy sources are:

Wind, Solar, Hydroelectric, Geothermal, Wave, Tidal.

Year 8 Spanish Knowledge Organiser

Unit 5: En mi Ciudad

5.1 De paseo por mi ciudad

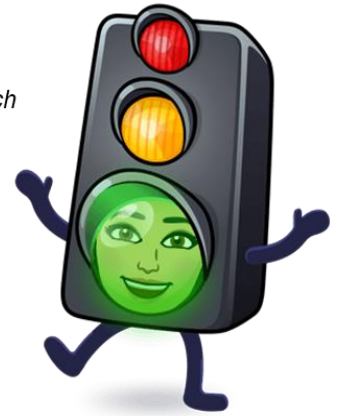
hay	*there is/are*
el lugar	*place*
el banco	*bank*
la biblioteca	*library*
la calle	*street*
la catedral	*cathedral*
el cine	*cinema*
la estación de tren	*train station*
el estadio	*stadium*
el hospital	*hospital*
el hotel	*hotel*
la iglesia	*church*
el instituto	*school*
la mezquita	*mosque*
el museo	*museum*
el parque	*park*
la plaza de toros	*bullring*
el restaurante	*restaurant*
el supermercado	*supermarket*
la tienda de ropa	*clothes shop*
bonito/a	*pretty*
histórico/a	*historic*
tranquilo/a	*quiet, peaceful*

5.2 Por eso voy allí

apoyar	*to support*
comprar	*to buy*
estudiar	*to study*
ir	*to go*
leer	*to read*
observar	*to observe*
pasear	*to walk*
ver	*to see, watch*
viajar	*to travel*
visitar	*to visit*
las ruinas	*ruins*
el sitio	*site, place*
único/a	*unique*

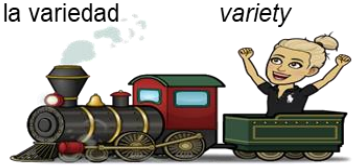
5.3 ¡Sigue todo recto!

¿Por dónde se va…?	*How do I get to…?*
muchas gracias	*thank you very much*
de nada	*you're welcome*
cruzar	*to cross*
pasar	*to go past*
tomar	*to take*
toma…	*take…*
torcer	*to turn*
tuerce…	*turn*
la primera	*the first*
la segunda	*the second*
la tercera	*the third*
a la derecha	*on the right*
a la izquierda	*on the left*
sigue todo recto	*go straight on*



5.6 Mi barrio con nostalgia

actualmente	*currently*
ahora	*now*
era	*it was*
existir	*to exist*
había	*there was*
hoy	*today*
el pasado	*past*
el acceso	*access*
las afueras	*outskirts*
AVE	*high-speed train*
el barco	*ferry*
el barrio	*neighbourhood, area*
cerca	*near*
contener	*to contain*
diferente	*different*
fresco/a	*fresh*
lejos	*far*
el parque de atracciones	*theme park*
público/a	*public*
recorrer	*to go across*
la red	*network*
sucio/a	*dirty*
tradicional	*traditional*
el tren de vapor	*steam train*
el turismo	*tourism*
variado/a	*varied*
la variedad	*variety*



5.5 ¿En la ciudad o en el campo?

el aire	*air*
la alergia	*allergy*
allí	*there*
aquí	*here*
complicado/a	*complicated*
la contaminación	*pollution*
conveniente	*convenient*
cosmopolita	*cosmopolitan*
la cultura	*culture*
el espacio	*space*
estresante	*stressful*
hay mucho que hacer	*there is a lot to do*
lento/a	*slow*
montar a caballo	*to go horse riding*
la naturaleza	*nature*
no me importa	*it doesn't matter*
la oportunidad	*opportunity*
la paz	*peace*
el peligro	*danger*
peligroso/a	*dangerous*
rápido/a	*fast*
el ruido	*noise*
ruidoso/a	*noisy*
el servicio público	*public service*
el sistema	*system*
tan	*so*
tan… como	*as… as*
al contrario	*on the other hand*
no es verdad	*it's not true*
no estoy de acuerdo	*I don't agree*
sobre todo	*above all*

5.4 Planes para el finde

bailar en la discoteca	*to dance in a club*
cantar en el coro	*to sing in the choir*
el fin de semana	*weekend*
el finde	*weekend*
ir a un concierto	*to go to a concert*
ir de compras	*to go shopping*
nadar en el mar	*to swim in the sea*
practicar judo	*to practise judo*
salir con amigos	*to go out with friends*
va a ser	*it's going to be*
ver una exposición de arte	*to see an art exhibition*
viajar en tren	*to travel by train*

Spanish

Year 8 Spanish Knowledge Organiser

Unit 5: En mi Ciudad

5.1 De paseo por mi ciudad

En mi pueblo / ciudad hay in my village / city there is	una iglesia *church* un instituto *school* un museo *museum* un parque *park*	bonito/a *pretty* histórico/a *historic* tranquilo/a *quiet, peaceful*	sin embargo no hay however there isn't	una plaza de toros *bullring* un restaurante *restaurant* una tienda de ropa *clothes shop*

5.2 Por eso voy allí

voy - I go va - you go vamos - we go van - they go	al supermercado to the supermarket al hospital to the hospital al parque to the park a la biblioteca to the library	para in order	comprar fruta vistar a mi abuela jugar al fútbol con mis amigos estudiar para mi exámen de español	to buy fruit to visit my grandma to play footbal with my friends to study for my Spanish test

5.3 ¡Sigue todo recto!

