

Wolfreton
SCHOOL AND SIXTH FORM COLLEGE



THE CONSORTIUM
ACADEMY TRUST

Year 7 Knowledge Booklet 2024/25

Excellence, Endeavour, Respect

THE WOLFRETON WAY

What are Knowledge Organisers? Knowledge Organisers are revision materials containing the key information that you need to know, in order to be successful in your assessments. They are designed in a way to help you store key bits of information together and help you to visualise the layout of the page, which in turn helps you to memorise the information better. Knowledge organisers are a summary of everything you have learned in your lessons. The Knowledge Organisers will show you the exact facts, dates, events, characters, concepts and precise definitions that we need you to remember for that topic.

How to use Knowledge Organisers?

To use the Knowledge Organisers well, you should:

- Spend time (approximately 15 minutes) reading one topic within one subject of the knowledge organiser.
- You can rewrite some key notes, write on flashcards or draw mind maps to help you pull out key information.
- You can read your knowledge organisers aloud (this helps some people to remember more easily)
- You can read one section, cover up that section, and then test yourself. You can then check to see how much you have remembered. This is called 'Look, say, cover, write, check'.
- Regularly re-read and review (even when you think you know it!)



What is self-quizzing?

Research about study tells us that one of the most effective techniques for revision is to self-test. We know that this is what the most successful students do! When most students think about tests, they don't particularly like the idea. They associate testing with long, difficult exams sat in a classroom or in the exam hall. However, self-testing for revision should not be like this at all. It should be relatively quick and simple, and it isn't a big deal if you get a question wrong.

How to self-quiz?

To self-quiz effectively you will need the following:

1. Knowledge organisers (all in this book) and any other revision materials you may have
2. A blue/black pen and a red pen
3. A note book for self quizzing































You should complete all of your self-quizzing in a notebook, as guided by your subject teacher. Ensure that you complete all subjects and all topics over time – not just the subjects you enjoy the most or find easiest! Practice makes perfect!

Step by Step Self Quizzing




























Look at a small section from the knowledge organiser.

1. Read aloud for 2 or 3 minutes
2. Cover up part of your knowledge organiser
3. Write it out from memory (in a black pen)
4. Self-check and correct any spelling mistakes, missing bits or mistakes (in a red pen).














Art - Year 7 keywords

<p>Mark making This describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat</p> 	<p>Tonal range This describes the range from an image's darkest shadow through to the brightest highlight details, including all the transitions in between</p> 	<p>Texture (visual and tangible) An element in the visual arts, texture is the perceived surface quality of a work of art or object. It may be perceived physically, through the sense of touch, or visually, or both</p> 	<p>Formal elements These are the parts used to make a piece of artwork. The art formal elements are line, shape, form, tone, texture, pattern and colour. They are often used together, and how they are organised in a piece of art determines what the finished piece will look like</p> 	<p>Blending This is the process of fusing two colours together so that the paint transitions from one colour to another or combines to create a new colour. A painting of a sunset is a classic example of blending because of the soft transition from deep red, to orange, to yellow</p> 	<p>Line An element in art that is a so-called point that moves from one direction to another. It can be any size, length, or pattern</p> 	<p>Form An element in art that is three-dimensional and encloses volume; includes height, width AND depth (as in a cube, a sphere, a pyramid, or a cylinder)</p> 
<p>Shape An element in art that is a two-dimensional area</p> 	<p>Colour An element in art that may be described in terms of hue, lightness, and saturation</p> 	<p>Pattern An element in art that repeats and can be found anywhere. They can be made by repeating shape, line, or colour</p> 	<p>Wet on Wet This is a watercolour technique that uses wet paint against that uses wet paint against wet paint or wet paper. It's used to create beautiful bleeds and blooms between areas of colour and allow the watercolour paint to spread and blend</p> 	<p>Secondary colours These are colour combinations created by the equal mixture of two primary colours. On the colour wheel, secondary colours are located between primary colours. According to the traditional colour wheel, red and yellow make orange, red and blue make purple, and blue and yellow make green</p> 	<p>Primary colours These are basic colours that can be mixed to produce other colours. They are usually considered to be red, yellow and blue. These colours cannot be mixed</p> 	<p>Complementary colours One of a pair of colours that are opposite each other on the traditional colour wheel (red-green, orange, blue and yellow-purple)</p> 
<p>Cultures This is the ensemble of social forms, material traits, customary beliefs, and other human phenomena that cannot be directly attributed to a genetic inheritance of a religious, racial, or social group. Art is the creative expression of one's experiences, emotions and other qualities</p> 	<p>Hue This literally means colour</p> 	<p>Saturation This refers to how vivid, rich, or intense a colour is. It is one of the three elements of colour, with the other two being hue and value. Most artists consider saturation to be more important than hue, but less important than value for painting with a sense of realism</p> 	<p>Tint, tone, shade An example of a tint is pink. Pink is a tint created by adding white to red. A shade is where an artist adds black to a colour to darken it down. A tone is where an artist adds grey to a colour</p> 	<p>Limited Palette This means that you're only using a few select colours in your piece. It's not an entire gamut of the rainbow, but just two or three colours that you stick to for the entire illustration</p> 	<p>Tertiary colours These next-door neighbour colours are formed by mixing a primary with a secondary</p> 	<p>Colour theory This is the collection of rules and guidelines which designers use to communicate with users through appealing colour schemes in the visual world</p> 
<p>Asymmetrical This is the lack of symmetry or equality between halves of your design. While both halves of a symmetrical design will be the same (or similar), both halves of an asymmetrical design will be different</p> 	<p>Wet on Dry This technique is essentially layering your watercolours. You place one layer of paint on the paper and allow it to dry, and then paint on the top. The bottom layer is dry and the top layer is wet, so that's why it's called wet on dry</p> 	<p>Symmetrical Symmetry is a very formal type of balance consisting of a mirroring of portions of an image</p> 	<p>Stipple This means drawing by means of dots or small touches. The noun is stippling</p> 	<p>Positive and negative space In art, negative space is the space around and between the subject of the image. The positive space is the subject or object of the image</p> 	<p>Harmony colours In colour theory, colour harmony refers to the property that certain aesthetically pleasing colour combinations have</p> 	<p>Natural colours A natural colour is a colour that can be directly found in nature</p> 
	<p>Geometric Based on simple geometric shapes (such as straight lines, circles, or squares)</p> 				<p>Composition This is the arrangement of elements within a work of art</p> 	


Art - Year 7 keywords

<p>Creativity This is the ability to create items that inspire and inform others, often in aesthetically pleasing ways</p> 	<p>Gridding This method is a technique used in art that involves dividing an image into a series of smaller, more manageable sections using a grid. A grid is typically drawn over the reference image, and then students use the grid to draw the image on their own piece of paper, carefully replicating each section of the grid</p> 	<p>Hatching The technique is done with a series of thin, parallel lines that give the appearance of shadow in varying degrees. It is often used in drawing and sketching, most often in pencil and pen-and-ink drawing, though painters do use the technique as well</p> 	<p>Cross hatching This is a type of shading technique, whereby artists will draw parallel lines at two angles that cross one another to create the impression of light and shadow</p> 	<p>Air drying clay As the name suggests, is clay that dries or cures with air</p> 	<p>Initial ideas A wide range of drawings/sketches that explore ideas for your project. Each idea should have a short explanation and some notes/labels added to explain the idea</p> 	<p>Developed ideas Development is about selecting ideas, visual elements, compositions and techniques from this initial work and using them in new and improved ways</p> 
<p>Crop To "crop" an image is to remove or adjust the outside edges of an image (typically a photo) to improve framing or composition, draw a viewer's eye to the image subject, or change the size or aspect ratio. In other words, image cropping is the act of improving a photo or image by removing unnecessary parts</p> 	<p>Artisan This is someone that works with their hands to create unique, functional and/or decorative items using traditional techniques</p> 	<p>Proportions This refers to the dimensions of a composition and relationships between height, width and depth</p> 	<p>Tribal art Tribal art (sometimes referred to as ethnographic art) denotes the material culture and visual arts of indigenous peoples. It is often ceremonial or religious in nature</p> 	<p>Slip This is a clay/water slurry used to produce and stick pottery together</p> 	<p>Día de los Muertos This relates to the Mexican Day of the Dead festival. It revolves around ofrendas, or offerings, which are created through a visual display of altar-making and grave decorating. The offerings, a main focal point of the celebration, echo the dedication and distinct love that is presented toward the dearly departed</p> 	<p>Calavera Literary Calaveras are satirical poems that critique or poke fun of the living individuals many time political figures or other in the public eye</p> 
<p>Refine Refinement is the improvement of the idea. It does not involve radical changes, but is about making small changes which improve the idea in some way</p> 	<p>Overlay To overlay is to cover with a coating or a layer or parts of an image, or to set one thing on top of another</p> 	<p>Transparency When a material transmits light to some extent so that some of the light arriving on one side of an object can be seen from the other side—the material is not totally opaque</p> 	<p>Collage This describes both the technique and the resulting work of art in which pieces of paper, photographs, fabric and other ephemera are arranged and stuck down onto a supporting surface</p> 	<p>Vignette This effect is a creative editing effect that darkens the corners and sides of an image</p> 	<p>Design It is the process of envisioning and planning the creation of objects</p> 	<p>Overlap Overlapping in art is the placement of objects over one another to create the illusion of depth</p> 
<p>Opaque The term opaque originated from the Latin, meaning 'dark' meaning 'not transparent' and opaque substance does not let any light pass through at all. A paint that is opaque will give a solid colour</p> 	<p>Papel Picardo Literally means 'punched' or 'perforated' paper. This traditional cut paper folk art is found throughout Mexico and the former colonies of Spain as well as in the folk traditions of many other countries</p> 	<p>Symbolism The representation of subjects or ideas by use of a device or motif to create underlying meaning</p> 	<p>Craft Manually-produced objects meant to serve a particular purpose of human needs. They can also be called handicraft. This is so because the use of skilled hand is involved</p> 	<p>Mixed media This is a term used to describe artworks composed from a combination of different media or materials</p> 	<p>Relief printing This is when you carve into a printing block that you then use to press onto paper and make a print. The lines or shapes you carve into the printing block will not have ink on them, so will not show up on your paper</p> 	

Art - Year 7 African Art and Cubism

<p>Knowledge - How ancient art influenced modern art</p> 	<p>African Art introduction and negative and positive space drawing techniques</p> 	<p>Knowledge - History of African Masks</p> 	<p>Knowledge - African Mask symbols</p> 	<p>Design is Everything</p> 	<p>Teacher demo African Art mask ideas</p> 
<p>Teacher demo African Mask Development of Design Ideas</p> 	<p>Teacher demo African tile Mask in clay</p> 	<p>Teacher demo African cut design</p> 	<p>Teacher demo African mask in watercolour</p> 	<p>Teacher demo Dr Esther Mahlangu Art House</p> 	<p>Poly block printing tutorial</p> 
<p>Knowledge - What is Cubism?</p> 					

Art - Year 7 Mexican Art and the Day of the Dead Festival

<p>Teacher demo - Pencil Basics and Shading</p> 	<p>Upside down drawing</p> 	<p>Who is artist Jose Guadalupe Posada</p> 	<p>Teacher demo of pen gridded Posada</p> 	<p>Teacher demo pen pattern skull</p> 	<p>Teacher demo of watercolour colour wheel</p> 
<p>Teacher demo watercolour techniques</p> 	<p>Teacher demo basic flower experiments with watercolour</p> 	<p>Teacher demo flower with watercolour</p> 	<p>Teacher demo watercolour skull</p> 	<p>Teacher demo portrait proportions</p> 	

Introduction to Computing Knowledge Organiser

Your Username and Password

You should have a sticker in your planner which informs you of your username ie.22Y.Surname and a password that you should have changed the first time you logged on.

It is recommended you write this in your planner, just in case you forget it.

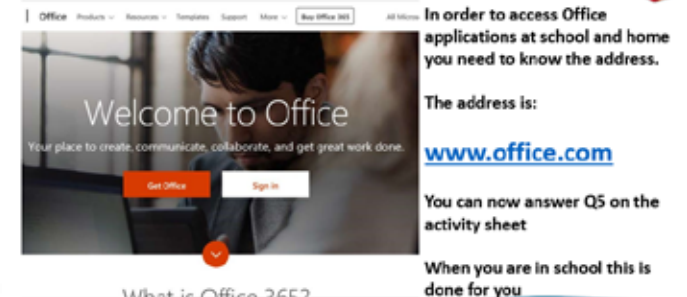
Please see your teacher if you cannot log on or if you have forgotten your password and the teacher can re-set it for you.

Windows Desktop

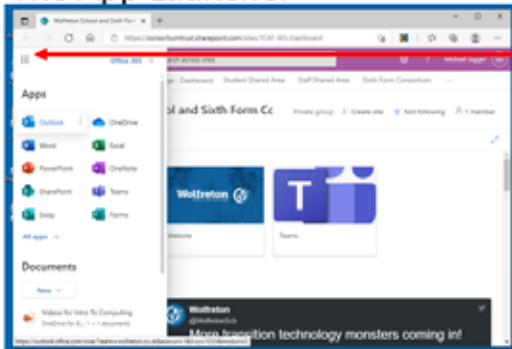


The icon to load the internet is called Microsoft Edge
It is the blue and green icon

The Address of Office



The App Launcher



The App Launcher contains all the programs that you can use in Office.com

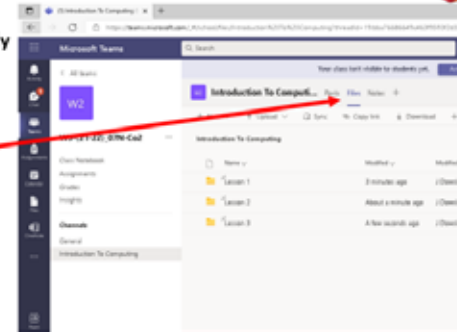
The App Launcher contains lots of programs such as:
Outlook
Word
PowerPoint
OneDrive
Excel

You can now answer Q8 on the activity sheet

Microsoft Teams 3

Using the school systems remotely

- Click on the Introduction to Computing Channel
- Now click **Files** on the top right hand side
- You can now select the lesson that is appropriate, in this instance **Lesson 2**



Username is NOT case sensitive

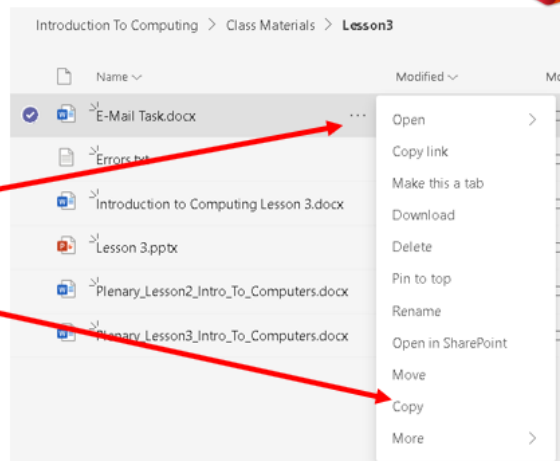
Your password is CASE sensitive

You need to make sure you know your username and password and know where to find it

Microsoft Teams 4

Copying the Resources from Teams

- Now click the three dots next to the "E-Mail Tasks" file
- Select Copy



E-Mail

To send an e-mail ensure you click the New Button and the compose e-mail window will come up

To: - Is the person who is receiving your e-mail

Subject: - This is what the e-mail is about

CC: - Carbon Copy. This is who else is going to receive a copy of your e-mail.

Your e-mail address ends with **@wolfreton.co.uk**

Computing

E-Safety (Year 7) Knowledge Organiser

CEOP - www.ceop.police.uk

CEOP stands for Child Exploitation and Online Protection, is a law enforcement agency here to help young people stay safe from sexual abuse. To report abuse click on the red button

Childline - 0800 1111

Thinkuknow - Is a website made by government / CEOP and the National Crime Agency. It contains advice for parents and students on the topic of internet safety. The address is:
www.thinkuknow.co.uk



1. What is E-Safety

E-safety is all about staying safe when you're using computers and digital devices that enable you to access and use the internet. At school we take your safety very seriously. We'll study different e-safety topics every year in Computer Science, You'll also have assemblies and PHSE sessions on e-safety.

We do this because if you're educated about the risks you have a much better chance of staying safe,

If you ever have any concerns about content you see or contact you have with people online raise it with a parent, tutor, student support or even CEOP.

Online Safety Statistics

In 2020 internet crime against children increased by 144%. 19% of children aged 10-15 experienced at least one type on online bullying.



2. Think you know....

It is very easy to set up fake profiles online. **Social media** companies and e-mail providers don't ask for ID like passports or driving licences when accounts are created. This means you can never be 100% sure who you are talking to.

If someone you only know online asks to meet up always take a trusted adult with you. If someone online asks you for **personal information** or images block them.



3. Privacy, personal information and digital footprints

Your **digital footprint** is everything the **internet** knows about you. The **internet** is a collection of computers all connected together. Information stored on the **internet** is easy to search but difficult to remove. It is important because any information about you that can be found on the **internet** could be used by employers or colleges and used to judge you.

To protect your **digital footprint** keep **social media** accounts private and only add people you really know. You should also search for yourself every so often to see what turns up.

Personal information is facts, figures and statistics about you eg name, address, gender, income level, education...

Some pieces of information like religion may be more personal than others so it's important to be aware of what you're sharing on the **internet**.

4. Social Media and mental health

Social media websites let you exchange information with groups of people on the **internet**. Your **mental health** is how happy you feel over a period of time. Lots of the material on **social media** is filtered or exaggerated to make the posts look more interesting or exciting. If your feeds are full of this material it can make you feel like you're missing out or as if your life isn't as good as other peoples. This can be bad for your **mental health**.

In reality everyone has good and bad days, we just tend to post more of the happy exciting things online. Good ways to avoid social media getting you down are:

1. Be aware it's not the whole story.
2. Reduce time spent online.
3. Spend more time with offline friends.
4. Exercise and develop offline interests.



5. Hackers and Malware

Hackers are people who access computers without the owner's permission. They often break into systems without asking, breaking the Computer Misuse Act. You can protect yourself from hackers by using **passwords** that are difficult to guess. These should include upper and lower case letters as well as numbers and symbols. They should be greater than 8 characters in length. You should also avoid using the same password in lots of different places.

Malware: is malicious software that tries to steal your information or damage your computer. Common types include:

Viruses: malware that copies itself and hides inside other files

Spyware: malware that sends information like the keys you press, the websites you visit, your camera-feed back to a hacker.

Ransomware: malware that scrambles your data so it can't be read and makes you pay to unscramble it.

You can protect your computer from malware by using firewalls, anti-malware software (like anti-virus) and not clicking on links sent to you from people you don't know.

SMART Rules

S SAFE Keep safe by being careful not to give out personal information – such as your full name, email address, phone number, home address, photos or school name – to people you are chatting with online.

M MEETING Meeting someone you have only been in touch with online can be dangerous. Only do so with your parents' or carers' permission and even then only when they can be present.

A ACCEPTING Accepting emails, IM messages, or opening files, pictures or texts from people you don't know or trust can lead to problems – they may contain viruses or nasty messages!

R RELIABLE Information you find on the internet may not be true, or someone online may be lying about who they are.

T TELL Tell your parent, carer or a trusted adult if someone or something makes you feel uncomfortable or worried, or if you or someone you know is being bullied online.
You can report online abuse to the police at www.thinkuknow.co.uk

INTERNET SAFETY KNOWLEDGE ORGANISER

Key Vocabulary

Digital footprint – The information about a person that exists on the Internet as a result of their online activity. This can be put together like a jigsaw puzzle.

Password - A string of characters that allow access to a computer system or service. It should contain a mixture of lower, uppercase letters, numbers and symbols.

PEGI rating – A rating that shows what age a game is suitable for. EG PG-13

Phishing – The practice of sending email pretending to be from reputable companies in order to persuade individuals to reveal personal information, such as passwords and credit cards numbers

Screen time - Time spent using a device such as a computer, television, or games console. You should try and limit the amount of screen time to less than 2 hours.

Spoof website – A website that uses dishonest design to trick users into thinking that it represents a different company or person in an attempt to steal data.

Why do I need to be aware of the dangers of being online?

Although the Internet is a brilliant resource for learning and entertainment some people use the Internet to cause you harm. Being aware of these dangers can help keep you safe and protect your privacy.

What is meant by my digital footprint?

The term digital footprint is used to describe the traces that people leave behind when they have visited a website or used social media. Your digital footprint is unique to you.

Why is it important to think about how much time use a screen for?

A digital footprint can be pieced together like a jigsaw puzzle by someone that knows what they are doing. People will collect information from all the different websites you have been on and then piece it together. So be careful what you post.

Using a screen can help you surf the Internet or enjoy computer games but you need to be careful how much time you spend using a screen. For instance, using a screen at night can damage your sleep patterns. Turn your screen off regularly and enjoy the world outside.

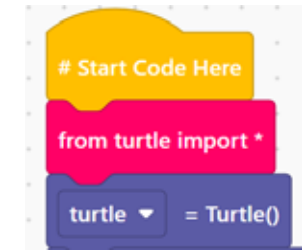
Always start your coding with:

EduBlocks

Knowledge Organiser



To Log on:
WWW.edublocks.org
username@wolfreton.co.uk
School Password

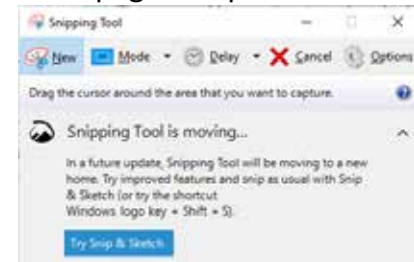


Sequence – The instructions for our code
Selection – Using logical tests to change the flow of the sequence
Iteration – Using loops to repeat sequences of code
Algorithm - is a list of rules to follow in order to solve a problem.
Programming languages - are used to give computers instructions on what to do.

Basic Colours:

Red: 255,0,0	Black: 0,0,0	Grey: 128,128,128
Blue: 0,0,255	Green: 0,128,0	Orange: 255,165,0
Yellow: 255,255,0	Pink: 255,192,203	Purple: 128,0,128

To use the snipping tool to copy your work
 To open the snipping tool, click on start Type in the word 'snip' > Click open
 When you want to copy your work click on 'New' and highlight the area you want to copy. Then go to your work page and press Ctrl V.



The Blocks Explained	
	Moves the turtle to a specific location (this is to the top left).
	This moves the turtle forward. If you click on forward you get other choices such as right, left or backwards.
	This changes the colour of the background. Use the RGB code to change the colour.
	This changes the speed of how fast the shape is drawn.
	Selecting this option will make your cursor the shape of a turtle.
	This lifts up the pen so when you move it, it will not draw. You can also select pen down from the drop-down arrow.
	This changes the colour of the pen. Use the RGB code to change the colour.
	This makes the pen thicker.

Importing an Image

On Photoshop – go to File > Place Embedded > choose your Image

Zooming in and Out

You can zoom in and out of the pictures by clicking on the Zoom Tool



Object Selection Tool,

Highlight round the full character. Once you release your mouse it should highlight the full Character. Now press Ctrl and C on the keyboard

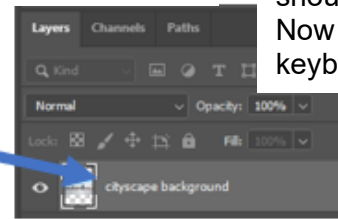


Resizing an Object

Click on the move tool on the left side of the screen. You should then be able to move the image around. To make the image bigger click on Edit > Free transform > resize your image.

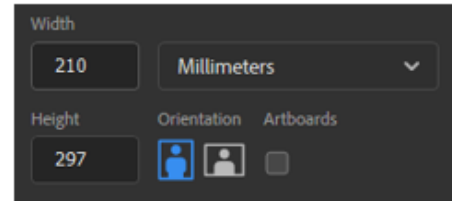
Name a layer

Click on the writing on the right side of the screen and type an appropriate name for the layer



Type Tool

Allows you to type in words



Setting up the page size

Click on File > New

On the right side of the screen you can set the size of the page:

A3 – 297 x 420 mm

A4 – 210 x 297 mm

A5 – 148 x 210 mm

To Save your work

Go to File > Save As > This PC or OneDrive > select your computing folder and save it with an appropriate name.

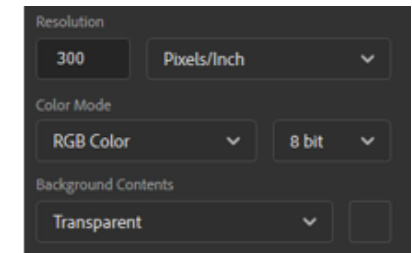
Saving an image

Choose an image on the internet you should use 'Snipping Tool' to snip and then save it in your One Drive or This PC pending were you saved your Photoshop document.