Perdona, ¿por dónde se va ..... Excuse me, how do I get to....	a la biblioteca? the library ? a la mezquita? the mosque? al museo? the museum?	Cruza *to cross* Pasa *to go past* Toma... *take...* Tuerce... *turn*	la plaza the square el semáforo the traffic lights la primera / segunda calle the first /second street a la izquierda / derecha on the left / on the right	

5.4 Planes para el finde

Este fin de semana voy a this weekend I am going to	bailar en la discoteca *to dance in a club* cantar en el coro *to sing in the choir*	y / pero mi hermano/a va and / but my brother / sister is going	ir a un concierto *to go to a concert* ir de compras *to go shopping* nadar en el mar *to swim in the sea* practicar judo *to practise judo*	

5.5 ¿En la ciudad o en el campo?

Prefiero I prefer Me gusta I like Detesto I hate	vivir to live / living	en el campo in the countryside en la ciudad in the city	porque because	hay más paz y meno contaminación – there is more peace and less pollution los servicios públicos son buenos – public services are good es estresante/ peligroso/ ruidoso – it's stressful / dangerous / noisy	

5.6 Mi barrio con nostalgia

Actualmente – nowadays Hoy – today En el pasado – in the past Hace diez años – 10 years ago	tengo – I have tenía – I used to have hay – there is/are había – there used to be	un mercado grande – a large market un aeropuerto en las afueras de la ciudad – an airport in the outskirts of the city un tren de vapor – a steam train muchas tiendas – lots of shops	

Spanish

Year 8 Spanish Knowledge Organiser

Unit 6: Mi Insti

6.1 Todo lo que estudio

las asignaturas	subjects
la clase	class
¿Qué estudias?	What do you study?
Estudio...	I study...
la biología	biology
las ciencias	sciences
el dibujo	art
la educación física	P.E.
el español	Spanish
la física	physics
el francés	French
la geografía	geography
la gimnasia	gymnastics, P.E.
la historia	history
los idiomas	languages
la informática	ICT
el inglés	English
las matemáticas	maths
la música	music
la química	chemistry
el teatro	drama
la tecnología	technology
el colegio	school
estudiar	to study
el instituto	school
obligatorio/a	compulsory
me aburre	it bores me
me anima	it cheers me up
me apasiona	it's a passion of mine
me da igual	it's all the same to me
me entretiene	it entertains me

6.2 ¡Uff! ¡Qué rollazo!

aburrido/a	boring
difícil	difficult
divertido/a	fun
duro/a	hard
fácil	easy
interesante	interesting
práctico/a	practical
útil	useful
el/la profesor(a) es...	the teacher is...
despistado/a	forgetful
estricto/a	strict
gracioso/a	funny
guay	cool
inteligente	intelligent
tolerante	tolerant
trabajador(a)	hard-working

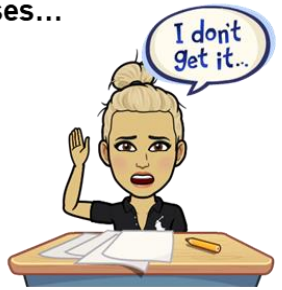
6.6 Mis planes

aprender	to learn
concentrarse	to concentrate
esperar	to hope
hacer amigos nuevos	to make new friends
repasar	to revise
sacar notas altas	to get high grades
tener la intención de	to have the intention of
trabajar	to work
competitivo/a	competitive
el curso que viene	next academic year
estresado/a	stressed
voluntario/a	volunteer
el yoga	yoga
el/la asistente/a	assistant
el/la ayudante	helper
el/la canguro	babysitter
el/la cuidador(a)	carer
el/la entrenador(a) de deportes	sports coach
el/la repartidor(a) de periódicos	paper delivery boy/girl
el trabajo a tiempo parcial	part-time job

6.4 Lo que hay en mi insti

las instalaciones	facilities
¿Qué hay en tu instituto?	What is there in your school?
los aseos	toilets
el aula	classroom
la biblioteca	library
la cancha (de baloncesto)	(basketball) court
el comedor	canteen
el gimnasio	gym
el laboratorio	laboratory
la planta baja	ground floor
la sala de profesores	staff room
el salón de actos	theatre
las taquillas	lockers
el uniforme	uniform
usar el móvil	to use your mobile
(no) se debe	you must/ mustn't
(no) se puede	you can/can't
charlar	to chat
comer chicle	to chew gum
comer en el comedor	to eat in the canteen
correr por los pasillos	to run down the corridor
ensuciar las instalaciones	to dirty/damage the facilities
estar en silencio	to be silent
gritar en clase	to shout in class
hacer los deberes	to complete your hwk
prestar atención	to pay attention
respetar a los profesores	to respect the teachers
ser educado/a	to be polite
ser maleducado/a	to be rude
ser puntual	to be on time

6.5 Y después de las clases...



el club...	
...de ajedrez	chess club
...de cine	film club
...de deberes	homework club
...de literatura	book club
...de fotografía	photography club
la excursión extraescolar	excursion extracurricular
la jornada	day
las manualidades	craft
el partido	match
el taller	workshop
el viaje	trip
las artes marciales	martial arts
el campeonato	championship
memorizar	to memorise
participar	to participate
tener que	to have to
tener tiempo	to have time
la actividad anual	activity annual

6.3 Mi horario escolar

la hora	time
¿Qué hora es?	What time is it?
Es/Son...	It is...
¿A qué hora...?	At what time...?
A la/las	At...
y cuarto	quarter past
y media	half past
menos cuarto	quarter to
el día	day
especial	special
el horario	timetable
el recreo	break
los domingos	on Sundays
los sábados	on Saturdays

Spanish

Year 8 Spanish Knowledge Organiser

Unit 6: Mi Insti

6.1 Todo lo que estudio

Estudio	I study
voy a estudiar	I am going to study
Estudiaba	I used to study

la biología	biology
las ciencias	sciences
el dibujo	art
el español	Spanish
la física	physics

porque	because
aunque	although
pero	but

es obligatorio/a	it is compulsory
me aburre	it bores me
me anima	it cheers me up
me apasiona	it's a passion of mine

6.2 ¡Uff! ¡Qué rollazo!

me gusta/n (mucho)	I (really) like
me encanta/n	I love
Odio	I hate
Mi asignatura favorita es	My favourite subject is

la historia	history
los idiomas	languages
la informática	ICT
el inglés	English

porque es / son
because it is/ they are

aburrido/a/os/as	boring
difícil/es	difficult
divertido/a/os/as	fun
duro/a/os/as	hard

6.3 Mi horario escolar

¿Qué hora es?
What time is it?

Son las dos, tres, cuatro…	It is ……. two, three, four o'clock
Es la una	It is …. one o'clock
A la/s una/ dos	At one/ two o'clock

….y cinco/ cuarto	five /quarter past
…..menos diez /cuarto	ten / quarter to
……y media	half past

6.4 Lo que hay en mi isnti

En mi instituto hay
In my school there is/ are

unos aseos	toilets
aulas	classrooms
una biblioteca	a library
un comedor	canteen

(no) se debe	you must/ mustn't
(no) se puede	you can/can't

comer chicle	to chew gum
comer en el comedor	to eat in the canteen
gritar en clase	shout in class

6.5 Y después de las clases…..

En mi insti hay muchas actividades extraescolares
In my school there are many extra curricular activities

por ejemplo
for example

el club de ajedrez	chess club
el club de cine	film club
el club de deberes	homework club

me apasiona	I am passionate about
me mola	I like
me chifla	I like

el cine	cinema
la tecnología	IT
las artes marciales	martial arts

6.6 Mis planes

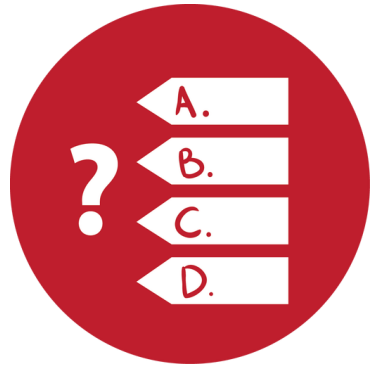
En el futuro	In the future
Pronto	Soon
El año que viene	next year
Dentro de poco	shortly

tengo la intención de	I intend
espero	I hope
quisiera	I would like
me gustaría	I would like

sacar buenas notas	get good grades
ir a la universidad	go to university
hacer nuevos amigos	to make new friends

Spanish

A



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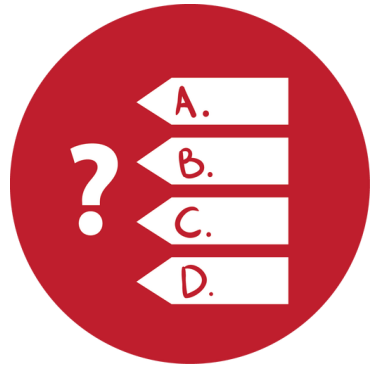

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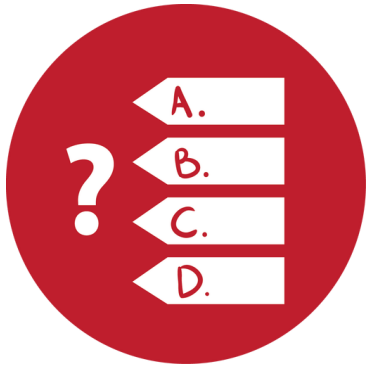

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