The resolution should be 300 pixels per inch

The Colour mode RGB should be 8 bit

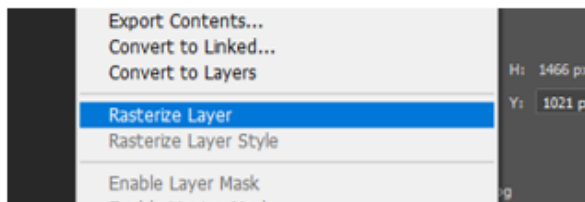
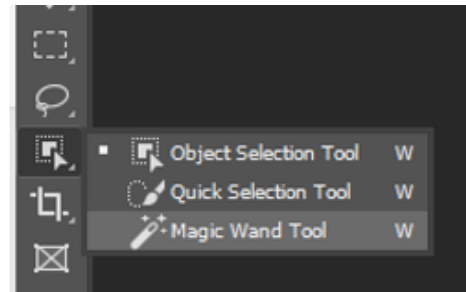
The Background contents should be transparent



Removing parts of an image

Go to the object selection tool and right click – the magic wand should come up with an option.

Make sure you are on the correct layer with removing the parts You may need to right click on the layer and select Rasterize Layer to make it edit.



Eraser tool

Moving Objects and Layers

Make sure you click on the correct layer to move the correct object around. The layers go in order so if you lose a picture, the image is probably layered wrong. On the right side of the screen, select the image and move it above the next image.

Another option is using the eraser tool (12 down) or the Rectangle Marquee Tool.

Photoshop Knowledge Organiser

Multimedia Unit Knowledge Organiser

Audience and Purpose

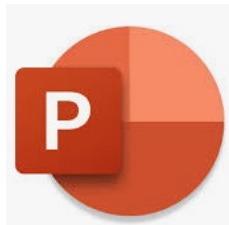
An important thing to understand when we are creating a product is who we are making it for and why we are making it?

The audience are the people we have in mind when we create something. It doesn't mean that other people cannot use or buy the product, but we didn't really target them. Another term for target audience is **target demographic**. These are the people who we aim the product at.

Demographics

Demographics are statistics, facts and attributes about a specific group of people. Demographics usually include:

- Age
- Location
- Gender
- Income level
- Education level
- Occupation
- Ethnic background



Purpose

Why is it good to know the purpose of a product before making it?

It is to help us understand why we are making something. That means we know what it should do and what things to include on the product. The purpose of a product is what the product is actually going to do!

Psychographics

Psychographics are most personal characteristics of a person.

These normally include:

- Personality
- Attitudes
- Values
- Interests/hobbies
- Lifestyles
- Behaviour

Algorithm – List of instructions executed in order (in sequence) to produce the correct output






Process – This is when the program is doing something or carry out an action. A process can also be when the computer is carrying out a calculation or working something out!

Selection – This is when the computer “**makes a decision**”. Selection is part of an algorithm, and they use **IF THEN ELSE** statements to do this. A diamond shape is used in flow charts for this

Multimedia Unit Knowledge Organiser

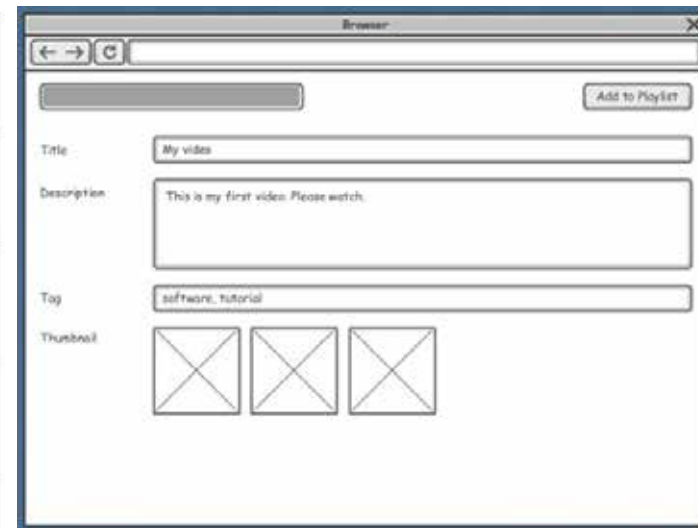
Flowcharts

Flowcharts are used when designing programs. They are a visual way of representing a program. Below you can see the shapes that we use when making a flowchart. The Start and Stop symbol are also called **Terminators** as they mark the beginning and end of the program that you are designing.

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

Wireframe Diagram

A wireframe is a diagram that visualizes how a webpage or application will look in the same way you'd use a blueprint for a house. It's a sketch of the interface's structure, usually without any color, images, or other visual design choices made or inserted. There is a complete lack of detail in a wireframe diagram! Look at the example below:



Multimedia Unit Knowledge Organiser

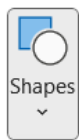
How To hyperlink :-

- > Right click on you text or image, circles should appear as follows:
- > Select 'link'.
- > Select 'Insert Link...'
- > Select 'Place in this document', here you can choose which slide you want it to go to.



To add Action Buttons (return Home)

- > Go to insert
- > Shapes
- > Scroll down to the bottom
- > Select the action button you want.



To insert a picture > find the image on the internet, select the snipping tool > highlight and then on your page press ctrl V or right click > paste.

Transitions: is the visual effect that occurs when you move from one slide to the next during a presentation. Click on the button in the circle to get more options.



To insert Text

- > Click on Insert
- > Select either text box or WordArt



The below changes the colour and style of the writing – found in the home tab.



Animations: is something that makes slide objects move on a slide. There are three choices: Entrance, Emphasis and Exit. Click on the button in the circle to get more options.



To Insert a background

Click on Design – you are given a variety of choices, if you click on the button which is circle there are more options.



To add a new slide click on the home tab and select New Slide.



To run your PowerPoint > go to Slide Show and click on either of the buttons or press F5



E-mail and Multi-Media Product

Emails

The program we use to send and receive Emails at school is Outlook, this belongs to the Microsoft package.

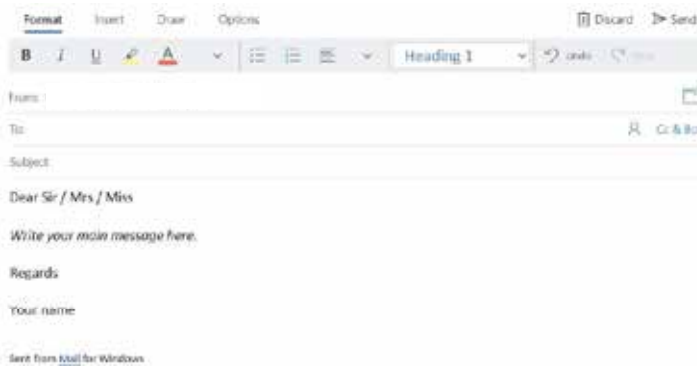
To send an e-mail ensure you click the New Button and the compose e-mail will come up.



To: Is the person who is receiving your email

Subject: This is what the e-mail is about

CC: Carbon Copy. This is who else is going to receive a copy of your e-mail



On the insert tab you can insert documents, tables, pictures and so on.



Reply – Replies to the main person that sent you the message. **Reply all** – Replies to everyone who has been sent the email. If you want to send someone an email you have received, you click on **Forward**.

Multimedia Product

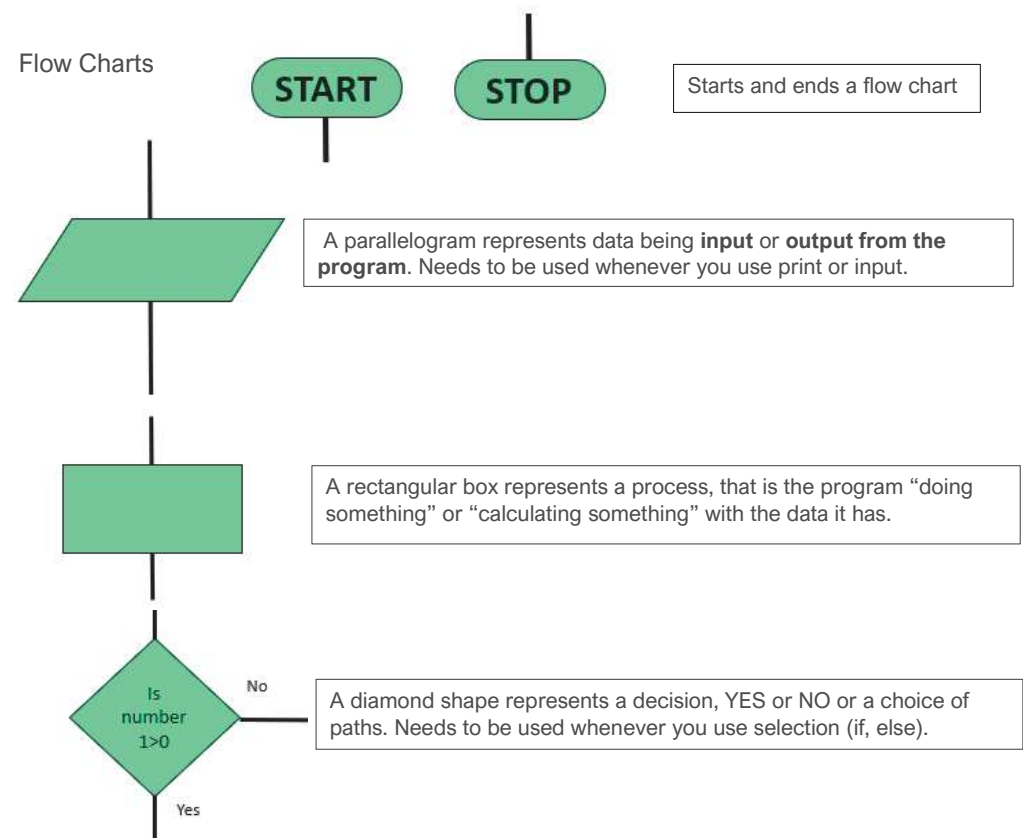
What is multimedia? It is a form of communication that combines different content forms such as:

- Text
- Audio
- Images
- Animations
- Videos

Into a single interactive presentation.

What is an algorithm? It is a set of instructions for solving a problem or completing a task.

Flow Charts



Internet Safety

What advice would you give to other young people about staying safe and not abusing or bullying others online? I would advise that you should:

- A. Only give good friends private information.
- B. Put your privacy settings on (Set your profile to private or friends only)
- C. Always be kind to your friends on the internet and do not text or say nasty things
- D. If your worried about people on the internet tell a parent or a teacher
- E. Press the Click CEOP button to get help

SMART Rules

Letter	Rule
S	“S” stands for Safe. Keep safe by not giving out any personal details such as your name, address, phone number or the school that you go to; especially to people who you have just met online.
M	“M” stands for meeting. Never arrange to meet anyone that you have just met online, doing so could be dangerous! Only meet people with your parent’s permission and if they are present.
A	“A” stands for Accepting. Never accept IMs, e-mails, text messages, files or pictures from people you do not know. Opening them up can lead to problems and they may contain viruses which will damage you phone or computer.
R	“R” sands for reliable. Not all information you get from the internet is reliable or the truth. So, you have to check facts by looking at different websites. You should also not trust people you have met online as they might be lying and not who they say they are
T	“T” stands for tell. If you are worried about something or someone online tell a trusted parent, guardian or teacher.

Where can you report abuse or if you are worried about someone online?

If you are worried about someone online or abuse you can report abuse by going to www.thinkuknow.co.uk and click on the report abuse button.

What does the CEOP report abuse button look like?



What is the number for child line?

0800 1111

Edublocks

Edublocks is a coding tool to solve the problem of moving from blocks to text.

- To find the angle of turn for a polygon, divide 360 by the number of sides.
- Sequence – The instructions for our code
- Selection – Using logical tests to change the flow of the sequence
- Iteration – Using loops to repeat sequences of code
- Algorithm - is a list of rules to follow in order to solve a problem.

Design and Technology Knowledge Organiser

Health & Safety in Design and Technology

In a DT workshop and textiles and food practical rooms there can be many potential dangers, or hazards. It is important that you are aware of the risks and that you understand how to prevent yourself or anyone else coming to harm. Below is more detail on the range of different hazards in DT.

Not listening – first and foremost it is essential that you listen carefully to instructions from your teacher or any other member of staff. If you don't listen, you might miss important instructions.



Food and drink – This is a high risk potential hazard as there is lots of electrical equipment. If things get spilled around the equipment or plugs it could cause a fire. Spillages could also damage work and other equipment including woodwork or coursework!



Long hair – This can be dangerous when using machines or hand tools. Always make sure long hair is tied back and out of the way

If everyone is aware of the hazards and works in a way which keeps everyone safe then DT is a fun and interesting subject to study!

Cooking and Nutrition: Health and Safety Key. In cooking and nutrition it is important to learn how to use tools correctly. This is so you can work safely, efficiently and independently



SMSC



Fairtrade



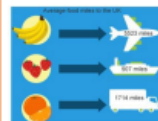
Red tractor



Organic



RSPCA assured



Food miles

Cleaning - Tidying up After a Practical



DT Designs

Clear drawings using a pencil

Materials/Ingredients labelled

Ingredients described – taste/texture appearance.

Links to eatwell guide

Colour added

Why will your idea work?

Draw further development ideas

Techniques



Bridge



Claw





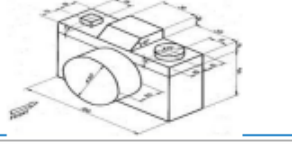

Grilling – direct heat from above cooks the food



Baking – uses an oven for all round dry heat to cook food.



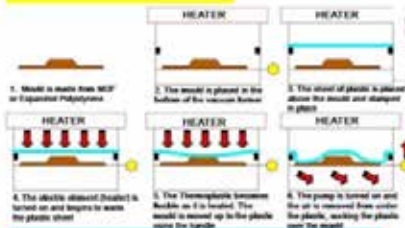
- Always use the oven gloves.
- Remember to handle the knife safely
- Always wash your hands.
- Work quietly and calmly with focus.

KEYWORDS AND TERMS		DRAWING TYPES	
One Point Perspective		A drawing that has one-point perspective when it contains only one vanishing point on the horizon line . This type of perspective is typically used for images of roads, railway tracks, or buildings viewed so that the front is directly facing the viewer.	
Two Point Perspective		Two-point perspective drawing is a type of linear perspective . Linear perspective is a method using lines to create the illusion of space on a 2D surface. Two-point perspective uses two vanishing points placed on the horizon line .	
Isometric Drawing		Isometric drawings are 3D drawings. They show three sides , all in dimensional proportion. All the vertical lines are drawn vertically but all horizontal lines are drawn at 30 degrees to the base line. Isometric is an easy way of drawing 3D images.	
Orthographic Projection (3rd Angle)		Third angle projection is a method or orthographic projection which is a technique in portraying 3D design using a series of 2D views. Each side of the 3D object is projected alongside each other, as if it has been turned on it's side.	

Materials used in D&T

Timbers	Polymers	Metals
Softwood	Thermoforming	Ferrous
Hardwood	Thermosetting	Non Ferrous
Manufactured board		Alloys

Vacuum Forming



Machinery and Tools in the workshop

- Tenon Saw:** used for sawing straight lines in wood.
- File:** Abrade a thin surface area of wood.
- Pillar Drill:**—used to drill holes into materials
- Coping Saw:** used to saw curved lines into wood.
- Junior Hacksaw:** a machine which abrades materials.

Hardwood and Softwood



Year 7

Resistant Materials

MEASURING - Measuring in millimetres is more accurate than measuring in centimetres. When measuring in the workshop you will use a steel rule. Always check where the "zero" is and start measuring from this point. There is an old saying that goes "measure twice, cut once". Always double check your measurements before you cut into your material.

- 1mm = 0.1cm
- 10mm = 1cm
- 50mm = 5cm
- 55mm = 5.5cm
- 100mm = 10cm



To convert mm to cm $\times 10$ To convert cm to mm $\div 10$

Health & Safety Rules

- In an emergency hit the stop button immediately.
- Always make sure you know how to use tools and machinery safely and correctly.
- Always make sure you are wearing correct protective equipment at all times.
- Make sure that any long hair is tied back, jewellery is removed and sleeves are rolled up.
- One person on a machine at any time.
- Only use equipment for the purpose for which it was designed for.
- When a machine is in use do not cross the black and yellow tape.



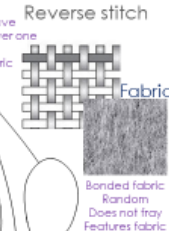
Basic Skills: Measuring

Juggling animal – TEXTILES – Year 7

- ACCESS
- Function
- FM
- Materials and making
- Aesthetics
- Cost
- Customer
- Ergonomics
- Size
- Shape



The sewing machine



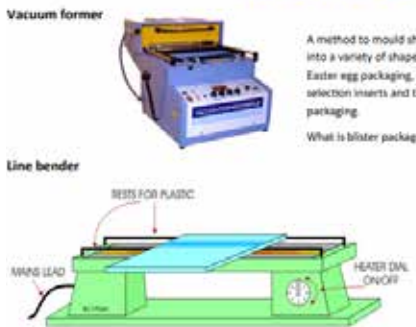
Step by step

Description	Equipment	Diagram	Health and safety	Hints and tips (success criteria)	Changes and developments
Explain each stage of how to create the juggling animal	List all equipment used	Draw!	Bullet point any health and safety issues	Explain how you create a successful juggling animal	How could you change / develop Possible Improvements

Health and Safety: Machinery

- Scroll Saw** - Only one person to operate the scroll saw at any time. Keep fingers and hands away from the moving blade. Always wear personal safety equipment. Always know where the emergency STOP button is to turn off the machine. Ensure the guard for the blade is in the correct place. Take your time when using this machine—never rush or work too quickly.
- Pillar Drill** - Only one person operating the pillar drill at any time. Never touch the drill piece when in motion. Always wear personal safety equipment. Ensure all materials are clamped in place securely - use the hand vice or a clamp whenever possible. Ensure that the guard is always in place. Always know where the emergency STOP button is to turn off the machine.

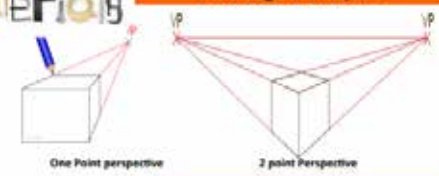
Equipment



Materials covered in D&T

- Timbers**—Hardwood, softwood and manufactured Board
- Polymers**—Thermo and thermosetting polymers
- Metals**—Ferrous, Non ferrous and Alloys
- Composite materials**—combination of 2 or more materials
- Modern Materials**—developed for a specific application
- Smart materials**—Change their properties in response to a stimulus.

Drawing Techniques



Keywords

- Aesthetics**—The way a product looks and feels
- Ergonomics**—The relationship of a product with the user and environment. Safety and comfort focused.
- Anthropometrics**—Human sizes used to influence design

Drama Keywords

Rhythm: Movements which follow a pattern or beat.	Body Language: Messages given by the position or movement of the body to express how a character is feeling.	Facial Expression: Look on face which shows how a character is thinking or feeling.	Characterisation: The process of fully developing a character.	Status: A characters importance in relation to the characters surrounding them.	Emphasis: The stress on a certain word or phrase.	Physical Theatre: A theatrical drama which is told many through physical movement.
Dialogue: The words exchanged between characters.						
Blocking: the moves of the actors on stage.						
Dynamics: Variations in levels of energy, physical movement, pace or emotional intensity.						
	Narration: A section of the story is spoken. There may be some action happening at the same time. This is usually spoken directly to the audience.	Slow Motion: A section of the Drama is performed slowly.	Freeze Frame: A still image which represents a moment in the Drama.	Propless Theatre: a theatre performance without the use of props. A story told through physical movement.	Transition: the movement between positions.	Narrator: section of the story is spoken. There may be some action happening at the same time. This is usually spoken directly to the audience.
	Choreography: The organised movement of actors and dancers, often to music.	Protagonist: main character in the drama.	Antagonist: the enemy or the competitor.	Slow Motion: when movement is slowed down to allow certain parts of the performance and body to be exaggerated.	Ensemble: An approach to theatre-making that focuses on the combined output of all the members of a group of performers working together, rather than emphasising individual performances.	Rhythm: In performing, rhythm is the tempo, pace or regular pattern of the work. Rhythm can reflect the emotional state of a character or group of characters, or the atmosphere of a scene.
		Isolation: Control of isolated body parts; the ability to control or move one part of the body independently of the rest.	Levels: The height or the positioning of a character compared to others. Levels can also refer to parts of the set that have been elevated or lowered to vary the height of the playing space.			



English Knowledge Organiser

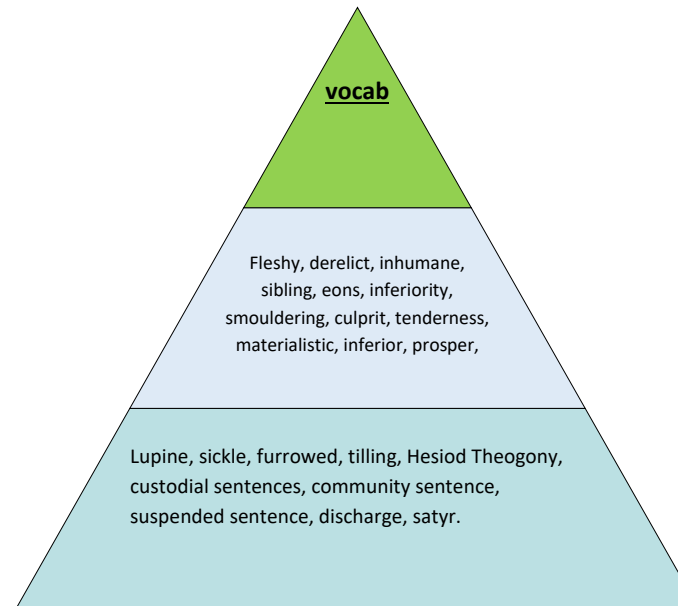
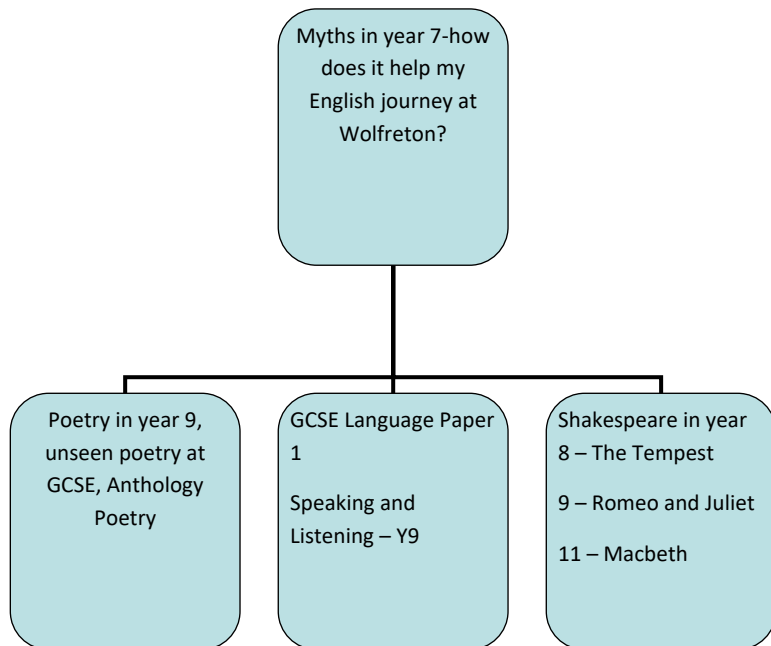


GREEK MYTHS-KNOWLEDGE ORGANISER

So much more than just a story.....



<p>THE CREATION</p> <p>In the beginning of time, the gods Uranus and Gaia started creating the children of the earth – the Titans. When Uranus and Gaia's son, Cronus, is told his children will overthrow him, he decides to eat them all. However, he forgets one: Zeus.</p>	<p>PROMETHEUS</p> <p>When Prometheus and his brother Epimetheus are spared imprisonment for not fighting against Zeus and the Olympians, they were given the task of creating man.</p> <p>Prometheus felt responsible and cared more about mankind than the Olympians. He started to rebel against the powerful</p>	<p>PROMETHEUS AND PANDORA</p> <p>Prometheus loved mankind more than the Olympians, so he decided to steal the fire from the gods to give mankind power and comfort.</p> <p>Zeus creates the first ever woman – Pandora – and sends her down to punish Prometheus and mankind for this rebellious act against the gods.</p>	<p>THE GREAT FLOOD</p> <p>When Zeus, the king of the gods, notices mankind acting selfishly and destroying all order, he disguises himself and pays a visit to Lycaon.</p> <p>When he visits the Arcadian king, he sees a vicious act of greed and is disgusted at mankind's reaction. He decides to give them the ultimate punishment.</p>	<p>MIDAS</p> <p>When King Midas cares and treats the lost Silenus well, he reunites him with his good friend Dionysus – a great god.</p> <p>When Dionysus is reunited with Silenus, he is immensely grateful to Midas and grants him one wish. King Midas wishes that everything he touches turns to gold.</p>	<p>MIDAS AND APOLLO</p> <p>When King Midas judges a musical duel between Pan and Apollo, he is the only judge to choose Pan as the winner.</p> <p>Apollo is furious at King Midas' decision and chooses to teach him a lesson.</p>
---	--	---	--	---	---



Written features you will study and aim to use:

Feature	Example
Simile-a comparison between two things using like or as.	She was like a miniature goddess
Metaphor- a direct comparison between two things.	With one sudden gesture he tore apart the clouds, banished the winds
Adjectives-descriptive words	Fleshy, Lupine, Derelict, Golden, Careless, Inhumane, Wicked
Lists-of words or phrases	Bristles burst forth from their backs, their bellies, their arms, their legs, their very faces.
Time related connectives	After, one day, in the beginning, years passed.
Sentences starting with adverbs and adjectives ending in 'ed'.	Suddenly, the box was open. Surprised, Pandora wondered what would happen next.

English Knowledge Organiser

Year 7: The Gothic – Reading and Writing

Reading Skills

KMW: How does Act 3 Scene 2 of 'Flesh and Blood' fulfil the conventions of the Gothic genre?

Themes

- Gothic
- Horror
- Mystery
- Grief
- Romance
- Supernatural
- Death
- Adventure
- Friendship
- Revenge

Contexts

- Classic literature (the canon)
- Vampires across literature
- School field trips
- Religion
- Parallel universes
- Superstitions

✓	Texts Studied (Your teacher will choose from the list below)
	Coraline (extract)
	Wuthering Heights (extract)
	Silent Companions (extract)
	Dracula (extract x 2)
	The Terrible Path (poem)
	The Woman in Black (extract)
	The Red Room (full short story)
	Flesh and Blood (ALL classes will read the full play)

Writing Skills

KMW: Write an opening to a Gothic story.

The Gothic Genre – it can include...

- Common fears of humans, e.g. darkness
- old-fashioned or remote locations such as castles, dungeons, abandoned buildings, forests...
- Supernatural creatures or events
- Emotions such as anger, pain, suffering, terror
- 'The Uncanny'
- Multiple narrators

Effective methods for use in a descriptive writing:

Varying sentence openers	<ul style="list-style-type: none"> - Begin with an -ly adverb - Begin with an -ed adjective - Begin with an -ing verb
Rule of Three (aka triplet)	The "rule of three" is based on the principle that things that come in threes are inherently funnier, more satisfying, or more effective than any other number. When used in words, the reader or audience is more likely to consume the information if it is written in threes.
Pathetic Fallacy	Using a description of weather to reflect the mood of a scene or character. E.g. stormy weather for anger or evil excitement
Metaphor	A metaphor is a figure of speech that describes an object or action in a way that isn't literally true, but helps explain an idea or make a comparison.
Using a semi-colon	A semi-colon looks like this ; You can use a semi-colon to join two main clauses that are linked. <i>I couldn't believe this had happened; I am going to be in so much trouble.</i>

GCSE English Literature	<ul style="list-style-type: none"> •Didactic nature of texts •Jekyll and Hyde
GCSE English Language	<ul style="list-style-type: none"> •Understanding an extract •writing creatively to describe and narrate
Year 9: 19th Century	<ul style="list-style-type: none"> •'A Christmas Carol' •morality •supernatural
Year 7: Gothic	<ul style="list-style-type: none"> •Victorianism •Appreciation of 19th Century Writing

Vocabulary

Tier 2:

explain, analyse, evaluate, extract, disembodied, architecture, atmospheric, gaunt, hemmed, desolate, malevolent, fiendish, melancholy

Tier 3:

extended metaphor, tension, authorial, Gothic, supernatural, etymology, narrative, playwright, scene, act, narrator, pathetic fallacy,



POINT: One gothic feature in the extract is _____ when _____.

EVIDENCE: This is shown by, "....."

EXPLAIN: This helps us to imagine or feel

CHALLENGE:

Furthermore, the writer's use of [method name] with "....." creates tension / mystery / fear because ...

Sentence Structure Type	What It Contains	Example
Simple	1 Independent Clause	<i>I like grammar.</i>
Compound	1 Independent Clause + 1 or More Independent Clauses	<i>I like grammar because I find language interesting.</i>
Complex	1 Independent Clause + 1 or More Dependent Clauses	<i>Because I like grammar, I have spent a lot of time studying sentence structure.</i>
Compound-Complex	2 Independent Clauses + 1 or More Dependent Clauses	<i>I have never been a great student, but because I like grammar, I have spent a lot of time studying sentence structure.</i>

English Knowledge Organiser

Year 7: GROWING UP – Reading and Writing



Reading Skills

Writing Skills

KMW: How do I write an engaging article?



- Themes**
- Diversity
 - Gender, feminism
 - Poverty, overcoming poverty
 - Grief
 - Race
 - Activism
 - Puberty

- Contexts**
- Founding Museum
 - Charles Dickens' life
 - Race
 - The impact of racism upon society and individuals
 - USA
 - Poverty and the impact of this on young people.
 - Education for girls around the world
 - Extremism

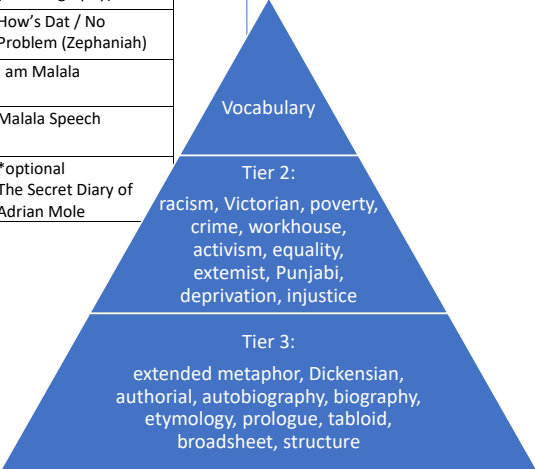
✓	Text Studied (Your teacher will choose from the list below)
	Coram Boy
	Oliver Twist
	Anita and Me
	The Rose that Grew from Concrete
	The Hate U Give
	Benjamin Zephaniah (autobiography)
	How's Dat / No Problem (Zephaniah)
	I am Malala
	Malala Speech
	*optional The Secret Diary of Adrian Mole



Effective methods for use in a speech:

Repetition	Repetition is when a single word, or a group of words, is repeated for effect.
Rule of Three (aka triplet)	The "rule of three" is based on the principle that things that come in threes are inherently funnier, more satisfying, or more effective than any other number. When used in words, either by speech or text, the reader or audience is more likely to consume the information if it is written in threes.
Pronouns	A pronoun is a word that can replace a noun in a sentence. For example, in the sentence <i>I love my dog because he is a good boy</i> , the word <i>he</i> is a pronoun that replaces the noun dog.
Metaphor	A metaphor is a figure of speech that describes an object or action in a way that isn't literally true, but helps explain an idea or make a comparison.
Emotive Language	'Emotive language' refers to word choices that are intended to get an emotional reaction or arouse an emotion. It doesn't matter what it is – anxiety, anger, relief, urgency, joy, excitement and so on – as long as it has been evoked by the language used.
Anecdotes	a short amusing or interesting story about a real incident or person.
Contrasts	Contrast is a rhetorical device through which writers identify differences between two subjects, places, persons, things, or ideas.

GCSE English Language	<ul style="list-style-type: none"> • Understanding an extract • writing creatively to present a viewpoint
Year 9: Inequality	<ul style="list-style-type: none"> • racism • poverty • injustice
Year 7: Gothic	<ul style="list-style-type: none"> • Victorianism • Appreciation of 19th Century Writing



POINT: Firstly, we learn that _____

EVIDENCE: This is shown by, "....."

EXPLAIN: This implies.....

CHALLENGE:
Furthermore, the writer's use of _____ with "....." suggests...
Contextually, this relates to

Sentence Structure Type	What It Contains	Example
Simple	1 Independent Clause	<i>I like grammar.</i>
Compound	1 Independent Clause + 1 or More Independent Clauses	<i>I like grammar because I find language interesting.</i>
Complex	1 Independent Clause + 1 or More Dependent Clauses	<i>Because I like grammar, I have spent a lot of time studying sentence structure.</i>
Compound-Complex	2 Independent Clauses + 1 or More Dependent Clauses	<i>I have never been a great student, but because I like grammar, I have spent a lot of time studying sentence structure.</i>

English Knowledge Organiser

YEAR 7 DYSTOPIA: The Giver by Lois Lowry

KMW: Reading Analysis of extract from Chapter 15: **How does Lois Lowry use language to emphasise how horrible war is?**

dystopia (n.) an imagined state or society in which there is great suffering or injustice, typically one that is totalitarian or post-apocalyptic.

INFORMATION RETRIEVAL

- ☐ Identify and understand **explicit** (obvious) and **implicit** (hidden) information and ideas.
- ☐ Select and **synthesise** (blend) evidence form different texts.

This means I need to be able to:

- ✓ Find important quotations
- ✓ Say what is obvious in a text
- ✓ Read between the lines to find what is suggested and not said
- ✓ Give more than one meaning about a quotation.

The teacher was sitting with his feet up on a desk.

EXPLICIT: The teacher has his feet up.

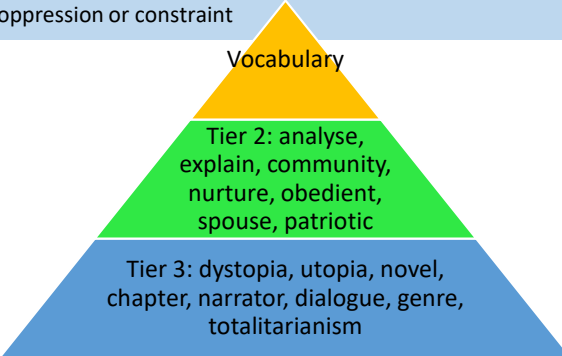
IMPLICIT: The teacher is tired, fed up and a bit unprofessional!

Conventions of a Dystopia:
 Propaganda is used to control the citizens of society. • Information, independent thought and freedom are restricted. • A leader/concept is worshipped by the citizens of the society. • Citizens have a fear of the outside world. • Citizens live in a dehumanized state. • Citizens conform to uniform expectations. Individuality and dissent are bad because personal freedoms are limited. • The society is an illusion of a perfect utopian world.

A Dystopian Protagonist:
 Often feels trapped and is struggling to escape. • Questions the existing social and political systems and attempts to rebel but in a way that is still morally acceptable • Believes or feels that something is terribly wrong with the society in which he or she lives. • Lacks the selfish nature of those in charge.

Typical settings of a Dystopia:
 Futuristic, industrial cities • Destroyed natural habitat with little connection to nature • High levels of surveillance • Environments and weather that creates a strong sense of oppression or constraint

Major themes : Memory • The 5 senses • Individuality • Choices & Freedoms • Knowledge • Art & Culture • Pain & Joy
Major Characters: Jonas (the protagonist) • Asher • Lily • The Giver • Rosemary • Gabriel • Mother • Father
 Jonas lives in a seemingly perfect community in which there is little pain and little crime. People are polite. Everyone belongs to a supportive family. But this harmony comes at a price; there is no choice and real emotions are non-existent. Life is dictated by strict rules. A committee of elders matches spouses and assigns them children born from women whose only job is to give birth. The committee names all babies; chooses every person's career; and families are dissolved when the children are grown. Everyone looks similar in skin colour and dress. Everything serves a purely practical purpose and the old or sick are "released," which the community believes means sent to live "Elsewhere".



Chronological history of Dystopian Texts									
Gulliver's Travels & A Modest Proposal By Jonathon Swift 1726	The Machine Stops By E. M. Forster 1909	1984 By George Orwell 1949	A Handmaid's Tale & The Testaments By Margaret Atwood, 1985 & 2019	The Giver By Lois Lowry 1993	The Hunger Games Series by Suzanne Collins 2008	The Maze Runner Series by James Dashner 2009	Divergent Series By Veronica Roth 2011	Delirium by Lauren Oliver 2011	Second Born Series by Amy A Bartol 2017

Geography Knowledge Organiser



YEAR 7

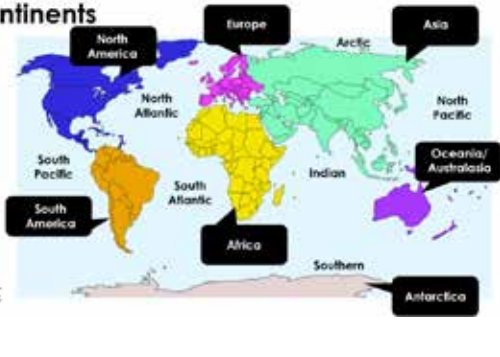
MAP SKILLS

GEOGRAPHY KNOWLEDGE ORGANISER



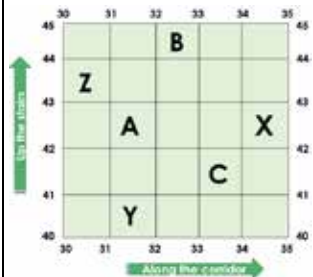
1. DIRECTION AND CONTINENTS

Continents



4. 4 FIGURE GRID REFERENCES

Along the edges of each map there are numbers. These numbers help you work out where a location is on a map. Northings are the numbers that go from bottom to top, Eastings go from left to right.



Rules to follow:

- Always look at the bottom left hand corner of the square.
- The first two numbers give the eastings, the second two numbers give the northings.

Remember: along the corridor and then up the stairs.

X = 3442

6. MEASURING HEIGHT ON A MAP

The land around us is rarely flat. We measure how high land is above sea level. As well as height we also think about slope or gradient. The height and shape of the land is known as relief.



A **spot height** shows the height of the land in meters in a particular location.

A **triangulation pillar** is a concrete post that used to be used for making maps. These show the height of the land at an exact spot too.



Contours are lines drawn on a map. Everywhere along a contour is the same level. The number on the contour line shows the height of the land in metres above sea level.

The closer together the contour lines, the steeper the gradient.

2. SCALE AND DISTANCE

Scale refers to the size of things. It's easy to get the scale of things wrong, especially from pictures. To avoid confusion, maps have a scale. The scale tells us how much smaller the map is than real life. Using the scale on a map helps us to work out how big things are and how far apart they are in real life.

Scale line		This scale line on the map shows that 1cm is the same as 1km on the ground. Sometimes it can be shown in miles also.
Ratio	1:25,000	Ratio can be shown in different ways on a map, you need to check this when measuring distance. If a scale is 2cm to 1km, you will need to calculate the distance.

5. 6 FIGURE GRID REFERENCES

We can use six-figure grid references to find exact locations within a grid square, so they are much more accurate. The grid square is divided into tenths.

The first 3 numbers give the eastings (along the corridor).

The second 3 numbers give the northings (up the stairs).

X = 235475
The numbers underlined show how far across the square you go.

7. CROSS SECTIONS

A **cross-section** is a view or drawing that shows what the inside of something looks like after a cut has been made across it.

The diagram on the top left shows what Mt St Helens looked like before it erupted in 1980 from an aerial view using contour lines.

The diagram on the bottom left shows the cross section of Mt St Helens and what the flanks (sides) of the volcano look like before it erupted in 1980.

3. MEASURING DISTANCE

Straight Line Distance (as the crow flies)
Use a ruler/piece of paper to measure from one point to the other. Then measure this on the scale line.

Curved Line Distance

Method 1: The String Method

1. Take a length of string. (It's best to take one longer than you think you'll need). Place one end on your starting point.
2. Carefully lay the string along the road or path you know you're going to use, following the curves as closely as you can. When you reach your finishing point, mark it on your string with a pen.
3. Straighten out your string and place it against the scale bar to find out how far you will actually be travelling.

Method 2: Moving Paper Method

1. Every time the route disappears or moves away from the straight edge of your paper, make a small mark on the edge and pivot the paper so the edge is back on the course.
2. Repeat the process until you reach your destination.
3. You should be left with a series of marks along the edge of your paper. You can now use the scale bar to measure against the scale bar. The last mark will tell you the real distance (it needs to travel).

8. MAP SYMBOLS

As Geographers we use symbols on a map. Symbols help us to include lots of detail on maps that are drawn to scale. They include simple images, letters and abbreviations. Here are some examples:

	Campsite		Viewpoint
	Train Station		School
	Parking		Telephone
	Information Centre		Nature Reserve

Geography Knowledge Organiser



YEAR 7

HAZARDS

GEOGRAPHY KNOWLEDGE ORGANISER



1. INTRODUCTION TO HAZARDS

A **hazard** is a situation that poses a level of threat to life, health, property, or environment.




Most hazards are dormant or potential, with only a theoretical risk of harm; however, once a hazard becomes "active", it can create an emergency situation.

Hazard risk is the chance or probability of being affected by a natural event.



Factors which affect hazard risk include urbanisation, location and wealth.



Tectonic hazard	Atmospheric hazard
Volcanic eruption Earthquake Tsunami Landslides 	Hurricane Flooding Wildfires Tornadoes Coastal flooding Drought  

2. STRUCTURE OF THE EARTH

The earth is divided into different layers. Each layer is very different to the others.

The **crust** is solid rock varying in thickness which surrounds the outside of the planet. It is broken into pieces like a jigsaw.

There are two types of crust:
 • Oceanic crust (under the ocean)
 • Continental crust (under the land)



The **mantle** is molten (liquid) rocks called magma. It is rich in magnesium and silicon.

The **outer core** is molten (liquid) metal including nickel and iron. There is high pressure and temperature.

The **inner core** is a solid metal (nickel and iron). There is very high pressure and a temperature over 6000°C.

Convection currents: Heat comes from the core, the hottest part of the earth. The heat warms the bottom layer of the mantle. The warm mantle pushes up towards the crust, cooling as it rises. It reaches the crust but this is solid and so it can not escape. So the mantle is pushed back down towards the core. When the mantle moves the crust above it moves too.

3. EARTHQUAKES

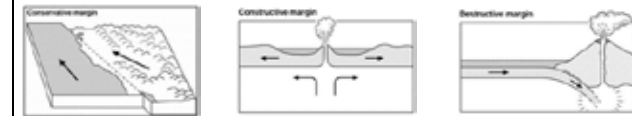
The world is split up into tectonic plates, which move due to convection currents. Where each of these plates meet is known as a **plate margin** or **plate boundary**.

There are three main types of plate margins:

- Conservative
- Constructive
- Destructive

An earthquake is the sudden movement and shaking of the Earth's surface.

- **Focus:** the point under the ground where the earthquake is triggered.
 - **Seismic waves:** shock waves that radiate from the focus of the earthquake.
 - **Epicentre:** the point on the earth's surface vertically above the focus of an earthquake.
 - Earthquakes are measured by **seismographs**.
- They record the shaking of the ground on a graph.
- The **Richter Scale** is used to describe the strength (magnitude) of an earthquake.



4. NEPAL EARTHQUAKE

April 25th 2015 **11.56am** **Magnitude 7.8**

Cause: Indian and Eurasian plates moving towards each other.

Effects:

- 9000 people killed
- 20,000 injured
- 8 million people affected
- 3 million homeless
- 7000 schools destroyed
- 50% of shops destroyed
- Cost of damage \$5 billion USD
- Avalanches on Mount Everest killed 19 people
- 1000 hospitals damaged
- More than 600,000 buildings destroyed in Kathmandu



Responses:

- International aid provided by India and China
- Over 100 search and rescue responders from UK
- Government taskforce created to help deal with future earthquakes
- Aid workers from the Red Cross came to help
- Temporary housing (Tent city) in Kathmandu
- People educated to do earthquake drills

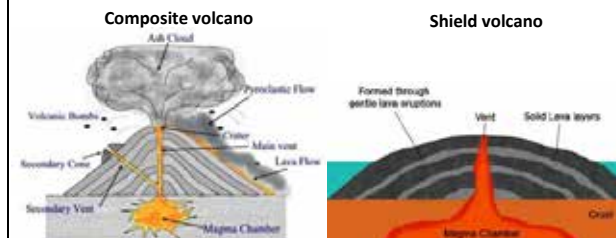


5. VOLCANO FEATURES

The majority of active volcanoes are located along the plate boundaries. Most of them are found around the Pacific Ocean, an area known as the Pacific Ring of Fire. They tend to be found along the coasts of countries.

Shield volcanoes form where plates move apart from each other (**constructive plate margin**) are usually fairly flat and very wide. This is because the lava they erupt is very runny and can flow a long way. Eruptions are quite frequent, but not very hazardous.

When plates move together (**destructive plate margin**), the volcanoes that form are usually called **composite volcanoes**. They have steep sides and are formed of alternate layers of lava and ash. They usually have explosive eruptions so their lava is not very runny.



6. VOLCANIC HAZARDS

Pyroclastic flow: fast-moving currents of hot gas and rock which travel away from the volcano at speeds generally as great as 435mph. The gas can reach temperatures of about 1000 °C.

Volcanic bomb: a mass of molten rock larger than 2.5 inches in diameter, formed when a volcano ejects lava during an eruption.

Lava flow: can be very hot (between 1000 to 2000°C).

They can cause serious burns and often burn down vegetation and structures.

Lahar: Volcanic mudflow. made of water mixed with ash and other volcanic debris, and have the consistency of wet concrete. They move extremely quickly reaching speeds of over 50mph. They are very powerful and can carry boulders of up to 10m in diameter. They can be hot (60-70°C when they stop) and can also be cold.


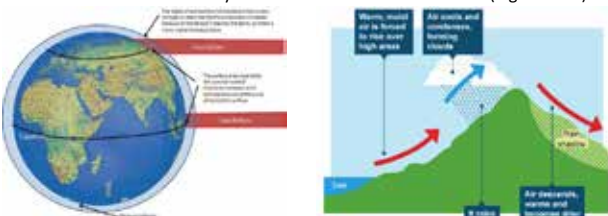

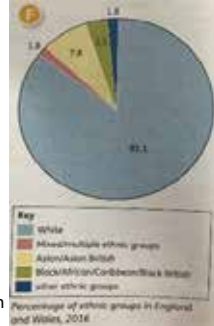
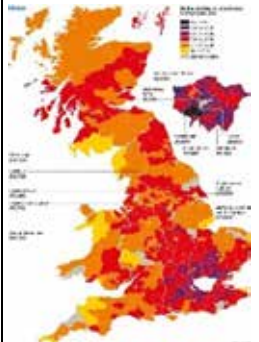


Volcanic gases: Carbon dioxide which can suffocate people and animals when it removes oxygen. Sulphur dioxide causes acid rain and can also affect the climate. Hydrogen fluoride is an acid which attacks the calcium in your bones and can instantly kill you if breathed in and can contaminate water.

Why do people live near volcanoes?

- Tourism
- Fertile soil (ash)
- Geothermal energy
- Hot springs
- Mineral extraction



Geography Knowledge Organiser

YEAR 7	GEOGRAPHY OF THE UK		GEOGRAPHY KNOWLEDGE ORGANISER												
<p>1. THE LOCATION OF THE UK</p> <p>The UK is located in the continent of Europe in the northern hemisphere, 55°N of the Equator. It is east of the Atlantic Ocean, west of the North Sea and north of the English Channel. The UK is north-west of France. The UK is made up of England, Scotland, Wales and Northern Ireland.</p> <p>Human Geography England is most densely populated in the South East of England. For centuries many people have migrated to Britain from different parts of the world. Almost 87% of the population are white, with many holding ancestry from the European mainland (e.g., Angles, Saxons, Jutes, Vikings and Romans). Sport plays a major role in UK culture. Several sports were founded in the UK including rugby, cricket, netball and tennis. Football is the most popular sport.</p> <p>Physical Geography About 75% of land in the UK is suitable for farming. There are 15 National Parks across England, Scotland and Wales which have all been created since 1950s. The River Severn is the longest river (354km) and Ben Nevis the highest mountain (1345m).</p>	<p>2. LAND'S END TO JOHN O'GROATS</p> <p>The Land's End to John O'Groats challenge is a route that stretches the whole length of the UK.</p> <p>Land's End is in the south-west of Cornwall. John O'Groats is in the far north-east corner of Scotland.</p> <p>In total, the route stretches for 1407km (874 miles).</p> <p>Many people walk, cycle or run the route in aid of charity.</p>		<p>3. UK CLIMATE</p> <p>Climate is the long-term changes in weather conditions such as temperature and precipitation (rain).</p> <p>The UK is relatively small island, however the climate can vary quite significantly. In the South of the UK, temperatures are generally higher as this part of the UK is closest to the Equator. The West of the UK generally receives more rainfall than the East, this is because the Western side of the UK is affected by winds which pick up moisture as they blow across the Atlantic Ocean and deposit this moisture as rainfall when they reach the Western half of the UK (e.g. Carlisle).</p> 												
<p>4. UK POPULATION</p>  <p>In 2023, the population of the UK was estimated at 68.8 million. By 2039, it is thought that the UK's population could be over 74 million. Some parts of the UK are densely populated, this means that they are very crowded, for example London and the South East. On the other hand, some parts of the UK are sparsely populated, this means that there are not many people living there, for example Northern Scotland.</p> <p>The UK has an ageing population – this means that there are increasing numbers of people aged 65 and over in the UK.</p>	<p>5. MIGRATION TO THE UK</p> <p>Migration is the permanent movement of people from one place to another, this can be within a country or moving to another country.</p> <p>Throughout history, people from a wide range of countries have migrated (moved to) the UK. This means that we have a very diverse population which is made up of lots of different religions and ethnic backgrounds.</p> <p>One example of a group of people that have migrated to the UK is Polish people (people who come from the country of Poland). The migration of people to the UK creates lots of advantages such as migrants filling important job roles e.g. nursing.</p>	 <table border="1"> <caption>Percentage of ethnic groups in England and Wales, 2018</caption> <thead> <tr> <th>Ethnic Group</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81.1</td> </tr> <tr> <td>Asian/Asian British</td> <td>7.9</td> </tr> <tr> <td>Black/Black British</td> <td>3.8</td> </tr> <tr> <td>Other ethnic groups</td> <td>1.8</td> </tr> <tr> <td>Mixed/Multiple ethnic groups</td> <td>3.4</td> </tr> </tbody> </table>	Ethnic Group	Percentage	White	81.1	Asian/Asian British	7.9	Black/Black British	3.8	Other ethnic groups	1.8	Mixed/Multiple ethnic groups	3.4	<p>6. JOBS IN THE UK</p> <p>The types of jobs that people do in the UK have changed over time. In the past, many men did manual labour while women often worked in factories. People often remained in the same job all their life. Today things are very different. Men and women work in a huge variety of different workplaces. They often change career and, increasingly, people work from home, linked to each other by the Internet.</p> <p>The jobs that people do in the UK can be divided up into four different sectors:</p> <ul style="list-style-type: none"> • Primary jobs are when people extract raw materials out of the ground e.g. farmers. • Secondary jobs involve people manufacturing things e.g. factory workers. • Tertiary jobs are when people provide a services for other people e.g. doctors. • Quaternary jobs are when people design and research new things e.g. scientists.
Ethnic Group	Percentage														
White	81.1														
Asian/Asian British	7.9														
Black/Black British	3.8														
Other ethnic groups	1.8														
Mixed/Multiple ethnic groups	3.4														
<p>7. UK ECONOMY</p>  <p>Although the UK is classed as a High Income Country (HIC), money is not distributed evenly. This means that some areas are much richer than others. The purple areas on this map show the UK's richer areas.</p> <p>The UK's 'North-South divide' refers to the fact that generally the Southern half of the UK is richer than the North.</p> <p>Even though the UK is a High Income Country (HIC), in 2023 18% of the UK population were living in poverty.</p>	<p>8. THE UK IN THE WIDER WORLD</p> <p>The UK is strongly linked to the rest of the world. Examples of how the UK is linked to the rest of the world are:</p> <ul style="list-style-type: none"> • Language and culture: for example the English language is widely spoken across the world. • Trade: the UK buys and sells things from and to other countries. • Travel and tourism: lots of people travel to the UK each year from other countries. • TNCs: lots of foreign companies have set up in the UK e.g. McDonald's. • Treaties: the UK has signed lots of laws with other countries. • Aid: the UK gives lots of money and support to other countries. 	<p>The Big Question Review</p>  <p>What is the geography of the UK?</p>													

Geography Knowledge Organiser



YEAR 7

EXTREME ENVIRONMENTS

GEOGRAPHY KNOWLEDGE ORGANISER



1. INTRODUCTION TO ANTARCTICA

Antarctica is the southernmost continent and is the world's 5th largest continent. The UK is 8600 miles away and Argentina is just 660 miles away from Antarctica. Antarctica is surrounded by the Southern Ocean.

The average temperature is around -30°C, but mountainous areas inland are much colder, falling to temperatures of -60°C.

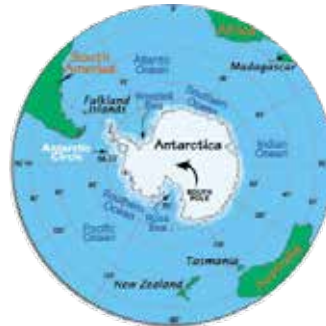
Antarctica is a **cold desert** because of the low levels of **precipitation**. The precipitation in Antarctica is mainly snow. Antarctica experiences strong **katabatic winds**, as cold air flows down from inland areas towards the coast. The coastline of Antarctica is one of the windiest places in the world. These winds speeds can reach up to **200mph**.

Nearly 99% of Antarctica is covered by an ice sheet. The ice in Antarctica is on average 2.5km thick. During the Antarctic winter, the continent has 24 hours of darkness. More ice forms and the continent doubles in size. In contrast, there are 24 hours of daylight in the Antarctic summer.



Precipitation: rain, snow, sleet, or hail that falls on the ground.

Climate: The weather conditions in a certain area over a long period of time.



2. LIFE IN ANTARCTICA

Antarctica is a **fragile environment**, with a long recovery time. A single footprint in the ice may still be seen 10 years later. This means that very few plants grow. Those that do, grow very slowly and are located around the coast. e.g., lichens. Lichens have a number of adaptations that enable them to survive in Antarctica. They are able to exhibit net photosynthesis while frozen at temperatures as low as -20°C.



At the edge of the continent, strong winds often blow at storm force.

East Antarctica is colder than West Antarctica because of its **higher elevation**.

Wind speeds can reach 200mph where there are **katabatic winds** (winds which blow down a slope because of gravity).

There is a British Research Base in Antarctica called the Halley VI research base. This has been rebuilt 5 times as they have been destroyed due to snow accumulation becoming too heavy and crushing them. Halley VI has hydraulic legs to keep it above the accumulation of snow and there are retractable giant skis on the bottom of these legs which enables the buildings to be relocated if necessary. **People must adapt** to living in Antarctica by wearing warm clothing and layers to prevent medical conditions such as frostbite and hypothermia.



3. WILDLIFE ADAPTATIONS IN ANTARCTICA

Seals keep open breathing holes in the ice by rasping back and forth with their teeth, so allowing them to live further south than any other mammal.

↑
WEDDELL SEAL



They can swim large distances between cracks in the ice and breathing holes.

Smooth, streamlined shape to pass easily through the water.

↓
A large blubber layer underneath the skin acting as insulation.

Weddell seals are very good divers. They can stay under water for up to 45 minutes and reaching depths as great as 720m in search of prey.

Thick, windproof and waterproof coats.



EMPEROR PENGUIN

Behaviour (forming large huddles).

Thick fat (or blubber) layers.

↓
Large in size (compared to other types of penguin).

Black on their backs and white on their fronts.

4. FUTURE OF ANTARCTICA

Importance

Scientific research: Antarctica tells us about the earth's climate and oceans.

Human activity: Antarctica tells us about the impact of human activity on the natural world.

Water: Antarctica holds most of the world's fresh water.

Global common: Antarctica is not owned by any one country and therefore represents international relations and cooperation.

The Antarctic Treaty (1959) is an agreement to protect Antarctica.

54 countries have signed the treaty.



Threats

Tourism: Problems are created with the pollutants that accompany ships and aircrafts, the possibility of oil spills and the effects of lots of people and infrastructure on wildlife and the wider environment.

Mineral extraction: Antarctica has many resources. As no single country owns Antarctica, access to these resources could cause conflict. Minerals, such as copper and gold, fossil fuels and fish stocks are all valuable resources that could be exploited.

Fishing and whaling

The world's oceans are over-fished, the chances are that if investments into the kinds of boats and fishing gear needed for Antarctica are made, then it too will suffer this same fate. Fishing for krill could be particularly significant as these are at the bottom of many Antarctic food chains. There are already illegal fishing boats that ignore current regulations. Southern fur seals and blue whales were hunted to the edge of extinction in Antarctica. Luckily the fur seals have recovered well.



Geography Knowledge Organiser



YEAR 7

ASIA

GEOGRAPHY KNOWLEDGE ORGANISER



1. INTRODUCTION TO ASIA

Asia is a continent that is made up of 48 countries. This includes countries such as China, India, Thailand, Vietnam, Cambodia, Japan, Nepal, Yemen and Oman to name a few.

Asia has both the highest and the lowest points on the surface of Earth, has the longest coastline of any continent, is subject overall to the world's widest climatic extremes, and, consequently, produces the most varied forms of vegetation and animal life on Earth.

Asia has many physical features including mountain ranges such as the Himalayas, Mount Fuji and Altai mountains. Asia has many rivers such as the Yangtze River in China, the Mekong which runs through 6 countries including Vietnam and the River Ganges in India.

Why is manufacturing taking place in Asia?

- A growing population eager to earn more provided relatively cheap and abundant labour in the last decade of the 20th century and the early part of the current century, producing many of the manufactured consumer goods the world needed.
- Raw materials of products are cheap because of 2 factors: One, most of them are produced in Asia itself. Second, due to high demand they are available at cheapest price. China only has VAT taxation system which allows taxing only value added services. So production is cheap.
- Large brands such as Nike, Adidas and Apple can have their products manufactured and then shipped out to other countries to maximise profits.



2. INDIA MONSOON

The monsoon is a time when a country sees exceptional amounts of rainfall over a few months.

Monsoon season in South Asia is March-November.



WET MONSOON IN INDIA

March 5th From March the sun shines on the whole of India and warms the ground faster than the sea. The hot ground begins to warm the air above India and so the heat over the large land mass builds.

June 5th When the land is warmer than the sea (around 20°C), the warm air rises upwards into the atmosphere.

June 15th As the warm air rises it leaves space underneath it for cooler, very wet air from the sea to rush onto the land. These south west winds bring the Monsoon first to the very southern tip of India and along the coast to the North.

July 15th The cool, wet air continues to travel northwards on south west winds from the Indian Ocean to fill the low-pressure zone. The rains now cover half of the country.

August 15th The air is forced to rise over the Himalayan mountains. The air cools and condenses forming heavy rain at the foothills (up to 12m).

September 15th Now the Monsoon rains have cooled the land, the air above the sea is warmer than the air above the land and the winds reverse and begin to blow from the north east. This is much drier warmer air.

October 15th The dry air pushes the rains south until the whole of India is again in a dry season.



3. CHINA TOURISM

Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business purposes.

The Great Wall of China: This is the longest wall in the world. It was built to protect against attack and invasion from the north. The official length is 21,196.18km and is more than 2700 years old. It cannot be seen from space by the human eye without aid. There is a toboggan slide you can go down the Great Wall on!



Giant Panda Breeding Research Base: The Giant Panda has a population of less than 2000 making the species endangered. There are laws which protect the Giant Panda and they are considered a national treasure in China. It costs £233 to hold and hug a panda for about 2 minutes (on top of the £7 to enter the park).



TOURIST ATTRACTIONS IN CHINA

The Great Wall of China, Beijing	Giant Panda Breeding Research Base, Chengdu	Terracotta Army, Xi'an	The Yellow Mountains, Huangshan
Jiuzhaigou National Park	Zhangjiajie Grand Canyon Glass Bridge	Pingyao, an Ancient City	The Yangtze River



4. HONG KONG HOMES

Hong Kong has huge inequality with 125,100 millionaires and 1.6 million people living in poverty. This has resulted in a **housing crisis** due to extreme prices and **inequality**. The city has the most expensive housing market in the world because of an increase demand for housing and the scarcity of adequate housing pushing house prices up. This means that many people are living in "coffin homes" which describes how small their homes are. Many people who live there are deeply ashamed of their circumstances and are living below the poverty line; some pay £1500 a month for these coffin homes. Affordable housing is out of reach for many. Hong Kong has among the **highest population density in the world**.

Hong Kong's leaders are considering building islands on reclaimed land in the sea, so that more housing can be built. The Lantau Tomorrow Vision is one of these projects.

The Lantau Tomorrow Vision proposes to:

- Reclaim 1,700 hectares of land out at sea to house up to 1.1 million people on artificial islands.
- It will cost £60 billion.
- Approximately 6% of the city's land is reclaimed and is home to 27% of its population.
- Critics claim building artificial islands is "pouring money into the sea" and local people will end up paying in tax.
- Environmental damage could include permanent loss of habitat as water systems change. This would have a negative impact on the livelihoods of Hong Kong fishermen.



5. THAILAND TOURISM

Ethical tourism mean thinking about the consequences of your actions as a tourist on the environment, local people and local economy.

Tourism can have positive or negative impacts on the people of Thailand. The money generated can really help improve the local people's wellbeing and quality of life but it can also lead to invasion of privacy and homogenization (cultures becoming the same).

TOURIST ACTIVITY	POSITIVES	NEGATIVES
Elephant Riding, Pai	Elephants are no longer logging after the ban in 1989.	Baby elephants are beaten into submission.
Tiger Kingdom, Chiang Mai	Tries to inspire people to care about the welfare of captive tigers as well as the plight of the wild tiger worldwide.	The adult tigers are to be kept isolated in a cage, 24 hours a day – unless they are taken out for photos.
Kayan People	People have escaped persecution during the civil war in Myanmar.	Women are not allowed to leave their village and have to wear the rings on their necks.
Songkran Festival, Chiang Mai	Provides lots of income from visiting tourists and shares cultural traditions.	Plastic pollution from left over water pistols and plastic bottles left behind.
Maya Bay, Ko Phi Phi	Boat operators make money.	Damage to coral reefs from boats.



6. HAZARDS IN INDONESIA

Indonesia is a **multi-hazardous environment**. It is at risk of both volcanic eruptions and earthquakes, which could also cause a tsunami. This is due to its location on the boundary of 3 major tectonic plates – Indian-Australian, Eurasian and Pacific.

On December 26th 2004 Indonesia was struck by an undersea earthquake with a magnitude of 9.1 off the coast of Sumatra which caused a **tsunami**. Some locations reported that the waves had reached a height of 30 feet (9 metres) or more when they hit the shoreline. At least 225,000 people were killed with Indonesia, Sri Lanka, India, Maldives, and Thailand sustaining massive damage. More than 80,000 houses sustained major damage or collapse and that more than 500,000 people were displaced from their homes in Sumatra alone. The public donated \$6.2billion. In the UK, the Disasters Emergency Committee (DEC) appeal for the tsunami received £392m in public donations. Indonesia received the most humanitarian aid, with more than \$1bn allocated to the country. A further \$3bn was allocated to the region as a whole, including for early warning systems to reduce the impact of future tsunamis.



Mount Merapi is a **volcano** that erupted in 2010. It is one of the most densely populated parts of Java with over 11,000 people living on the slopes of the mountain. Pyroclastic flows travelled 3km down the heavily populated mountain sides and volcanic ash fell up to 30km away. On 25th October the Indonesian government wanted villages to move to safer ground and 19,000 were ordered to evacuate. An exclusion zone of 20km was established around the volcano.



Geography Knowledge Organiser



YEAR 7

WEATHER AND CLIMATE

GEOGRAPHY KNOWLEDGE ORGANISER



1. INTRODUCTION TO WEATHER AND CLIMATE

Weather: The day to day conditions of the atmosphere, it might be sunny, hot, windy or cloudy, raining or snowing.

Climate: The average weather conditions in a particular location based on the average weather experienced there over 30 years or more.

How does weather affect human activities?

Weather has a huge impact on human activities. It can affect jobs e.g., the number of customers who use a café, the quality of crops produced by farmers or the ability to go out to sea fishing. It can also have an impact on recreational activities that people choose to do e.g., hiking or fishing. Extreme weather can also cause problems for people e.g., flooding of houses/businesses, extreme cold causing an increase in electricity bills and storms damaging property.

Weather can also cause health problems for people such as heatwaves causing sunstroke and dehydration and ice causing slips and falls.



2. WEATHER INSTRUMENTS (FORECASTING)

A **weather forecast** is simply a scientific estimate of future weather condition. Weather condition is the state of the atmosphere at a given time. The significant weather variables being forecast differ from place to place.

An **anemometer** measures wind speed, either in kph or mph (kilometres per hour or miles per hour). The cups catch the wind, turning a dial attached to the instrument. The dial shows the wind speed - the faster the cups spin the stronger the wind.

A **hygrometer** measures humidity. It is a tool that utilises various materials and measurements to gauge a room or space's level of water vapor. While no scientific measurement is absolutely true, reaching humidity measurements that are as accurate as possible is crucial across industries.

Oktas are used to measure cloud cover. An observation is made by looking at the sky and an estimation of cloud coverage is made. It is measured in eighths - 1/8 through to 8/8.



A **thermometer** measures the air temperature. Most thermometers are closed glass tubes containing liquids such as alcohol or mercury. When air around the tube heats the liquid, the liquid expands and moves up the tube. A scale then shows what the actual temperature is.

A **barometer** measures air pressure. It tells you whether or not the pressure is rising or falling. A rising barometer means sunny and dry conditions, while a falling barometer means stormy and wet conditions. The arrow moves depending on what the air pressure is. A written description provides information on what the weather is going to be like.

A **rain gauge** measures the amount of rain that has fallen over a specific time period. A measuring cylinder is contained within a metal case with a funnel opening at its top. Rainwater as it falls goes into the opening and is channelled down the funnel into the measuring cylinder below. Measurements can then be taken to record the amount of rain which has fallen in a given period of time.

3. TYPES OF RAINFALL

Why does it rain?

1. Air rises (evaporation)
2. Air cools
3. Condensation occurs and clouds form



Air Pressure

Low pressure = warm air rises
High pressure = cold air sinks

Relief Rainfall

When wind meets a hill, it must go over it. As it rises, the warm air cools down. It condenses and forms clouds and rains. Air descends and begins to warm again and clouds disappear. This side of the mountain is the rainshadow.

Convective Rainfall

The sun heats the ground causing air to rise. When it gets higher, it cools down and condenses to form clouds. Torrential rain and thunderstorms.

Frontal Rainfall

When a warm air meets cold air, the warm air is pushed higher. This cools down, condenses and forms clouds. It then rains.

6. MICROCLIMATES

Microclimate: When the climate of a small area is different to its surroundings due to local features.

Factors affecting microclimates:

Shelter: Human features such as walls and buildings will shelter against the wind, making it warmer.

Buildings: These act like storage heaters, absorbing the sun's heat during the day and letting it out at night.



Surface colour: Dark surfaces absorb more heat than light ones, which reflect heat from the sun.

Aspect (which way something faces): if a place faces the sun it will receive more heat than one in shadow. South-facing slopes in the northern hemisphere catch the sun and north-facing slopes are cooler. It is the other way round in the southern hemisphere.

Physical conditions: Bare surfaces are windier than ones covered in vegetation.

4. CLOUDS

1. Clouds form when the air cools down. This changes water vapour into drops of liquid water, or even tiny ice crystals in a process called condensation.
2. The water droplets are big enough to catch the light and allow us to see them, but so small and light that they hang in the sky and don't fall to the ground.
3. The water droplets all gather together and make clouds.



5. GLOBAL CLIMATE

Climate varies globally because of the following:

Distance from the sea: Coastal areas are cooler and wetter than inland areas. Clouds form when warm air from inland areas meets cool air from the sea.




Ocean currents: As ocean currents flow around the planet, they move cold and warm water from one place to another. This changes climate and temperatures all over the world. The UK would be much colder if it wasn't warmed by water that travels from the Caribbean - called the North Atlantic Drift, or the Gulf Stream.

Latitude: Higher temperatures are recorded closer to the equator, while lower temperatures are recorded towards polar latitudes

Aspect: The direction a slope faces affects its temperature. South-facing slopes in the northern hemisphere are usually warm, and vice versa for the southern hemisphere.

Altitude: Higher elevations are generally colder and receive more precipitation, while flat, low-lying areas are typically warmer.

7. EXTREME WEATHER

Example	Description
Hurricane	A hurricane is a storm system rotating around an area of low pressure over an ocean, which produces strong winds and heavy rain. 
Snow Storm	A blizzard is a long-lasting snowstorm with very strong winds and intense snowfall. 
Tornado	A tornado is a violent rotating column of air extending from a thunderstorm to the ground. This is formed over land. 
Drought	Droughts happen when there is not enough rain for a long period of time.
Sand storm	A sandstorm refers to a high amount of wind occurring in sandy areas.

8. DROUGHT

Drought: a prolonged period of **very low rainfall**, leading to a shortage of water.

This can cause a variety of problems for local communities including damage to crops and a shortage of clean drinking water for people and livestock. This can have lasting economic and social effects. Drought can be hard to define and can be different in different regions – this is because it is defined depending on the average amount of precipitation that an area usually receives.

Causes of drought

Most droughts occur when regular weather patterns are interrupted e.g. the drought in Australia in the 2000s was made worse by changing air and ocean currents in the Pacific Ocean. Changes in atmospheric circulation can also affect rainfall patterns. In the past, monsoon rains in India had failed to appear when they were due.

High-pressure systems can block low-pressure systems that bring rainfall to the UK. This can lead to drought conditions.

History Knowledge Organiser

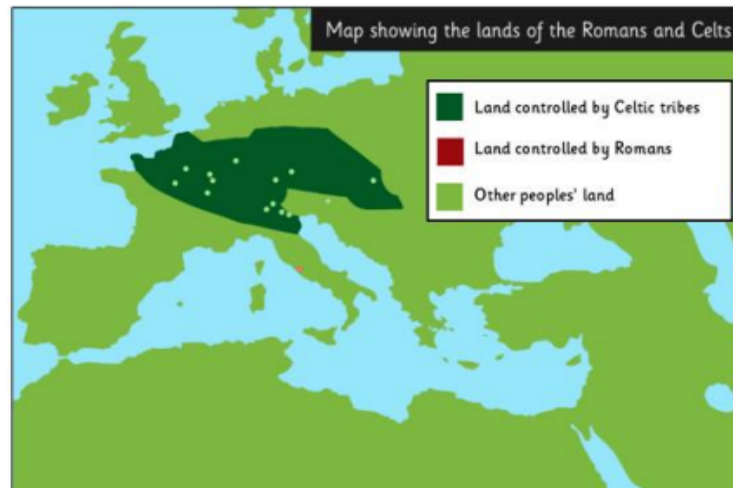
Knowledge Organiser: The Romans

Important Topic Vocabulary

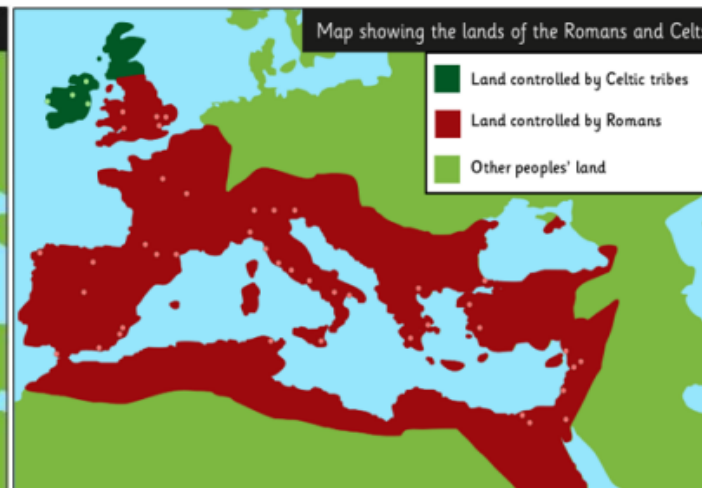
armour	Special metal clothing that soldiers wore for protection in battle.
conquest	The act of taking over a country or group of people.
empire	A group of countries or territories under the rule of one emperor.
invader	A country or army that forcibly enters another country to take control of it.
legion	A unit in the ancient Roman army of 3000 to 6000 men
source	Gives us clues about the past. These can be primary or secondary.
tribe	A group of people following the same beliefs living as a community with a leader.
warrior	A fighter who was brave and experienced in fighting battles.

What you already know!

- BC stands for Before Christ.
- During The Stone Age, villagers lived near rivers for food, water and farming. They were craftsmen and carved their own tools and methods of transportation such as boats.
- Britain changed throughout the Stone Age, Bronze Age and Iron Age.
- The capital city of Italy is Rome.



8000BC. Most of the land owned by the Celts and other groups.



117AD. The Height of the Roman Empire.

Before the Romans invaded, there was no single king or queen ruling the nation. Britain was made up of different tribes.

Around 2000 years ago, Britain was ruled by the Celts. This changed when the Roman army began building their empire across Europe.

Rome was led by a number of different emperors.

An emperor is a man who rules an empire or is the head of state in an empire.

Queen Boudicca

Queen Boudicca was the Queen of the British Celtic Iceni tribe who fought against the Roman Empire.

Some Celtic tribes wanted revenge against the Romans. Queen Boudicca raised a huge army and went on a rampage, burning the towns of Colchester and London. The Roman army fought back and both sides had a fierce battle.

The Romans won!



Julius Caesar

Julius Caesar laid the foundation for the Roman Empire and raided Britain. The Romans first arrived in Britain in AD43. Caesar wrote “The Britons have a huge number of cattle, they use gold coins or iron and then produce tin”.

This helps to explain why Caesar and his army invaded Britain. Rome wanted to get their hands on all of this and become richer!



Did you know?

In Roman times, urine was used to clean clothes and as a tooth whitener in toothpaste!

Purple clothing was a status symbol in Roman times. Only emperors were allowed to dress completely in purple!

Brilliant Books

Truth or busted: fact or fiction behind the Romans (By Peter Hepplewhite)

Horrible Histories – The Rotten Romans

Wonderful Websites

<https://www.bbc.co.uk/bitesize/topics/zwmpfg8>

https://www.bbc.co.uk/history/historic_figures/boudicca.shtml

<https://www.resourcesforhistory.com>



Ancient Rome



The Colosseum in Rome



Hadrian's Wall



Modern-day Rome

55 BC
Julius Caesar attempts to invade Britain.

43 AD
Roman invasion of Britain.

60 AD
Boudicca

122 AD
Hadrian's Wall was built.

410 AD
Last Romans leave Britain.

753 BC
Rome is founded by Romulus.

27 BC
Augustus becomes the first Roman Emperor.

50 AD
London is founded

80 AD
Colosseum is built in Rome

312 AD
Christianity becomes official religion of Roman Empire.

History Knowledge Organiser - The Tudors

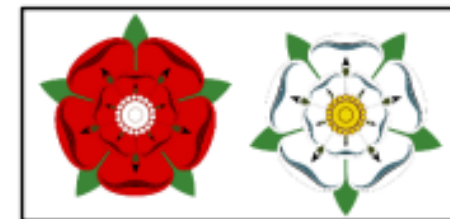
Who were the Tudors and what impact did they have on Britain?

Key Vocabulary

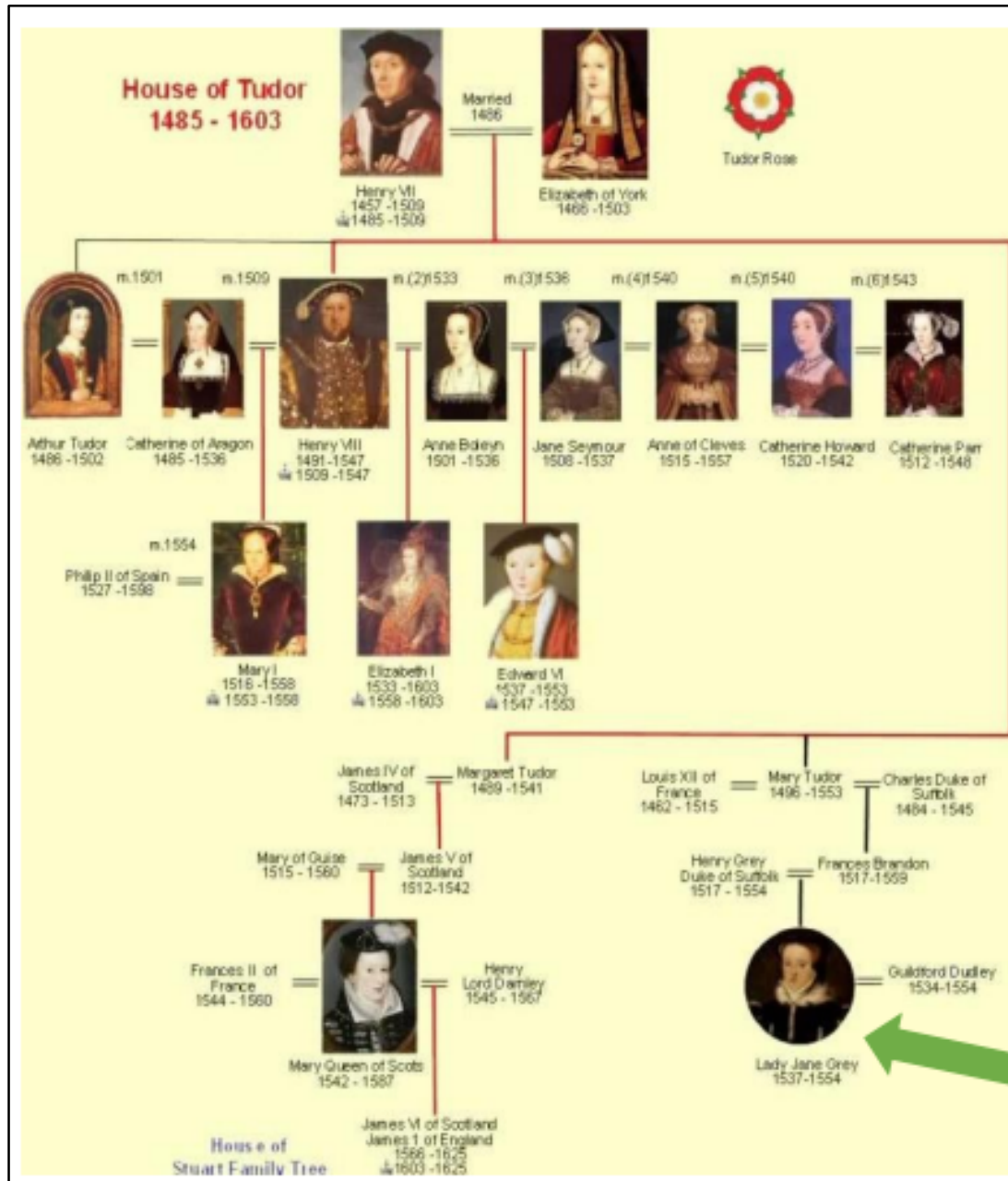
Key Vocabulary	
monarchy	A system of government that has a king or queen at its head.
dynasty	A family of rulers who rule over a country for a long time.
successor	A person who inherits the throne after the death of the previous king or queen.
Catholic	The oldest and largest branch of Christianity ruled over by the Pope in Rome.
Protestant	The second largest branch Christianity that became separate from the Catholic church in the 16 th century. Protestants don't have the Pope as their leader.
Reformation	An attempt in the 16 th century to change the Catholic church that resulted in the creation of Protestant churches.
dispensation	Permission to ignore or break a rule under special circumstances.
monastery	A building where people lived, worshiped and devoted their time to God. People who lived in a monastery were called monks.
dissolution	A formal, legal ending of something.
armada	A large group of warships.

Who were the Tudors?

The Tudors were a dynasty of kings and queens who ruled England between 1485 and 1603. The Tudors produced two of England's most successful and famous monarchs, Henry VIII and Elizabeth I.



The red rose of the House of Lancaster and the white rose of the House of York. The Tudor rose is a mixture of the two.



How did the Tudors come to power?

From 1154 – 1485, England was ruled by the Plantagenet family. In the 1450s, war broke out between two branches of this family, the House of York and the House of Lancaster. This war was named the Wars of the Roses after the symbols each side used (the white rose of York and the red rose of Lancaster). The war continued until 1485, when Henry Tudor, who was related the House of Lancaster, killed King Richard III, the last Plantagenet king at the Battle of Bosworth Field.

Lady Jane Grey (Queen 1553)

Lady Jane Grey became queen after her cousin, Edward VI. She was only queen for 9 days! In 1554, she was executed at the Tower of London.

Edward VI (King 1547 – 1553)

Each of Henry VIII's children would become the ruler of England. After Henry VIII's death, his son Edward became king. He was only 9, so his uncle was appointed to help him rule the country. Edward was a devout protestant and he quickly introduced laws that banned many Catholic services.

Edward was not a healthy boy and in 1553 he became very ill. Terrified that his Catholic half-sister Mary would take over and bring back the Catholic faith, he named his protestant cousin, Lady Jane Grey as queen. He died at the age of 15.

Henry VII (King from 1485 – 1509)

After the Battle of Bosworth Field, Henry Tudor became Henry VII and married Elizabeth of York (Richard III's niece). This united the two houses and ended the Wars of the Roses.

Henry VII and Elizabeth had many children but only 4 survived into adulthood; Arthur, Henry, Margaret and Mary. Prince Arthur died of illness when he was a young man which devastated the king.

Henry VII was careful with money and raised taxes in order to gain more money for the crown. He ruled for 24 years.

Henry VIII (King from 1509 – 1547)

Henry VIII is best known for having six wives in his attempt to have a male heir. His first wife, Catherine of Aragon was his brother Arthur's widow. Henry had three children that survived into adulthood; Mary, Elizabeth and Edward. Each would become the ruler of England.

Henry VIII is also remembered for breaking with the Catholic Church in Rome in order to get a divorce from his first wife. His actions made England a protestant country. He created the Church of England and made himself its head. This meant that he could grant himself a divorce and could marry his second wife, Anne Boleyn.

Wives of Henry VIII

<u>Name</u>	<u>Length of marriage</u>	<u>Fate</u>
1. Catherine of Aragon	23 years 11 months	Divorced
2. Anne Boleyn	2 years 11 months	Beheaded
3. Jane Seymour	1 year 4 months	Died
4. Anne of Cleaves	6 months	Divorced
5. Catherine Howard	1 year 3 months	Beheaded
6. Catherine Parr	3 ½ years	Survived

Mary I (Queen 1553 – 1558)

Mary I was a devout Catholic and soon after becoming queen she brought the Catholic faith back to England. Mary actively punished Protestants and many people were burned at the stake during her reign. As a result, she is known to history as 'Bloody Mary'. Mary married Phillip of Spain and hoped she would have an heir. However, after believing she was pregnant twice, no baby appeared and her husband abandoned her and returned to Spain. She died at the age of 42 after ruling for just 5 years.



Elizabeth I (Queen 1558 – 1603)

Elizabeth I was 25 years old when she became queen. She reigned for 44 years, far longer than any other Tudor monarch. Her reign is known as England's 'The Golden Age' due to the wealth and power that England gained during this time. Elizabeth was known to her people as 'Gloriana', 'Good Queen Bess' and 'The Virgin Queen'. She was given this last name as she never married or had children.

Due to the wealth of Elizabeth's reign more money could be invested in exploration and the arts. Elizabeth paid for people to explore newly discovered countries and playwrights, such as William Shakespeare, were able to build theatres.

Elizabeth's reign did have problems. In 1586, Elizabeth's cousin, Mary Queen of Scots was caught plotting to murder Elizabeth. Just two years later, Phillip of Spain sent a huge armada of warships to invade England. It was defeated.



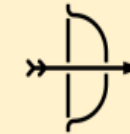
Bayeux Tapestry showing Harold's death



KS3: Year 7 History - Succession Crisis



Weapons used in Battles



Battles for the thrones

Battle of Fulford Gate

20th September 1066

Fought between Vikings and Saxons



Hardrada invaded with 300 ships

9,000 Vikings VS 6,000 Saxons

Vikings win as they outnumbered the Saxons and invaded the northern coast earlier than expected

Battle of Stamford Bridge

25th September 1066

Fought between Vikings and Saxons



Saxons march 185 miles in four days and surprise the Vikings

Viking warrior holds back Saxons on the bridge but eventually killed

Saxons win but are in the North of England whilst William lands

Battle of Hastings

14th October 1066

Fought between Saxons and Normans



William breaks the Saxon shield wall by pretending to retreat

Saxon army too tired to fight due to marching from the North and having two battles with the Vikings

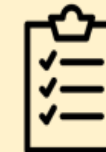
Normans win

Anglo Saxons	Normans
Anglo-Saxon warriors fought on foot during battles. The most common Anglo-Saxon weapon was a spear, the most feared weapon was a battle-axe, and the most precious was a sword	William's army of about 10,000 were experienced and well trained. They used swords, bows and arrows , and knights on horseback

Question practice

"Describe two features of..." (4 marks)

- Requires you to choose something that is distinctive.
- "One feature of...This is... (description)" x2



"What can you infer from this source?" (4 marks)

I can infer... (what can you learn from the source?)

The detail from the source that tells me this... (pick out a part of or a quote from the source that told you that information)



Historical sources top tips!

What does the source tell us?

Who wrote the source?

When was it written?

Is it useful?

KS3: Year 7 History - The Norman Conquest

Norman Conquest:

The 11th century (1066) invasion and occupation of England led by William of Normandy from France



An Anglo-Saxon 'Hue and cry' village hunt for the criminal

The Social Systems




Anglo-Saxon social structure

King	Chosen by Witan – who were the King's council.
Earls	Owned land, advised the King and ensured law was followed.
Thegns	Warriors who protected the King.
Ceorls	'Freemen' who held land, attended courts and served in army.
Peasants	Worked on land three days a week.
Slaves	Not free, life dictated for them.







Norman Feudal system

Introduced by William as new King of England as he promised those who had supported his invasion that they would be richly rewarded and needed to keep supporters loyal.



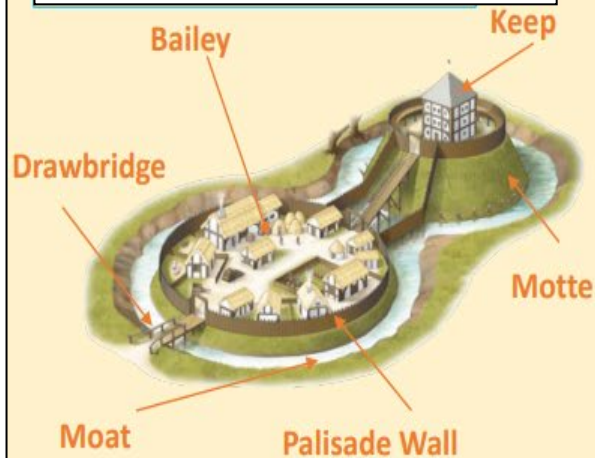
King	Owns all land.
Barons	Norman, employ the knights.
Knights	Soldiers, protect the peasants.
Peasants	No freedom, work on the farmland.

How much did the Norman conquest change England?

	Changes 	Continuities 
The Domesday Book 	First huge survey of the land in England, meant William could tax more, mostly owned by Norman barons.	Peasants still working on the farmland.
Language 	Norman-French became language of the court, government and upper class.	English continued to be used by ordinary people. English words like 'king' still used.
Legal system 	New fine paid to the king for committing crimes, public executions and trial by combat.	Use of hue and cry, trial by ordeal and death penalty for serious crimes.
Castles in towns 	Motte and Bailey castles built very quickly, eventually changed to stone which meant huge Norman presence in towns.	Towns still had the Church marked as an area of importance, market-places remained.

KS3: Year 7 History - The Norman Conquest

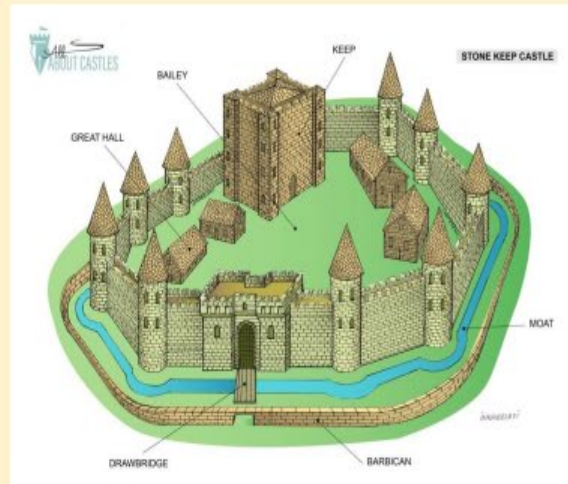
Motte and Bailey Castles



The very first was built a few miles from where William initially landed and used as a base for soldiers to terrorise the local population and gather supplies.

Motte	Raised mound or earth which would have the keep on top.
Bailey	Enclosed courtyard.
Drawbridge	Would allow entrance and exit into the castle.
Keep	Fortification, place of last resort in case of siege or attack.
Palisade Wall	Wooden wall that protected the bailey.
Moat	Water around the castle to protect from enemies or invaders.

Stone Square Keep Castles



Stone keep	Wooden fortifications replaced with permanent stone to show wealth and protect from damage (fire, rain or attack).
Great Hall	Main room in the castle, used for eating, administering justice, entertainment or holding visits between important people.
Barbican	Defensive wall of the castle, made from stone.
Arrow slits	Slits in the castle walls to help archers aim and attack enemies or invaders.

How did parts of life continue and how did parts change?

Pupil's will practice 4 mark questions based on how life in Norman England before the Norman Conquest was similar and different to life after the Norman Conquest".

They could look at:

- **Feudal system**
- **Language**
- **Legal system**
- **Castles**

1. Life before the Norman Conquest was similar to after the Norman Conquest because...

2. One way life was different before the Norman Conquest was... (Anglo-Saxon life).

Whereas after the Norman Conquest... (Norman life).



Theme: The Church

KS3: Year 7 History - Who held power in the Middle Ages

The Crusades

Jerusalem (The Holy Land) considered holy to Judaism, Christianity and Islam.

Most crusades tried to capture the city but not all.

Crusaders discovered better castle designs, gunpowder, medicine and numbers easier to use as they travelled.

123

The Black Death

Plague that spread from 1346-53 from rats that travelled on ships from China, first came to England in 1348.

Causes	Consequences
<p><u>What people thought at the time:</u></p> <ul style="list-style-type: none"> • Movement of planets. • Being close to infected people. • Miasma (bad smells) • Most believed it was punishment by God for sins. <p><u>What we now know:</u></p> <ul style="list-style-type: none"> • Spread by rats that travelled on trading ships from China. 	<ul style="list-style-type: none"> • Flagellants whipped themselves as punishment. • 40% of the English population died. • Collapse of the feudal system. • Peasants wages increased by 400%. • Many people lost faith in the Church as they thought their prayers had not been answered.

Reason people went on Crusades	Explanation
The Pope's instruction 	Pope Urban II instructed people in Europe to go on the First Crusade, he was the leader of the Catholic Church.
The Will of God 	People pledged they were on a holy mission to rescue the Holy Land (Jerusalem) from non-Christians.
Knighthood and chivalry 	Knights wanted to prove themselves in battle, gain land, power and titles.
Religious conviction 	People believed God would forgive them for sins and help them get into heaven if they went on the Crusade.
Turkish threat 	Turks were threatening places like Constantinople and the Byzantine Empire, people could no longer go on pilgrimage to Holy places.

Who went on Crusades?

Kings

Knights




Ordinary people

Lesson 4: Power of the Church

Very powerful	Church extremely wealthy,	Focal point of people's lives.	Belief that if people did not go to Church, they would go to hell.	Education controlled by bishops and priests.
Little power	Doom paintings showed the difference between heaven and hell to discourage sin.		People losing faith in Church as prayers not answered during the Black Death.	Reformation- break away from Catholic Church.
Early Middle Ages- C.1000	Late Middle Ages C.1300-1400		End of Middle Ages C.1500	

Theme: The King

The Murder of Thomas Becket

1162	1164	1170	29th Dec 1170
Henry makes Becket Archbishop as thought he would help in controlling the Church. 	Becket gave lighter sentences in courts to clergy (leaders of the Church), Henry very angry and Becket flees to France. 	Becket returns but punishes Bishops who supported the King in 1164, Henry becomes angry and says "will no one rid me of this troublesome priest?"	Four loyal knights to Henry murder Becket in Canterbury Cathedral. 

Who is responsible for the murder?



King of England 1154-1189: Henry II.

- Ordered the knights to kill Becket.
- Bad temper.
- Tried to force the Church to obey him.

The four loyal knights to Henry:




- Horribly murdered Becket
- Henry may not have meant to murder him.
- They had no right to murder an Archbishop on Holy ground (The Cathedral).

Archbishop of Canterbury 1152-1170: Thomas Becket

- Too stubborn and ambitious, wanting to be as great as the King.
- Lied to the King and broke promises.
- Would not punish priests that murdered and committed thefts.

KS3: Year 7 History - Who held power in the Middle Ages?

The Peasants Revolt

What?	When?	Where?	Why?	How?
<ul style="list-style-type: none"> • First popular rebellion in English history by peasants. 	<ul style="list-style-type: none"> • 1381 when Richard II was King of England. 	<ul style="list-style-type: none"> • Peasants mostly from Essex and Kent marched onto London. 	<ul style="list-style-type: none"> • The same amount of Poll Tax paid by rich Lords and poor peasants. • French armies invading villages • Two days of unpaid labour a week • Black Death • 14 year old Richard's evil advisors 	<ul style="list-style-type: none"> • 30th May 1381: Tax collector in Villagers of Essex and Kent march onto London. • Priest John Ball delivers an inspiring speech to peasants. • 13th June: Peasants torch government buildings in London and behead the Archbishop of Canterbury. Richard promises to abolish serfdom and revolt ends- Leader Wat Tyler is killed ry. • 15th June Essex murdered.

The Revolt WAS a threat

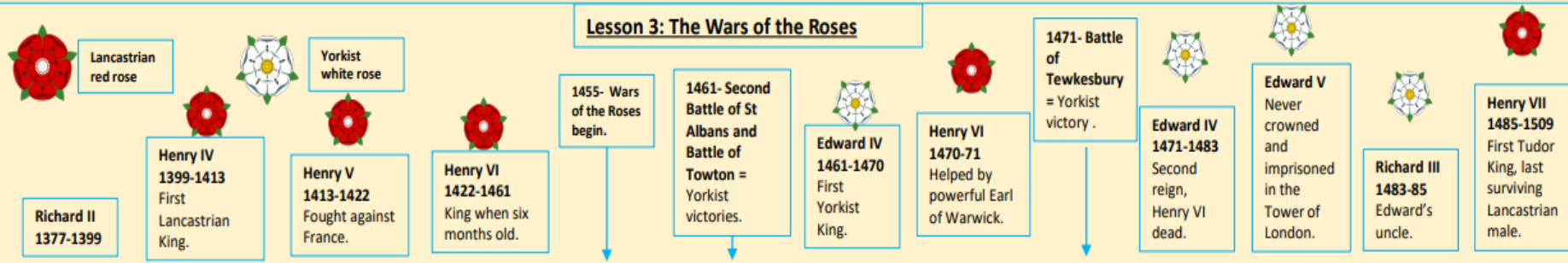
- Peasants got what they wanted: less harsh laws, money for the poor, freedom and equality.
- Caused chaos in London.
- Safety of the King was feared.



The Revolt WAS NOT a threat

- Richard was able to successfully end the Revolt by talking to the peasants.
- Rebels were killed for taking part.
- Serfdom not abolished officially in 1574.

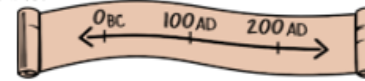
Lesson 3: The Wars of the Roses



Key vocabulary	
AD	Anno Domini - After Jesus was born
Archaeologist	A person who studies human history and prehistory through the excavation of sites and the analysis of artefacts and other physical remains
Archaeology	The study of human history and prehistory through the excavation of sites and the analysis of artefacts and other physical remains
Artefact	The remains of things made by humans e.g. weapons or buildings
BC	Before Christ
BCE	Before Common Era (non-religious date term)
Cause	A person or thing that gives rise to an action or effect
CE	Current Era (non-religious date term)
Century	100 years
Change	When things are different/alter
Chronological order	The order in which historical events happened, starting with the earliest event first.
Chronology	The study of time
Continuity	When things stay the same or extremely similar
Decade	10 years
Effect	A change which is a result or consequence of an action or other cause
Evidence	Facts, information or objects that prove something to be true or valid
Fossil	The remains of living things (e.g. animals and humans)
Interpretation	A historians view or opinion on a historical event or person
Millenium	1000 years
Primary Source	A primary source is a piece of evidence that comes from the period of time being studied.
Secondary Source	A secondary source is a source which does not come from the time we are studying but was produced much later.
Significance	The quality of being worthy of attention or being important
Source	A piece of evidence that comes from the past, like a letter or an artefact.

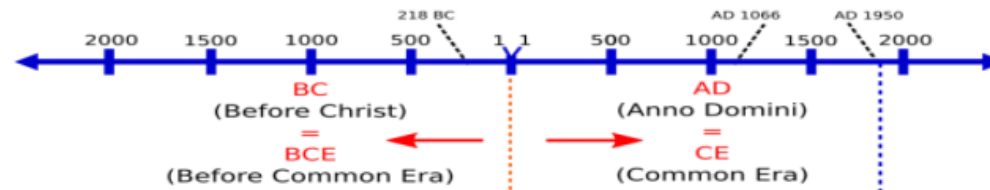


Year 7 - Historical Skills Knowledge Organiser




Understanding chronology

BC - BCE and AD - CE Terms

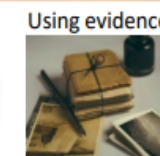


BP (Before Present) = before AD 1950

Centuries	
1 to 100	1st century
101 to 200	2nd century
201 to 300	3rd century
301 to 400	4th century
401 to 500	5th century

4  BC
Always cover the last two numbers and add 1!

Threshold Concepts (history skills)



Maths Knowledge Organiser

NUMBER SKILLS

What do I need to be able to do?

You should be able to:

- Understand properties of addition and subtraction
- Understand properties of multiplication and division
- Use formal methods of addition and subtraction for integers
- Use formal methods of multiplication and division for integers
- Add and subtract directed numbers
- Multiply and divide directed numbers
- Understand and use order of operations with positive and negative integers

Key Words

- Commutative:** changing the order of operations does not change the result
- Associative:** when you add or multiply you can do so regardless of how the numbers are grouped
- Inverse:** the operation that undoes what was done by the previous operation
- Subtract:** taking away one number from another
- Negative:** a value less than zero
- Debit:** money that leaves a bank account
- Credit:** money that goes into a bank account
- Integer:** a whole number
- Product:** multiply terms
- Operation:** a mathematical process

What do I need to be able to do?

You should be able to:

- Understand and use factors
- Understand and use multiples
- Recognise prime numbers
- Recognise square/triangular numbers
- Find common factors, including HCF
- Find common multiples, including LCM
- Express a number as the product of its prime factors

FACTORS, MULTIPLES AND PRIMES

Key Words

- Multiple:** found by multiplying any number by a positive integer
- Factor:** integers that multiply together to get another number
- Prime:** an integer with only two factors (1 and itself)
- HCF:** the highest common factor of two or more numbers
- LCM:** the lowest common multiple of two or more numbers
- Product:** multiply terms

Factors

A number can have many factors!

Example: what are the factors of 12?

- 1 x 12
- 2 x 6
- 3 x 4

So the factors of 12 are 1, 2, 3, 4, 6, 12

How to find factors

Be systematic! Always find your factor pairs and then write them in ascending order. This way you can be sure you've not missed any out!

Multiples

Example: What are the multiples of 4?

4 x 1, 4 x 2, 4 x 3, 4 x 4 etc.
4, 8, 12, 16, 20

This list never ends!

'The multiples of a number make up its times table'

Is 15 a multiple of 3?

5 5 5

As 1 can share 15 into 3 equally sized parts, 15 is a multiple of 3.

3 x 5 = 15

Why is 10 not a multiple of 4?

4 x 2 = 8 but 25 is not a multiple of 4!

4 x 25 = 10 but 25 is not interesting therefore 10 cannot be a multiple of 4!

Addition

Addition is commutative

$$2 + 4 = 4 + 2$$

The order of addition doesn't change the result

Addition is associative

$$6 + (3 + 4) = (6 + 3) + 4$$

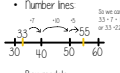
It doesn't matter how you group the numbers

Formal written method

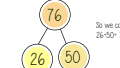
H	T	U
3	4	2
+	1	4
4	9	1

Remember the place value for each column!

Models to help with addition



Bar models



Subtraction

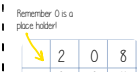
Subtraction is NOT commutative or associative.

$$12 - 8 \neq 8 - 12$$

When you subtract, the order must stay the same.

Formal written method

H	T	U
1	2	
-	2	1
3	1	6



Written Methods for Multiplication

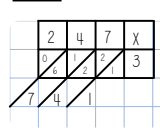
LONG MULTIPLICATION

	2	4	7
x	1	2	3
	7	4	1

GRID METHOD

x	200	40	7
3	600	120	21
	600	120	21
	741		

GEOSIA



REPEATED ADDITION

H	T	U
2	4	7
+	2	4
7	4	1

Calculations with Directed Numbers

Addition

$$2 + 3 = 5$$

Remember if I add a negative, I'm adding something that will make a smaller or in the same as subtracting that number!

$$2 - 3 = -1$$

Subtraction

$$2 - 3 = -1$$

Remember if I subtract a negative, I'm taking away the amount that will make a smaller or in the same as adding that number!

$$2 + 3 = 5$$

Generalisation

Multiplication

2×-3
"2 lots of -3"
= -6

-2×3
Think of this as the negative of 2×3 .
= -6

Division

Remember that multiplication and division are inverse operations.

Eg $6 \div -3 = -2$
 $-6 \div 2 = -3$

Generalisation

x	+	-
+	+	-
-	-	+

Models to help

It can be helpful to put calculations involving directed numbers into real life contexts. Think about temperature or bank accounts when unsure.

Written Methods for Division

SHORT DIVISION

0	4	2
6	2	5
	1	0
	8	1
	8	1
		6

SHORT DIVISION with remainders

1	2	5	5
2	2	5	1
			0

Continue after the decimal point! If you start to get a repeating decimal, stop.

LONG DIVISION

0	4	2
6	2	5
-	2	4
	0	1
-	0	1
		2
		0

This method relies on you being comfortable with multiples of your divisor in the case of 4!

Order of Operations

Example 1
 $(4 \times 7) + 3$

So we need to evaluate the brackets first, $4 \times 7 = 28$

This is now $28 + 3 = 31$

Example 2
 $(6 + 4 - 3) \times 4$

So we need to evaluate the brackets first and we work left to right, $6 + 4 - 3 = 7$

This is now $7 \times 4 = 28$

Example 3
 $4 - 8 \times 2 + 12 = 4$

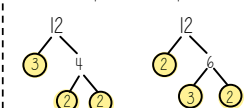
So first we do the multiplication/division left to right, $4 - 16 + 12$

Now we do the addition/subtraction from left to right, $-12 + 3 = -9$

Product of Prime Factors

Example 1

Write 12 as a product of its prime factors

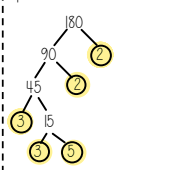


Both of these trees represent the same decomposition

$$12 = 2 \times 2 \times 3 = 2^2 \times 3$$

Example 2

Write 180 as a product of its prime factors



$$180 = 2 \times 2 \times 5 \times 3 \times 3 = 2^2 \times 3^2 \times 5$$

Always try to write your final answer in ascending order using index notation!

Using prime factor decomposition

If we know that 12 written as a product of its prime factors, how does that help us to write 36 as a product of its prime factors?

We know $12 \times 3 = 36$ therefore we can multiply our answer by three and $36 = 2 \times 2 \times 3 \times 3 = 2^2 \times 3^2$

What about 120?

Well 120 is 10×12 so we can say $120 = 2 \times 2 \times 3 \times 10 = 2^2 \times 3 \times 5$

Lowest Common Multiple (LCM)

Example 1

What is the LCM of 6 and 8?

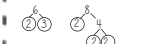
6 - 6, 12, 18, 24, 30
8 - 8, 16, 24, 32, 40

The first time their multiples match is 24 therefore:

the LCM of 6 and 8 is 24

Example 2

What is the LCM of 6 and 8?



We just multiply all the numbers in the Venn diagram together to find the LCM.

LCM of 6 and 8 = $2 \times 2 \times 2 \times 3 = 24$

Example 3a

What is the LCM of 24 and 16?

24	16
2	2
3	2
4	2
6	4
8	8

LCM of 24 and 16 = $2 \times 2 \times 2 \times 3 \times 2 = 48$

Example 3b

What is the LCM of 12 and 15?

12	15
3	5
4	3

LCM of 12 and 15 = $2 \times 2 \times 3 \times 5 = 60$

Highest Common Factor (HCF)

Example 1

What is the HCF of 6 and 8?

6 - 1, 2, 3, 6
8 - 1, 2, 4, 8

The biggest number which is a factor of both 6 and 8 is 2, therefore

the HCF of 6 and 8 is 2

Example 2

What is the HCF of 6 and 8?



As we are looking for the highest common factor we are looking for the factor under the line numbers share. These can be shared in the Venn diagram.

HCF of 6 and 8 = 2

Example 3a

What is the HCF of 24 and 16?

24	16
2	2
3	2
4	2
6	4
8	8

HCF of 24 and 16 = $2 \times 2 \times 2 = 8$

Example 3b

What is the HCF of 12 and 15?

12	15
3	5

HCF of 12 and 15 = 3

Maths Knowledge Organiser

What do I need to be able to do?

- You should be able to:
 - Understand different representations of fractions
 - Fully simplify fractions
 - Recognise and find equivalent fractions
 - Convert between mixed numbers and improper fractions
 - Add/subtract any fractions
 - Add/subtract mixed numbers


FRACTIONS 1

Key Words

- Numerator:** the top number of a fraction
- Denominator:** the bottom number of a fraction
- Equivalent:** of equal value
- Mixed Number:** a number with an integer and a proper fraction
- Improper Fraction:** a fraction where the numerator is larger than the denominator
- Coprime:** two numbers which share no common factors (except 1)

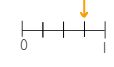
Representing Fractions

numerator $\frac{3}{4}$
denominator

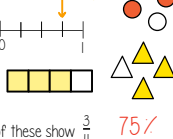


We say "three quarters" or "three out of four"

0.75



All of these show $\frac{3}{4}$



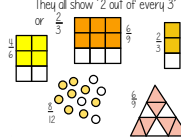
Equivalent Fractions

Two fractions are equivalent if they represent the same quantity

If the numerator and denominator have the same multiplier, they are equivalent

Each of these diagrams represents an equivalent amount

They all show '2 out of every 3'




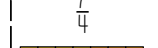

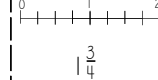
$\frac{2}{3} \times 5 = \frac{10}{15}$
 $\frac{2}{3} \times 2 = \frac{4}{6}$
 $\frac{2}{3} \times 3 = \frac{6}{9}$

Mixed Numbers and Improper Fractions

Fractions can represent more than one whole

The denominator tells us how many parts make up one whole

This tells us that one whole is made up of 5 parts. We have 9 parts, so we can make one whole plus 4 parts.

Simplifying Fractions


You must always simplify your fractions if you can

Once you cannot find a common factor the fraction is fully simplified

Sometimes a picture can help to visualise the problem

Both ways will give the same answer, just one is easier

This fraction is fully simplified as 7 and 10 have no common factors. We can say that 7 and 10 are coprime.



Adding/Subtracting Fractions

$\frac{2}{7} + \frac{4}{7} = \frac{6}{7}$

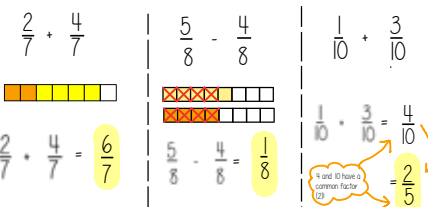
$\frac{5}{8} - \frac{4}{8} = \frac{1}{8}$

$\frac{1}{10} + \frac{3}{10} = \frac{4}{10} = \frac{2}{5}$

Remember that the denominator doesn't change

We can just subtract '4' from 5

You must always fully simplify your fractions



Adding/Subtracting Fractions

Common multiples

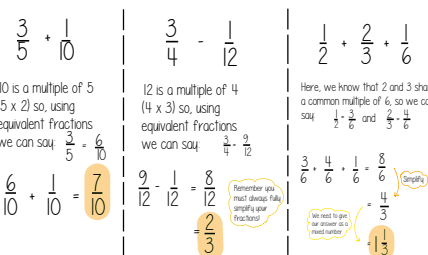
10 is a multiple of 5 (5 x 2) so, using equivalent fractions we can say $\frac{3}{5} = \frac{6}{10}$

12 is a multiple of 4 (4 x 3) so, using equivalent fractions we can say $\frac{3}{4} = \frac{9}{12}$

Here, we know that 2 and 3 share a common multiple of 6, so we can say $\frac{1}{2} = \frac{3}{6}$ and $\frac{2}{3} = \frac{4}{6}$

Remember you must always fully simplify your fractions

We need to get the same denominator



Adding/Subtracting Fractions

Different denominators

We need to find a common denominator using equivalent fractions

The LCM of 3 and 11 is 33, so we equate fractions

Remember you can find the LCM of 1 and 7 by listing their multiples: 1, 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98, 105, 112, 119, 126, 133, 140, 147, 154, 161, 168, 175, 182, 189, 196, 203, 210, 217, 224, 231, 238, 245, 252, 259, 266, 273, 280, 287, 294, 301, 308, 315, 322, 329, 336, 343, 350, 357, 364, 371, 378, 385, 392, 399, 406, 413, 420, 427, 434, 441, 448, 455, 462, 469, 476, 483, 490, 497, 504, 511, 518, 525, 532, 539, 546, 553, 560, 567, 574, 581, 588, 595, 602, 609, 616, 623, 630, 637, 644, 651, 658, 665, 672, 679, 686, 693, 700, 707, 714, 721, 728, 735, 742, 749, 756, 763, 770, 777, 784, 791, 798, 805, 812, 819, 826, 833, 840, 847, 854, 861, 868, 875, 882, 889, 896, 903, 910, 917, 924, 931, 938, 945, 952, 959, 966, 973, 980, 987, 994, 1001, 1008, 1015, 1022, 1029, 1036, 1043, 1050, 1057, 1064, 1071, 1078, 1085, 1092, 1099, 1106, 1113, 1120, 1127, 1134, 1141, 1148, 1155, 1162, 1169, 1176, 1183, 1190, 1197, 1204, 1211, 1218, 1225, 1232, 1239, 1246, 1253, 1260, 1267, 1274, 1281, 1288, 1295, 1302, 1309, 1316, 1323, 1330, 1337, 1344, 1351, 1358, 1365, 1372, 1379, 1386, 1393, 1400, 1407, 1414, 1421, 1428, 1435, 1442, 1449, 1456, 1463, 1470, 1477, 1484, 1491, 1498, 1505, 1512, 1519, 1526, 1533, 1540, 1547, 1554, 1561, 1568, 1575, 1582, 1589, 1596, 1603, 1610, 1617, 1624, 1631, 1638, 1645, 1652, 1659, 1666, 1673, 1680, 1687, 1694, 1701, 1708, 1715, 1722, 1729, 1736, 1743, 1750, 1757, 1764, 1771, 1778, 1785, 1792, 1799, 1806, 1813, 1820, 1827, 1834, 1841, 1848, 1855, 1862, 1869, 1876, 1883, 1890, 1897, 1904, 1911, 1918, 1925, 1932, 1939, 1946, 1953, 1960, 1967, 1974, 1981, 1988, 1995, 2002, 2009, 2016, 2023, 2030, 2037, 2044, 2051, 2058, 2065, 2072, 2079, 2086, 2093, 2100, 2107, 2114, 2121, 2128, 2135, 2142, 2149, 2156, 2163, 2170, 2177, 2184, 2191, 2198, 2205, 2212, 2219, 2226, 2233, 2240, 2247, 2254, 2261, 2268, 2275, 2282, 2289, 2296, 2303, 2310, 2317, 2324, 2331, 2338, 2345, 2352, 2359, 2366, 2373, 2380, 2387, 2394, 2401, 2408, 2415, 2422, 2429, 2436, 2443, 2450, 2457, 2464, 2471, 2478, 2485, 2492, 2499, 2506, 2513, 2520, 2527, 2534, 2541, 2548, 2555, 2562, 2569, 2576, 2583, 2590, 2597, 2604, 2611, 2618, 2625, 2632, 2639, 2646, 2653, 2660, 2667, 2674, 2681, 2688, 2695, 2702, 2709, 2716, 2723, 2730, 2737, 2744, 2751, 2758, 2765, 2772, 2779, 2786, 2793, 2800, 2807, 2814, 2821, 2828, 2835, 2842, 2849, 2856, 2863, 2870, 2877, 2884, 2891, 2898, 2905, 2912, 2919, 2926, 2933, 2940, 2947, 2954, 2961, 2968, 2975, 2982, 2989, 2996, 3003, 3010, 3017, 3024, 3031, 3038, 3045, 3052, 3059, 3066, 3073, 3080, 3087, 3094, 3101, 3108, 3115, 3122, 3129, 3136, 3143, 3150, 3157, 3164, 3171, 3178, 3185, 3192, 3199, 3206, 3213, 3220, 3227, 3234, 3241, 3248, 3255, 3262, 3269, 3276, 3283, 3290, 3297, 3304, 3311, 3318, 3325, 3332, 3339, 3346, 3353, 3360, 3367, 3374, 3381, 3388, 3395, 3402, 3409, 3416, 3423, 3430, 3437, 3444, 3451, 3458, 3465, 3472, 3479, 3486, 3493, 3500, 3507, 3514, 3521, 3528, 3535, 3542, 3549, 3556, 3563, 3570, 3577, 3584, 3591, 3598, 3605, 3612, 3619, 3626, 3633, 3640, 3647, 3654, 3661, 3668, 3675, 3682, 3689, 3696, 3703, 3710, 3717, 3724, 3731, 3738, 3745, 3752, 3759, 3766, 3773, 3780, 3787, 3794, 3801, 3808, 3815, 3822, 3829, 3836, 3843, 3850, 3857, 3864, 3871, 3878, 3885, 3892, 3899, 3906, 3913, 3920, 3927, 3934, 3941, 3948, 3955, 3962, 3969, 3976, 3983, 3990, 3997, 4004, 4011, 4018, 4025, 4032, 4039, 4046, 4053, 4060, 4067, 4074, 4081, 4088, 4095, 4102, 4109, 4116, 4123, 4130, 4137, 4144, 4151, 4158, 4165, 4172, 4179, 4186, 4193, 4200, 4207, 4214, 4221, 4228, 4235, 4242, 4249, 4256, 4263, 4270, 4277, 4284, 4291, 4298, 4305, 4312, 4319, 4326, 4333, 4340, 4347, 4354, 4361, 4368, 4375, 4382, 4389, 4396, 4403, 4410, 4417, 4424, 4431, 4438, 4445, 4452, 4459, 4466, 4473, 4480, 4487, 4494, 4501, 4508, 4515, 4522, 4529, 4536, 4543, 4550, 4557, 4564, 4571, 4578, 4585, 4592, 4599, 4606, 4613, 4620, 4627, 4634, 4641, 4648, 4655, 4662, 4669, 4676, 4683, 4690, 4697, 4704, 4711, 4718, 4725, 4732, 4739, 4746, 4753, 4760, 4767, 4774, 4781, 4788, 4795, 4802, 4809, 4816, 4823, 4830, 4837, 4844, 4851, 4858, 4865, 4872, 4879, 4886, 4893, 4900, 4907, 4914, 4921, 4928, 4935, 4942, 4949, 4956, 4963, 4970, 4977, 4984, 4991, 4998, 5005, 5012, 5019, 5026, 5033, 5040, 5047, 5054, 5061, 5068, 5075, 5082, 5089, 5096, 5103, 5110, 5117, 5124, 5131, 5138, 5145, 5152, 5159, 5166, 5173, 5180, 5187, 5194, 5201, 5208, 5215, 5222, 5229, 5236, 5243, 5250, 5257, 5264, 5271, 5278, 5285, 5292, 5299, 5306, 5313, 5320, 5327, 5334, 5341, 5348, 5355, 5362, 5369, 5376, 5383, 5390, 5397, 5404, 5411, 5418, 5425, 5432, 5439, 5446, 5453, 5460, 5467, 5474, 5481, 5488, 5495, 5502, 5509, 5516, 5523, 5530, 5537, 5544, 5551, 5558, 5565, 5572, 5579, 5586, 5593, 5600, 5607, 5614, 5621, 5628, 5635, 5642, 5649, 5656, 5663, 5670, 5677, 5684, 5691, 5698, 5705, 5712, 5719, 5726, 5733, 5740, 5747, 5754, 5761, 5768, 5775, 5782, 5789, 5796, 5803, 5810, 5817, 5824, 5831, 5838, 5845, 5852, 5859, 5866, 5873, 5880, 5887, 5894, 5901, 5908, 5915, 5922, 5929, 5936, 5943, 5950, 5957, 5964, 5971, 5978, 5985, 5992, 5999, 6006, 6013, 6020, 6027, 6034, 6041, 6048, 6055, 6062, 6069, 6076, 6083, 6090, 6097, 6104, 6111, 6118, 6125, 6132, 6139, 6146, 6153, 6160, 6167, 6174, 6181, 6188, 6195, 6202, 6209, 6216, 6223, 6230, 6237, 6244, 6251, 6258, 6265, 6272, 6279, 6286, 6293, 6300, 6307, 6314, 6321, 6328, 6335, 6342, 6349, 6356, 6363, 6370, 6377, 6384, 6391, 6398, 6405, 6412, 6419, 6426, 6433, 6440, 6447, 6454, 6461, 6468, 6475, 6482, 6489, 6496, 6503, 6510, 6517, 6524, 6531, 6538, 6545, 6552, 6559, 6566, 6573, 6580, 6587, 6594, 6601, 6608, 6615, 6622, 6629, 6636, 6643, 6650, 6657, 6664, 6671, 6678, 6685, 6692, 6699, 6706, 6713, 6720, 6727, 6734, 6741, 6748, 6755, 6762, 6769, 6776, 6783, 6790, 6797, 6804, 6811, 6818, 6825, 6832, 6839, 6846, 6853, 6860, 6867, 6874, 6881, 6888, 6895, 6902, 6909, 6916, 6923, 6930, 6937, 6944, 6951, 6958, 6965, 6972, 6979, 6986, 6993, 7000, 7007, 7014, 7021, 7028, 7035, 7042, 7049, 7056, 7063, 7070, 7077, 7084, 7091, 7098, 7105, 7112, 7119, 7126, 7133, 7140, 7147, 7154, 7161, 7168, 7175, 7182, 7189, 7196, 7203, 7210, 7217, 7224, 7231, 7238, 7245, 7252, 7259, 7266, 7273, 7280, 7287, 7294, 7301, 7308, 7315, 7322, 7329, 7336, 7343, 7350, 7357, 7364, 7371, 7378, 7385, 7392, 7399, 7406, 7413, 7420, 7427, 7434, 7441, 7448, 7455, 7462, 7469, 7476, 7483, 7490, 7497, 7504, 7511, 7518, 7525, 7532, 7539, 7546, 7553, 7560, 7567, 7574, 7581, 7588, 7595, 7602, 7609, 7616, 7623, 7630, 7637, 7644, 7651, 7658, 7665, 7672, 7679, 7686, 7693, 7700, 7707, 7714, 7721, 7728, 7735, 7742, 7749, 7756, 7763, 7770, 7777, 7784, 7791, 7798, 7805, 7812, 7819, 7826, 7833, 7840, 7847, 7854, 7861, 7868, 7875, 7882, 7889, 7896, 7903, 7910, 7917, 7924, 7931, 7938, 7945, 7952, 7959, 7966, 7973, 7980, 7987, 7994, 8001, 8008, 8015, 8022, 8029, 8036, 8043, 8050, 8057, 8064, 8071, 8078, 8085, 8092, 8099, 8106, 8113, 8120, 8127, 8134, 8141, 8148, 8155, 8162, 8169, 8176, 8183, 8190, 8197, 8204, 8211, 8218, 8225, 8232, 8239, 8246, 8253, 8260, 8267, 8274, 8281, 8288, 8295, 8302, 8309, 8316, 8323, 8330, 8337, 8344, 8351, 8358, 8365, 8372, 8379, 8386, 8393, 8400, 8407, 8414, 8421, 8428, 8435, 8442, 8449, 8456, 8463, 8470, 8477, 8484, 8491, 8498, 8505, 8512, 8519, 8526, 8533, 8540, 8547, 8554, 8561, 8568, 8575, 8582, 8589, 8596, 8603, 8610, 8617, 8624, 8631, 8638, 8645, 8652, 8659, 8666, 8673, 8680, 8687, 8694, 8701, 8708, 8715, 8722, 8729, 8736, 8743, 8750, 8757, 8764, 8771, 8778, 8785, 8792, 8799, 8806, 8813, 8820, 8827, 8834, 8841, 8848, 8855, 8862, 8869, 8876, 8883, 8890, 8897, 8904, 8911, 8918, 8925, 8932, 8939, 8946, 8953, 8960, 8967, 8974, 8981, 8988, 8995, 9002, 9009, 9016, 9023, 9030, 9037, 9044, 9051, 9058, 9065, 9072, 9079, 9086, 9093, 9100, 9107, 9114, 9121, 9128, 9135, 9142, 9149, 9156, 9163, 9170, 9177, 9184, 9191, 9198, 9205, 9212, 9219, 9226, 9233, 9240, 9247, 9254, 9261, 9268, 9275, 9282, 9289, 9296, 9303, 9310, 9317, 9324, 9331, 9338, 9345, 9352, 9359, 9366, 9373, 9380, 9387, 9394, 9401, 9408, 9415, 9422, 9429, 9436, 9443, 9450, 9457, 9464, 9471, 9478, 9485, 9492, 9499, 9506, 9513, 9520, 9527, 9534, 9541, 9548, 9555, 9562, 9569, 9576, 9583, 9590, 9597, 9604, 9611, 9618, 9625, 9632, 9639, 9646, 9653, 9660, 9667, 9674, 9681, 9688, 9695, 9702, 9709, 9716, 9723, 9730, 9737, 9744, 9751, 9758, 9765, 9772, 9779, 9786, 9793, 9800, 9807, 9814, 9821, 9828, 9835, 9842, 9849, 9856, 9863, 9870, 9877, 9884, 9891, 9898, 9905, 9912, 9919, 9926, 9933, 9940, 9947, 9954, 9961, 9968, 9975, 9982, 9989, 9996, 10003, 10010, 10017, 10024, 10031, 10038, 10045, 10052, 10059, 10066, 10073, 10080, 10087, 10094, 10101, 10108, 10115, 10122, 10129, 10136, 10143, 10150, 10157, 10164, 10171, 10178, 10185, 10192, 10199, 10206, 10213, 10220, 10227, 10234, 10241, 10248, 10255, 10262, 10269, 10276, 10283, 10290, 10297, 10304, 10311, 10318, 10325, 10332, 10339, 10346, 10353, 10360, 10367, 10374, 10381, 10388, 10395, 10402, 10409, 10416, 10423, 10430, 10437, 10444, 10451, 10458, 10465, 10472, 10479, 10486, 10493, 10500, 10507, 10514, 10521, 10528, 10535, 10542, 10549, 10556, 10563, 10570, 10577, 10584, 10591, 10598, 10605, 10612, 10619, 10626, 10633, 10640, 10647, 10654, 10661, 10668, 10675, 10682, 10689, 10696, 10703, 10710, 10717, 10724, 10731, 10738, 10745, 10752, 10759, 10766, 10773, 10780, 10787, 10794, 10801, 10808, 10815, 10822, 10829, 10836, 10843, 10850, 10857, 10864, 10871, 10878, 10885, 10892, 10899, 10906, 10913, 10920, 10927, 10934, 10941, 10948, 10955, 10962, 10969, 10976, 10983, 10990, 10997, 11004, 11011, 11018, 11025, 11032, 11039, 11046, 11053, 11060, 11067, 11074, 11081, 11088, 11095, 11102, 11109, 11116, 11123, 11130, 11137, 11144, 11151, 11158, 11165, 11172, 11179, 11186, 11193, 11200, 11207, 11214, 11221, 11228, 11235, 11242, 11249, 11256, 11263, 11270, 11277, 11284, 11291, 11298, 11305, 11312, 11319, 11326, 11333, 11340, 11347, 11354, 11361, 11368, 11375, 11382, 11389, 11396, 11403, 11410, 11417, 11424, 11431, 11438, 11445, 11452, 11459, 11466, 11473, 11480, 11487, 11494, 11501, 11508, 11515, 11522, 11529, 11536, 11543, 11550, 11557, 11564, 11571, 11578, 11585, 11592, 11599,

Maths Knowledge Organiser

What do I need to be able to do?

- You should be able to:
- Understand place value and the number system
 - Read and write decimal numbers
 - Order decimals of any size
 - Use inequality symbols
 - Add and subtract decimals
 - Multiply and divide decimals
 - Use related calculations to find the answers to questions

DECIMALS

Key Words

- Place Value:** the value of a digit depending on its place in a number
- Place Holder:** we use 0 as a place holder to show there are none of a particular place in a number
- Integer:** a whole number that is positive or negative
- Decimal:** a number with a decimal point used to separate ones, tenths, hundredths etc.
- Inequality:** compares two values and indicates which is larger

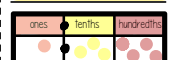
Place Value



3 2 4 7 3 5 | . 1 4 5

"Three million, two hundred and forty seven thousand, three hundred and fifty one point one four five"

Decimal Place Value



1 one, 3 tenths and 4 hundredths
 $1 + 0.3 + 0.04$
 $= 1.34$

We say "one point three four"

Inequalities

- > greater than
- < less than
- ≥ greater than or equal to
- ≤ less than or equal to
- = equal to
- ≠ not equal to

Examples

- $5 > 3$ 5 is greater than 3
- $2 \cdot 2 = 4$ 2 multiplied by 2 is equal to 4
- $5 \cdot 3 \times 2 \neq 4$ 5 multiplied by 3 multiplied by 2 is not equal to 4
- $x \leq 3$ x is less than or equal to 3

Ordering Decimals

Example WHICH IS BIGGER, 16 OR 166?

Method 1

Method 2

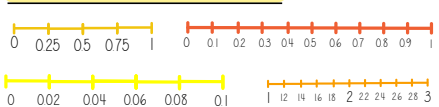
Compare both numbers with the same number of decimal places

160 } We can clearly see that 166 > 16
 166 }

Example WHICH IS BIGGER, 0.304 OR 0.034?

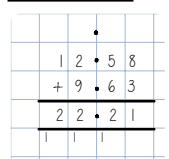
By looking we can see that 0.304 > 0.034 as it has 3 tenths compared to 0

Decimal intervals on a number line



Adding Decimals

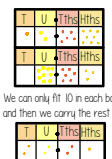
Formal written method



Tenths = tenths
Hundredths = hundredths

Visual Prompt

1258.963

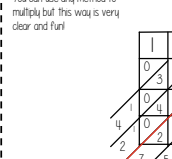


We can only fit 10 in each box and then we carry the rest

2221

Multiplying Decimals

125 x 3.42



= 427.5

You can use any method to multiply but this way is very clear and fun!



Related Calculations

Example 1
If I know that $5 \times 2 = 10$, what is 0.5×2 ?

$$\begin{aligned} 5 \times 2 &= 10 \\ \div 10 & \quad \div 10 \\ 0.5 \times 2 &= 1 \end{aligned}$$

Example 2
 $19 \times 900 = 17100$
 $19 \times 90 = 1710$
 $19 \times 9 = 171$
 $19 \times 0.9 = 17.1$
 $19 \times 0.009 = 0.171$

EXAMPLES

Related calculations to $6 \times 8 = 48$

- $0.6 \times 8 = 4.8$
- $0.6 \times 0.8 = 0.48$
- $48 \div 8 = 6$
- $48 \div 0.6 = 8$

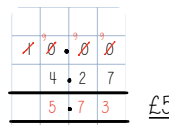
Key Points

- Keep the values in proportion
- If you are stuck with a division, write it as a fraction and simplify that

Subtracting Decimals

Worded Problem

I have a £10 note and spent £4.27 on sweets. How much do I have left?



£5.73 left

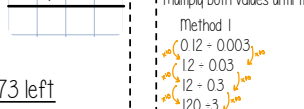
Dividing Decimals

The place holder is very important in division

All of these give the same solution

$$15 \div 0.05 \rightarrow 15 \div 0.5 \rightarrow 150 \div 5$$

Multiply both values until the divisor becomes an integer



What do I need to be able to do?

- You should be able to:
- Find percentages of amounts
 - Increase or decrease by a percentage
 - Find percentage change
 - Find the original amount
 - Express one number as a fraction of another
 - Increase or decrease using multipliers
 - Work with simple interest
 - Work with compound interest

PERCENTAGES

Key Words

- Percent:** parts per hundred
- Simple Interest:** interest calculated as a percent of the original amount
- Compound Interest:** interest calculated on the amount borrowed plus the previous interest
- Multiplier:** the number that you are multiplying by
- Increase:** make bigger
- Decrease:** make smaller

Percentage of an Amount

Find 10% of 300

$$\begin{aligned} 100\% \text{ of } 300 &= 300 \\ 10\% \text{ of } 300 &= 30 \end{aligned}$$

Find 30% of 240

$$\begin{aligned} 100\% \text{ of } 240 &= 240 \\ 10\% \text{ of } 240 &= 24 \\ 30\% \text{ of } 240 &= 72 \end{aligned}$$

A bar model to help visualise it:



Percentage Increase/Decrease

An antique clock has increased in value by 12%. If it's original price was £400, what is the new price?

Method 1

12% increase means we have 112% of the original price. So we are now finding 112% of £400

$$\begin{aligned} 100\% \text{ of } £400 &= £400 \\ 10\% \text{ of } £400 &= £40 \\ 2\% \text{ of } £400 &= £8 \\ 112\% \text{ of } £400 &= £448 \end{aligned}$$

Method 2

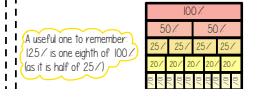
We need to find 12% of £400

$$\begin{aligned} 100\% \text{ of } £400 &= £400 \\ 10\% \text{ of } £400 &= £40 \\ 2\% \text{ of } £400 &= £8 \\ 12\% \text{ of } £400 &= £48 \\ \text{We are increasing by } 12\%, \text{ so adding } 12\% \text{ on } £400 + £48 &= £448 \end{aligned}$$

Helpful Percentages

It is helpful to remember the relationships between some percentages to help speed up the process!

- 50% is half of 100% To find 50% of something, we can divide it by 2
- 25% is a quarter of 100% To find 25% of something, we can divide it by 4
- 10% is one tenth of 100% To find 10% of something, we can divide it by 10
- 20% is one fifth of 100% To find 20% of something, we can divide it by 5



Percentage Change

I bought a phone for £200. A year later it sold for £125. What was the % loss?

$$\begin{aligned} \frac{£200 - £125}{£200} \times 100 &= \frac{£75}{£200} \times 100 \\ &= 37.5\% \end{aligned}$$

Difference in value x100
Original value

I bought a house for £180,000. I sold it for £216,000. What was the % profit?

$$\begin{aligned} \frac{£216,000 - £180,000}{£180,000} \times 100 &= \frac{£36,000}{£180,000} \times 100 \\ &= 20\% \end{aligned}$$

Expressing One Number as a Percentage of Another

Express 12 as a percentage of 20

$$\frac{12}{20} = \frac{60}{100} = 60\%$$

37 out of 50 people in a class are Manchester United fans. What percentage of the class support Manchester United?

$$\frac{37}{50} = \frac{74}{100} = 74\%$$

Multipliers

What multiplier would represent an increase of 15%?

We are finding 100% + 15%, so 115%.

As a decimal this is 1.15

Compound Interest

I put £1000 in a bank account. It earns compound interest of 10% per year. How much will be in the account after 5 years?

$$\begin{aligned} \text{INTEREST:} \\ \text{Compound interest means we work out the interest each year and the original amount plus any interest in the account} \\ \bullet 10\% \text{ of } £1000 &= £100 \\ \text{So after year 1, the account will have } &£1100 \\ \bullet 10\% \text{ of } £1100 &= £110 \\ \text{So after year 2, the amount is } &£1210 \text{ etc.} \\ \text{If we are increasing by } 10\% \text{ each time, this is the same as finding } 110\% \text{ of the amount, or multiplying by } 1.1 \text{ (see multipliers). So another way we can work this out is:} \\ £1000 \times 1.1 \times 1.1 \times 1.1 \times 1.1 \times 1.1 &= £1610.51 \end{aligned}$$

Finding the Original

60% of a number is 48. What is the number?

$$\begin{aligned} 60\% \text{ of } x &= 48 \\ 10\% \text{ of } x &= 8 \\ 100\% \text{ of } x &= 80 \end{aligned}$$

A bar model to help visualise it:

A pair of shoes are on sale for 87.5% off. The sale price is £49.50. How much did they cost originally?

$$\begin{aligned} 87.5\% \text{ off means we are left with } 12.5\%. \text{ So } \\ 12.5\% \text{ of } £49.50 &= £6.1875 \\ 100\% \text{ of } x &= £49.50 \\ 25\% \text{ of } x &= £99 \\ 100\% \text{ of } x &= £396 \end{aligned}$$

Simple Interest

I put £1000 in a bank account. It earns simple interest of 10% per year. How much will be in the account after 5 years?

$$\begin{aligned} \text{INTEREST:} \\ \text{Simple interest means we calculate the interest the total amount will earn and add that amount on each year} \\ 10\% \text{ of } £1000 &= £100 \\ \text{So each year, the account will gain } &£100 \text{ interest.} \\ £1000 + (£100 \times 5) &= £1500 \end{aligned}$$

Maths Knowledge Organiser

What do I need to be able to do?

You should be able to:

- Convert fluently between fractions, decimals and percentages
- Order fractions, decimals and percentages
- Know the key FDP equivalences

HIGHER TIER ONLY

- Convert recurring decimals into fractions

FDP EQUIVALENCE

Key Words

- Percent:** parts per hundred
- Fraction:** how many parts out of a whole
- Decimal:** a number with a decimal point used to separate ones, tenths, hundredths etc.
- Tenth:** one whole split into 10 parts
- Equivalent:** of equal value
- Recurring decimal:** a decimal number with a digit that repeats forever

Percentages to Decimals

Convert 37% to a decimal
Remember this means 37 out of 100 or 37 hundredths. If 1 hundredth is 0.01, 37 hundredths would be **0.37**.

$$\begin{aligned} 12\% &= 0.12 & 123\% &= 1.23 \\ 85\% &= 0.85 & 0.1\% &= 0.001 \end{aligned}$$

Percentage → Decimal, $\div 100$

Percentages to Fractions

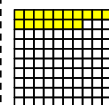
Convert 37% to a fraction
Remember this means 37 out of 100. We can write this as $\frac{37}{100}$ ← This is fully simplified

$$\begin{aligned} 12\% &= \frac{12}{100} = \frac{3}{25} & 123\% &= \frac{123}{100} = 1\frac{23}{100} \\ 85\% &= \frac{85}{100} = \frac{17}{20} \end{aligned}$$

Percentage → Fraction, write over 100 and then simplify.

Visual aids

Sometimes, it can be helpful to draw a diagram to help understand what is happening



Here are 100 squares. I have 17 yellow squares.
The fraction of yellow squares is $\frac{17}{100}$
The percentage of yellow squares is 17%

Decimals to Percentages

Convert 0.63 to a percentage
0.63 is equal to 6 tenths plus 3 hundredths or 63 hundredths. So **0.63 = 63%**

$$\begin{aligned} 0.23 &= 23\% & 0.535 &= 53.5\% \\ 0.02 &= 2\% & 2.13 &= 213\% \end{aligned}$$

Decimal → Percentage, $\times 100$

Decimals to Fractions

Convert 0.63 to a fraction
0.63 is equal to 6 tenths plus 3 hundredths or 63 hundredths. We can write this as $\frac{63}{100}$

$$\begin{aligned} 0.23 &= \frac{23}{100} & 0.535 &= \frac{535}{1000} = \frac{107}{200} \\ 0.02 &= \frac{2}{100} = \frac{1}{50} \end{aligned}$$

Here we have 5 tenths, 3 hundredths and 5 thousandths or 535 thousandths

Fractions to Decimals

Convert $\frac{2}{5}$ to a decimal

Remember a divide symbol is an empty fraction, so this is the same as $2 \div 5$

$$\begin{array}{r} 0.4 \\ 5 \overline{) 2.0} \\ \underline{20} \\ 0 \end{array}$$

Remember

$$\frac{1}{10} = 0.1 \quad \frac{1}{4} = 0.25 \quad \frac{1}{2} = 0.5$$

Fractions to Percentages

Convert $\frac{2}{5}$ to a percentage

Here we need to be confident with equivalent fractions. We know percent means out of 100 so we need to find an equivalent fraction with a denominator of 100

$$\frac{2}{5} = \frac{40}{100} = 40\%$$

Ordering FDP

Put in ascending order: $0.3, \frac{1}{3}, 0.303, 35\%, \frac{31}{100}$

- Choose a form to compare them in, here let's choose to compare them as decimals
 $0.3, 0.303, 0.35, 0.31$
- Put them in ascending order: $0.3, 0.303, 0.31, 0.35$
- Convert them back to their original form
 $0.3, 0.303, \frac{31}{100}, \frac{1}{3}, 35\%$

Key FDP Equivalences

You are expected to know some of the key FDP equivalences without writing them out

Decimal	Percentage	Fraction
0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.75	75%	$\frac{3}{4}$
0.2	20%	$\frac{1}{5}$
0.1	10%	$\frac{1}{10}$
0.5	50%	$\frac{1}{2}$

Recurring Decimals to Fractions

HIGHER TIER ONLY

Example (ONE RECURRING DIGIT)

Convert 0.3 to a fraction $x = 0.3333...$
 $10x = 3.3333...$
 $10x - x = 9x$
 $9x + 3 \rightarrow x = \frac{3}{9} = \frac{1}{3}$

Example (TWO RECURRING DIGITS)

Convert 0.35 to a fraction $x = 0.353535...$
 $100x = 35.353535...$
 $99x = 35 \rightarrow x = \frac{35}{99}$

Example

Convert 0.25 to a fraction $x = 0.255555...$
Here, we can't just take 2555 away from 0.255 as we will not reduce it to an integer
 $100x = 25.555555...$
 $90x + 23 \rightarrow x = \frac{23}{90}$

What do I need to be able to do?

You should be able to:

- Recognise metric measures
- Convert metric measures
- Calculate with metric measures
- Convert between units of time
- Understand compound measures
- Work out compound units

Metric Units

- Length
- Millimetres (mm)
 - Centimetres (cm)
 - Metres (m)
 - Kilometres (km)



- Mass
- Grams (g)
 - Kilograms (kg)
 - Tonnes (t)

- Capacity
- Millilitre (ml)
 - Litre (l)

Imperial Units

Length

1 inch \approx 2.5cm | 1 foot = 12 inches | 1 mile \approx 1.6km

Mass

1 ounce \approx 28g | 1 pound = 16 ounces | 1 stone = 14 pounds

Capacity

1 pint \approx 568ml

1 gallon = 8 pints

Time

Remember:
60 seconds = 1 minute
60 minutes = 1 hour
24 hours = 1 day
7 days = 1 week

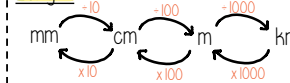
DON'T FORGET! 15 minutes is often referred to as a quarter of an hour. As 15 is a quarter of 60 and 30 minutes is referred to as half an hour

UNIT CONVERSIONS

Key Words

- Length:** the distance from one point to another
- Mass:** a measure of how much matter is in an object
- Capacity:** the amount an object can contain (usually liquids)
- Volume:** the amount of 3-dimensional space an object takes up
- Convert:** change a value or expression from one value to another
- Unit:** any measurement that there is one of
- Imperial:** a system of weights and measures originally developed in England
- Metric:** a system of measuring that replaced the imperial system to fall in line with the rest of Europe
- Compound Units:** units which require two types of measurement

Length



10mm = 1cm
100cm = 1m
1000m = 1km

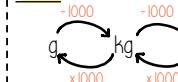
Example 1

Convert 123m to mm
 $123m \times 100 = 12300mm$

Example 2

Convert 28400mm to km
 $28400mm \div 1000 = 28.4km$
 $28.4km \div 10 = 2.84km$
 $28400mm = 28.4km$
 $28400mm = 0.0284km$

Mass



1000g = 1kg
1000kg = 1t

Example 1

Convert 1458t to g
 $1458t \times 1000 = 1458000kg$
 $1458000kg \times 1000 = 1458000000g$

Example 2

Convert 15600t to kg
 $15600t \times 1000 = 15600000kg$

Example 3

One parcel weighs 280g. How much will 12 weigh? Leave your answer in kg.
 $280g \times 12 = 3360g$
 $3360g \div 1000 = 3.36kg$

Volume



1000ml = 1l
1000l = 1m³

Example 1

Convert 5000ml to litres
 $5000ml \div 1000 = 5l$

Example 2

Convert 1257l to m³
we multiply by 1000, so
 $1257l = 1.257m³$

Example 3

I need 1l of water. I can only buy 300ml bottles. How many bottles do I need to buy?
 $1000ml \div 300ml = 3.3333...$
So we need 33333 bottles, but we can't buy 0.333 of a bottle! So we need to buy 3334

Compound Measures

Speed, Distance, Time

A car travels 200m in 30 minutes, calculate its speed in mph.
 $200m \div 30 \text{ mins} = 6.67 \text{ m/min}$
 $400m \div 60 \text{ mins} = 6.67 \text{ m/min}$
 $6.67 \text{ m/min} \times 60 = 400 \text{ mph}$

It takes Ryan 12 minutes to travel 15km, what is his average speed in km/h?

Speed = $\frac{\text{Distance}}{\text{Time}}$
notice this says km/h. Our time is in minutes right? now 12 minutes is 0.2 of an hour, so instead of 12 mins, we write time as 0.2 hours.
Speed = $\frac{15 \text{ km}}{0.2 \text{ hours}} = 75 \text{ km/h}$

Density, Mass, Volume

Density is a way of looking at the amount of mass contained in a certain volume

The standard units are $kg/m³$ or $g/cm³$
The density of air is $1.3kg/m³$
Calculate the mass of a balloon which holds $0.0035m³$ of air
 $\text{Mass} = \text{Density} \times \text{Volume}$
 $\text{Mass} = 1.3 \times 0.0035 = 0.00455kg$

we know the units must be kg as the density is given in $kg/m³$

Pressure, Force, Area

Pressure indicates the amount of force being exerted per unit area

A box is placed on a table and exerts a force of 200N on an area of $40cm²$. Find the pressure.
 $\text{Pressure} = \frac{\text{Force}}{\text{Area}}$
 $\text{Pressure} = \frac{200}{40} = 5 \text{ N/cm}²$

MFL Knowledge Organiser - French

Mon autoportrait • My self-portrait

les animaux (m pl)	animals
les araignées (f pl)	spiders
la capoeira	a Brazilian dance
les chats (m pl)	cats
les chiens (m pl)	dogs
le cinéma	cinema
les consoles de jeux (f pl)	games consoles
la danse	dancing
le foot	football
les gâteaux (m pl)	cakes
le hard rock	hard rock
l'injustice (f)	injustice
les insectes (m pl)	insects
les jeux vidéo (m pl)	video games
les livres (m pl)	books
la musique	music
les mangas (m pl)	mangas
les maths (f pl)	maths
les pizzas (f pl)	pizzas
la poésie	poetry
le racisme	racism
le rap	rap
le reggae	reggae
les reptiles (m pl)	reptiles
le roller	roller-skating
le rugby	rugby
le skate	skateboarding
les spaghettis (m pl)	spaghetti
le sport	sport
la tecktonik	tecktonik (dance)
la télé	TV
le tennis	tennis
le théâtre	theatre, drama
les voyages (m pl)	journeys
la violence	violence

Les mots essentiels • High-frequency words

et	and
aussi	also
mais	but
très	very
assez	quite
toujours	always
Qu'est-ce que ... ?	What ... ?
Qui ... ?	Who ... ?

Les opinions • Opinions

j'aime	I like
je n'aime pas	I don't like
Tu aimes ... ?	Do you like ... ?
il/elle aime	he/she likes
Oui, j'aime ça.	Yes, I like that.
Non, je n'aime pas ça.	No, I don't like that.
Tu es d'accord?	Do you agree?
Je suis d'accord.	I agree.
Je ne suis pas d'accord.	I don't agree.
C'est ...	It's ...
génial	great
cool	cool
bien	good
ennuyeux	boring
nul	rubbish
essentiel	essential
important	important
Ce n'est pas bien.	It's not good.

Moi et les autres • Me and other people

je suis	I am
je ne suis pas	I am not
tu es	you are
il/elle s'appelle	he/she is called
il/elle est	he/she is
beau/belle	good-looking
branché(e)	trendy
charmant(e)	charming
cool	cool
curieux/curieuse	curious
de taille moyenne	average height
drôle	funny
généreux/généreuse	generous
gentil(le)	nice
grand(e)	tall
impatient(e)	impatient
intelligent(e)	intelligent
modeste	modest
petit(e)	small
poli(e)	polite

Mon kit de survie • My survival kit

j'ai	I have
je n'ai pas de	I don't have
tu as	you have
il/elle a	he/she has
un appareil photo	a camera
une barre de céréales	a cereal bar
un bâton de colle	a glue stick
des chips (f pl)	crisps
des clés (f pl)	keys
une clé USB	a memory stick
une gourde	a water bottle
des kleenex (m pl)	tissues
des lunettes de soleil (f pl)	sunglasses
un magazine	a magazine
un miroir	a mirror
un portable	a mobile phone
un portemonnaie	a purse
un paquet de mouchoirs	a packet of tissues
un sac	a bag
des surligneurs fluo (m pl)	fluorescent highlighters
une trousse	a pencil case

KNOWLEDGE ORGANISER

Module 1 C'est perso

Stratégie 1

Look, say, cover, write, check

Use the five steps below to learn how to spell any word.

- LOOK** Look carefully at the word for at least 10 seconds.
- SAY** Say the word to yourself or out loud to practise pronunciation.
- COVER** Cover up the word when you feel you have learned it.
- WRITE** Write the word from memory.
- CHECK** Check your word against the original. Did you get it right? If not, what did you get wrong? Spend time learning that bit of the word. Go through the steps again until you get it right.

Les yeux et les cheveux • Eyes and hair

j'ai	I have
tu as	you have
il/elle a	he/she has
mon ami(e) a	my friend has
J'ai les yeux bleus/verts/ gris/marron.	I have blue/green/gray/ brown eyes.
J'ai les cheveux ...	I have ... hair.
longs/courts/mi-longs	long/short/ medium-length
frisés/raides	curly/straight
blonds/bruns/noirs/roux	blond/brown/black/red

Adjectives

Adjectives describe nouns. Their endings change to agree with the noun they describe.

Regular adjectives add **-e** in the feminine form and **-s** or **-es** in the plural form:

masc. (s)	fem. (s)	masc. (pl)	fem. (pl)
petit	petite	petits	petites
important	importante	importants	importantes

Other adjectives change a bit more!

masc. (s)	fem. (s)	masc. (pl)	fem. (pl)
curieux	curieuse	curieux	curieuses
essentiel	essentielle	essentiels	essentielles

Other adjectives are completely irregular:

masc. (s)	fem. (s)	masc. (pl)	fem. (pl)
beau	belle	beaux	belles

MFL Knowledge Organiser - French

Bonjour!/Salut! Au revoir!/À plus! Comment t'appelles-tu? Je m'appelle ...	Hello/Hi Bye / See you later! What are you called? I am called ...
Ça va? (Oui), ça va bien, merci. Pas mal, merci. (Non), ça ne va pas.	How are you? (Yes) I am okay, thanks. Not bad, thanks. (No), I'm not okay.
Ça s'écrit comment? Ça s'écrit ...	How do you spell it? It is spelled ...

A ah	B bay	C say	D day	E ugh!
F eff	G zhey	H ash	I ee	J zhee
K ka	L el	M em	N en	O oh
P pay	Q koo	R err	S ess	T tay
U oo	V vay	W doo bl vay	X iks	Y ee-grec
Z zed				

 j'aime  je n'aime pas
 j'adore  je déteste

Mois de l'année

janvier	juillet
février	août
mars	septembre
avril	octobre
mai	novembre
juin	décembre

<i>Dans mon sac, il y a ...</i>	<i>In my bag, there is ...</i>
<i>un agenda,</i>	<i>a diary</i>
<i>un cahier,</i>	<i>an exercise book</i>
<i>un crayon,</i>	<i>a pencil</i>
<i>un livre,</i>	<i>a book</i>
<i>un portable,</i>	<i>a phone</i>
<i>un stylo,</i>	<i>a pen</i>
<i>une calculatrice,</i>	<i>a calculator</i>
<i>une gomme,</i>	<i>a rubber</i>
<i>une règle,</i>	<i>a ruler</i>
<i>une trousse,</i>	<i>a pencil case</i>
<i>des cahiers</i>	<i>some exercise books</i>

Les jours de la semaine
The days of the week



Lundi (Monday)
Mardi (Tuesday)
Mercredi (Wednesday)
Jeudi (Thursday)
Vendredi (Friday)
Samedi (Saturday)
Dimanche (Sunday)

MFL Knowledge Organiser - French

LES NOMBRES 0-31 EN FRANÇAIS



0	zéro	16	seize
1	un	17	dix-sept
2	deux	18	dix-huit
3	trois	19	dix-neuf
4	quatre	20	vingt
5	cinq	21	vingt et un
6	six	22	vingt-deux
7	sept	23	vingt-trois
8	huit	24	vingt-quatre
9	neuf	25	vingt-cinq
10	dix	26	vingt-six
11	onze	27	vingt-sept
12	douze	28	vingt-huit
13	treize	29	vingt-neuf
14	quatorze	30	trente
15	quinze	31	trente et un

© JAMES HENRY PUBLISHERS, 2001 - ALL RIGHTS RESERVED

LES NOMBRES 0-31 EN FRANÇAIS



0	zéro	16	seize
1	un	17	dix-sept
2	deux	18	dix-huit
3	trois	19	dix-neuf
4	quatre	20	vingt
5	cinq	21	vingt et un
6	six	22	vingt-deux
7	sept	23	vingt-trois
8	huit	24	vingt-quatre
9	neuf	25	vingt-cinq
10	dix	26	vingt-six
11	onze	27	vingt-sept
12	douze	28	vingt-huit
13	treize	29	vingt-neuf
14	quatorze	30	trente
15	quinze	31	trente et un

© JAMES HENRY PUBLISHERS, 2001 - ALL RIGHTS RESERVED

MFL Knowledge Organiser - French

Les matières scolaires • School subjects

le français	French
le théâtre	drama
la géographie/la géo	geography
la musique	music
la technologie	technology
l'anglais (m)	English
l'EPS (f)	PE
l'histoire (f)	history
l'informatique (f)	ICT
les arts plastiques (m)	art
les mathématiques/maths (f)	maths
les sciences (f)	science

Quelle heure est-il? • What time is it?

Il est ...	It's ...
huit heures	eight o'clock
huit heures dix	ten past eight
huit heures et quart	quarter past eight
huit heures et demie	half past eight
neuf heures moins vingt	twenty to nine
neuf heures moins le quart	quarter to nine
midi	midday
minuit	midnight
midi/minuit et demi	half past twelve (midday/midnight)

Qu'est-ce que tu manges? • What do you eat?/ What are you eating?

Je mange ...	I eat/I'm eating ...
du fromage	cheese
du poisson	fish
du poulet	chicken
du steak haché	beefburger
du yaourt	yoghurt
de la pizza	pizza
de la purée de pommes de terre	mashed potatoes
de la glace à la fraise	strawberry ice-cream
de la mousse au chocolat	chocolate mousse
de la tarte au citron	lemon tart
des crudités	chopped, raw vegetables
des frites	chips
des haricots verts	green beans
Bon appétit!	Enjoy your meal!

Stratégie 2

Cognates and not quite cognates!
A cognate is spelt the same in English as in French. Most of the time they mean exactly the same too, for example:
pizza → pizza

In French there are also lots of words that look similar to English words but are not identical. Often these words have exactly the same meaning as the English (but not always!).
How many of these words can you find on pages 46 and 47? Here's one to get you started:
musique → music

There's also one word on Page 46 that looks (almost) identical to an English word but has a different meaning here. Can you spot it?

So the lesson from this is to use your knowledge of English to help you work out the meanings of French words, but be careful. There are some that can trip you up.

Les opinions • Opinions

Tu aimes/Est-ce que tu aimes ... ?	Do you like ... ?
J'aime ...	I like ...
J'aime beaucoup ...	I like ... a lot.
J'aime assez ...	I quite like ...
J'adore ...	I love ...
Je n'aime pas ...	I don't like ...
Je déteste ...	I hate ...
C'est ma matière préférée.	It's my favourite subject.
Moi aussi.	Me too.
T'es fou/folle.	You're crazy.

L'emploi du temps • The timetable

le lundi	on Mondays
le mardi	on Tuesdays
le mercredi	on Wednesdays
le jeudi	on Thursdays
le vendredi	on Fridays
À [neuf heures]	At [nine o'clock]
j'ai [sciences].	I've got [science].
le matin	(in) the morning
l'après-midi	(in) the afternoon
le mercredi après-midi	on Wednesday afternoon
la récréation/la récré	breaktime
le déjeuner	lunch

KNOWLEDGE ORGANISER

La journée scolaire • The school day

On a cours (le lundi).	We have lessons (on Mondays).
On n'a pas cours ...	We don't have lessons ...
On commence les cours à ...	We start lessons at ...
On a quatre cours le matin.	We have four lessons in the morning.
On étudie neuf matières.	We study nine subjects.
À la récré, on bavarde et on rigole.	At break, we chat and have a laugh.
On mange à la cantine.	We eat in the canteen.
On finit les cours à ...	We finish lessons at ...
On est fatigués.	We are tired.

Module 2 Mon collège

Using on

There are two words in French for 'we': **on** and **nous**.
The most commonly used is **on**.
on can also mean 'you', 'they' and 'people (in general)'.
on has the same verb form as *il/elle*.

The partitive article

The partitive article means 'some'. It has a different form with masculine, feminine and plural nouns. *de l'* is used before a vowel sound or silent h.

<i>le poulet</i> (chicken)	→	du poulet (some chicken)
<i>la glace</i> (ice-cream)	→	de la glace (some ice-cream)
<i>l'eau</i> (water)	→	de l' eau (some water)
<i>les frites</i> (chips)	→	des frites (some chips)

You often have to use the partitive article in French where you could miss it out in English.
Pour le déjeuner, je mange du poulet avec des frites. – For lunch I eat (some) chicken and (some) chips.

regular -er verbs	regular -ir verbs	irregular verbs	
<i>bavarder</i> (to chat)	<i>finir</i> (to finish)	<i>avoir</i> (to have)	<i>être</i> (to be)
<i>je bavarde</i> <i>tu bavardes</i> <i>il/elle/on bavarde</i>	<i>je finis</i> <i>tu finis</i> <i>il/elle/on finit</i>	<i>j'ai</i> <i>tu as</i> <i>il/elle/on a</i>	<i>je suis</i> <i>tu es</i> <i>il/elle/on est</i>

Les raisons • Reasons

C'est ...	It's ...
intéressant	interesting
ennuyeux	boring
facile	easy
difficile	difficult
génial	great
nul	rubbish
marrant	fun/funny
On a beaucoup de devoirs.	We have a lot of homework.
Le/La prof est sympa.	The teacher is nice.
Le/La prof est trop sévère.	The teacher is too strict.

Les mots essentiels • High-frequency words

à	at
et	and
aussi	also
mais	but
très	very
trop	too
assez	quite
un peu	a bit
pourquoi?	why?
parce que	because
beaucoup (de)	a lot (of)
tous les jours	every day
aujourd'hui	today
pardon	excuse me
merci	thank you
est-ce que (tu) ... ?	do (you) ... ?
qu'est-ce que (tu) ... ?	what do (you) ... ?
avec	with

MFL Knowledge Organiser - French

Les ordinateurs et les portables
• **Computers and mobile phones**

Qu'est-ce que tu fais ... *What do you do/are you doing ...*

avec ton ordinateur? *on your computer?*
avec ton portable? *on your mobile phone?*
Je joue. *I play/I'm playing games.*

Je surfe sur Internet. *I surf/I'm surfing the net.*
Je chatte sur MSN. *I chat/I'm chatting on MSN.*

Je regarde des clips vidéo. *I watch/I'm watching video clips.*

Je télécharge de la musique. *I download/I'm downloading music.*
J'envoie des SMS. *I text/I'm texting.*
Je parle avec mes ami(e)s/ mes copains/ mes copines. *I talk/I'm talking to my friends/mates.*
J'envoie des e-mails. *I send/I'm sending e-mails.*

Quand? • When?

en été *in summer*
en hiver *in winter*
quand il fait beau *when it's good weather*
quand il fait chaud *when it's hot*
quand il pleut *when it rains*
quand il fait froid *when it's cold*

Stratégie 3

Words that won't go away!

When you learn French in Studio you see that some words come up again and again. No matter what you're talking about they're there all the time. These are 'high-frequency words'. Because they occur so often they are extremely important. You need to know what they mean.

These Vocabulaire pages at the end of each module all contain a selection of high-frequency words. However, there are lots more. Look through the words on these pages and see how many more you can find. Write down what they mean in English. Here are a couple to start you off:

je
très

Qu'est-ce qu'ils font? • What do they do?

Il fait de la lutte. *He does wrestling.*
Elle fait du jogging. *She goes jogging.*
Elle a gagné le match. *She won the match.*
Il est champion régional. *He's the regional champion.*

Elle s'entraîne (trois) fois par semaine. *She trains (three) times a week.*
Ils font de la musculation. *They do weight training.*
Elles écoutent de la musique. *They listen to music.*
Ils jouent au foot. *They play football.*
Elles regardent la télé. *They watch TV.*
Ils sont des clowns. *They're clowns.*
Elles aiment le R&B. *They like R&B.*

La fréquence • Frequency

quelquefois *sometimes*
souvent *often*
tous les jours *every day*
tous les soirs *every evening*
tout le temps *all the time*
de temps en temps *from time to time*
une fois par semaine *once a week*
deux fois par semaine *twice a week*

Module 4 Ma zone

Le sport • Sport

Je joue ... *I play ...*
au basket *basketball*
au billard *billiards/snooker*
au foot(ball) *football*
au hockey *hockey*
au rugby *rugby*
au tennis *tennis*
au tennis de table/ au ping-pong *table tennis*
au volleyball *volleyball*
à la pétanque/aux boules *boules*
sur la Wii *on the Wii*
Tu es sportif/sportive? *Are you sporty?*
Je suis (assez) sportif/ sportive. *I'm (quite) sporty.*
Je ne suis pas (très) sportif/sportive. *I'm not (very) sporty.*
Mon sportif/Ma sportive préféré(e) est ... *My favourite sportsman/ sportswoman is ...*

KNOWLEDGE ORGANISER

Les directions • Directions

Pardon ... *Excuse me ...*
Où est ... ? *Where is ... ?*
Où sont ... ? *Where are ... ?*
C'est ... *It's ...*
à gauche *left*
à droite *right*
tout droit *straight on*
au carrefour *at the crossroads*
entre *between*
derrière *behind*
devant *in front of*

Les mots essentiels • High-frequency words

sur *on*
en (été) *in (summer)*
quand *when*
tout/toute/tous/toutes *all*
par (deux fois par semaine) *per (twice a week)*
d'habitude *usually*
d'abord *first of all*
ensuite *then/next*
puis *then/next*

Qu'est-ce que tu fais? • What do you do?

Je fais du judo. *I do judo.*
Je fais du parkour. *I do parkour.*
Je fais du patin à glace. *I go ice-skating.*
Je fais du roller. *I go roller-skating.*
Je fais du skate. *I go skateboarding.*
Je fais du vélo. *I go cycling.*
Je fais de la danse. *I do dance.*
Je fais de la gymnastique *I do gymnastics.*
Je fais de la natation. *I go swimming.*
Je fais de l'équitation. *I go horse-riding.*
Je fais des promenades. *I go for walks.*

Qu'est-ce que tu aimes faire? • What do you like doing?

le soir/le weekend *in the evenings/ at the weekends*
le samedi matin/ après-midi/soir *on Saturday mornings/ afternoons/evenings*
J'aime ... *I like ...*
... retrouver mes amis en ville. *... meeting my friends in town.*
... regarder la télévision (la télé). *... watching TV.*
... jouer sur ma PlayStation. *... playing on my PlayStation.*
... écouter de la musique. *... listening to music.*
... faire les magasins. *... going shopping.*
... faire du sport. *... doing sport.*
... jouer au football. *... playing football.*
... trainer avec mes copains. *... hanging out with my mates.*
... téléphoner à mes copines. *... phoning my mates.*

jouer à

You use **jouer à** to talk about playing a sport or a game. **à** has a different form with masculine, feminine and plural nouns. (Most sports are masculine singular.)

singular		plural
masculine	feminine	
le rugby	la pétanque	les boules
Je joue au rugby.	Tu joues à la pétanque?	Il/Elle/On joue aux boules.

MFL Knowledge Organiser - French

Là où j'habite • Where I live

Qu'est-ce qu'il y a ... ?	What is there ... ?
Il y a ...	There is ...
un café	a café
un centre commercial	a shopping centre
un centre de loisirs	a leisure centre
un château	a castle
un cinéma	a cinema
une église	a church
un hôtel	a hotel
un marché	a market
un parc	a park
un restaurant	a restaurant
un stade	a stadium
une patinoire	an ice rink
une piscine	a swimming pool
des magasins	shops
des musées	museums
Il n'y a pas de ...	There isn't a ... / There are no ...

Les directions • Directions

Pardon ...	Excuse me ...
Où est ... ?	Where is ... ?
Où sont ... ?	Where are ... ?
C'est ...	It's ...
à gauche	left
à droite	right
tout droit	straight on
au carrefour	at the crossroads
entre	between
derrière	behind
devant	in front of

Les attractions • Attractions

le bateau pirate	the pirate ship
le manège	the merry-go-round
le Cheval de Troie	the Trojan horse
le petit train	the little train
le toboggan géant	the giant slide
le trampoline magique	the magic trampoline
la grotte mystérieuse	the mysterious grotto
la rivière enchantée	the enchanted river
la soucoupe volante	the flying saucer
l'hôtel	the hotel
les autos tamponneuses	the dodgems
les chaises volantes	the flying chairs

Les opinions • Opinions

Tu aimes ta ville/ ton village?	Do you like your town/ village?
Je pense que ...	I think that ...
À mon avis, ...	In my view ...
C'est ...	It's ...
bien	good
super	great
joli	pretty
intéressant	interesting
ennuyeux	boring
vraiment nul	really rubbish
trop petit	too small
J'aime ça.	I like that.
J'adore ça.	I love that.
Tu es d'accord?	Do you agree?
Oui, je suis d'accord.	Yes, I agree.
Non, je ne suis pas d'accord.	No, I disagree.

Qu'est-ce qu'on peut faire à ... ?

• What can you do at/in ... ?	
je peux	I can
tu peux	you can (singular, informal)
il/elle/on peut	he/she can/we can
nous pouvons	we can
vous pouvez	you can (plural/formal)
ils/elles peuvent	they can
aller au concert	go to a concert
faire du bowling	go bowling
faire du roller	go roller-skating
faire du skate	go skateboarding
faire du vélo	go cycling
faire une promenade en barque	go on a boat trip
jouer au babyfoot et au flipper au café	play table football and pinball at the café
manger au restaurant	eat at a restaurant
visiter les jardins/ les monuments/ les musées	visit gardens/ monuments/ museums

Les mots essentiels • High-frequency words

assez	quite
mais	but
ou	or
puis	then
très	very

Les adverbes de fréquence

• Expressions of frequency	
d'habitude	usually
normalement	normally
quelquefois	sometimes
tous les weekends	every weekend

Coucou! • Hi there!

je veux	I want
tu veux	you want (singular, informal)
il/elle veut	he/she wants
on veut	we want
nous voulons	we want
vous voulez	you want (plural/formal)
ils/elles veulent	they want
Bonne idée!	Good idea!
Super!	Fabulous!
Génial!	Great!
D'accord.	OK.
Oui, c'est super top.	Yes, that's really great.
Oui, je veux bien.	Yes, I want to.
Non, je n'ai pas envie.	No, I don't want to.
Si tu veux.	If you want to.
Non merci.	No, thanks.



Stratégie 4

Mnemonics

One way of remembering new words is to invent a mnemonic: a rhyme or saying that sticks easily in the mind. Here's an example from the word list on page 86, but it's best to make up your own – you'll find them easier to remember/harder to forget.

My
Aunt
Gets
Alligator
Shoes
In
Normal
Shops

You can't learn every word like this – it would take ages! But it's a great way of learning those words that just don't seem to stick.

aller

aller (to go) is an important irregular verb.

je vais	I go	nous allons	we go
tu vas	you go (singular, informal)	vous allez	you go (plural/formal)
il/elle/on va	he/she goes/we go	ils/elles vont	they go

Looking for patterns in language:

Try to make links as you're learning French. Look for patterns to help you memorise things. Think about why you're using a particular article. If you're not sure, check the gender in a wordlist or a dictionary.

	singular			plural
	masculine	feminine	before vowel sound	
the	le	la	l'	les
a	un	une	un/une	des
to the	au	à la	à l'	aux

Modal verbs

vouloir (to want) and **pouvoir** (to be able) are modal verbs.

vouloir	to want
je veux	I want
tu veux	you want (singular, informal)
il/elle/on veut	he/she wants/we want
nous voulons	we want
vous voulez	you want (plural/formal)
ils/elles veulent	they want

pouvoir

pouvoir	to be able
je peux	I can/am able
tu peux	you can/are able (singular, informal)
il/elle/on peut	he/she can/is able; we can/are able
nous pouvons	we can/are able
vous pouvez	you can/are able (plural/formal)
ils/elles peuvent	they can/are able

Modal verbs are followed by an infinitive.
je veux **aller** – I want to go
on peut **visiter** – you can visit

Module 4 Ma Zone

KNOWLEDGE ORGANISER

MFL Knowledge Organiser - Spanish

Estrategias!

Look, say, cover, write, check

1. LOOK: Look carefully at the word for at least 10 seconds.
2. SAY: Say the word to yourself or out loud to practise pronunciation.
3. COVER: Cover up the word when you feel you have learned it.
4. WRITE: Write the word from memory.
5. CHECK: Check your word against the original. Did you get it right? If not, what did you get wrong? Spend time learning that bit of the word. Go through the steps again until you get it right.

Mi vida

!MODULE 1!

KNOWLEDGE ORGANISER

¿Tienes hermanas?	Do you have any brothers or sisters?	un hermano	a brother	un hermano	a brother
Tengo...	I have...	una hermana	a sister	un hermano	a brother
un hermano	a half-brother/stepbrother	una hermana	a half-sister/stepsister	un hermano	a brother
No tengo hermanos.	I don't have any brothers or sisters.	una hermanastra	a half-sister/stepsister	un hermano	a brother
Soy hijo único/hija única.	I am an only child. (male/female)				

Saludos Greetings			
¡Hola!	Hello!	¿Cómo te llamas?	What are you called?
¿Qué tal?	How are you?	Me llamo...	I am called...
Bien, gracias.	Fine, thanks.	¿Dónde vives?	Where do you live?
fenomenal	great	Vivo en...	I live in...
regular	not bad	¡Hasta luego!	See you later!
fatal	awful	¡Adiós!	Goodbye!

Mi pasión My passion			
Mi pasión es...	My passion is...	el fútbol	football
Mi héroe es...	My hero is...	la música	music
el deporte	sport	el tenis	tennis

Los números 1 - 31 Numbers 1 - 31			
uno	1	diecisiete	17
dos	2	dieciocho	18
tres	3	diecinueve	19
cuatro	4	veinte	20
cinco	5	veintiuno	21
seis	6	veintidós	22
siete	7	veintitrés	23
ocho	8	veinticuatro	24
nueve	9	veinticinco	25
diez	10	veintiséis	26
once	11	veintisiete	27
doce	12	veintiocho	28
trece	13	veintinueve	29
catorce	14	treinta	30
quince	15	treinta y uno	31
dieciséis	16		

¿Cuántos años tienes? How old are you?			
Tengo... años.	I am... years old.	mayo	May
¿Cuándo estu cumpleaños?	When is your birthday?	junio	June
		julio	July
Mi cumpleaños es el... de...	My birthday is the... of...	agosto	August
enero	January	septiembre	September
febrero	February	octubre	October
marzo	March	noviembre	November
abril	April	diciembre	December

The definite article		
The Spanish word for 'the' also changes according to the gender of the noun and whether it is singular or plural.		
	singular	plural
masculine	el conejo (the rabbit)	los conejos (the rabbits)
feminine	la cobaya (the guinea pig)	las cobayas (the guinea pigs)

The indefinite article		
In Spanish, the words for 'a' change according to whether the noun is masculine or feminine.		
masculine	un perro	a dog
feminine	una tortuga	a tortoise

Palabras muy frecuentes High-frequency words			
a/al/a la	to (the)	¿Dónde...?	Where...?
en	by	¿Adónde...?	Where... to?
con	with	¡Qué...!	How...!
mi/mis	my	además	also, in addition
¿Cómo...?	How...?	pero	but

¿Qué tipo de persona eres? What sort of person are you?			
Soy...	I am...	listo/a	clever
divertido/a	amusing	serio/a	serious
estupendo/a	brilliant	simpático/a	nice, kind
fenomenal	fantastic	sincero/a	sincere
generoso/a	generous	tímido/a	shy
genial	great	tonto/a	silly
guay	cool	tranquilo/a	quiet, calm

MFL Knowledge Organiser - Spanish

Expresiones de frecuencia		Expressions of frequency	
a veces	sometimes	nunca	never
de vez en cuando	from time to time	todos los días	every day

Los días de la semana		The days of the week	
lunes	Monday	domingo	Sunday
martes	Tuesday	los lunes	on Mondays, every Monday
miércoles	Wednesday	los martes	on Tuesdays, every Tuesday
jueves	Thursday		
viernes	Friday		
sábado	Saturday		

Palabras muy frecuentes		High-frequency words	
con	with	pero	but
cuando	when	porque	because
generalmente	generally	sí	yes
mucho	a lot	también	also, too
no	no	y	and
o	or	¿Y tú?	And you?

¿Qué deportes haces?		What sports do you do?	
Hago artes marciales.	I do martial arts.	Juego al tenis.	I play tennis.
Hago atletismo.	I do athletics.	Juego al voleibol.	I play volleyball.
Hago equitación.	I do/go horseriding.	¡Me gusta!	I like it!
Hago gimnasia.	I do gymnastics.	¡Me gusta mucho!	I like it a lot!
Hago natación.	I do/go swimming.	¡Me gusta muchísimo!	I really, really like it!
Juego al baloncesto.	I play basketball.	¡Me encanta!	I love it!
Juego al fútbol.	I play football.		

Stem-changing verbs

Stem-changing verbs like **jugar** (to play) have regular endings, but some parts of the verb change the vowel in the 'stem'. Some people call these 'boot' verbs.

juego	I play	jugamos	we play
juegas	you play	jugáis	you (plural) play
juega	he/she plays	juegan	they play

¿Qué haces en tu tiempo libre?		What do you do in your spare time?	
bailo	I dance	monto en bici	I ride my bike
canto karaoke	I sing karaoke	saco fotos	I take photos
hablo con mis amigos	I talk with my friends	toco la guitarra	I play the guitar

¡MODULE 2!

Mi tiempo libre

Estrategia 2

Cognates and near-cognates

A **cognate** is spelt the same in English as in Spanish. Most of the time they mean exactly the same, too, for example:
piano → piano

In Spanish there are also lots of words that look similar to English words but are not identical. These words are called **near-cognates**. They often have exactly the same meaning as the English (but not always!). How many of these words can you find on these two pages? Here's one to get you started:
música → music

However, there are some words that look identical, or almost identical, to English words but have different meanings. These are often called **false friends**. For example, you have met the Spanish word **once**. This doesn't mean the same as the English word 'once'! Can you remember what it does mean, and how to pronounce it?

So the lesson from this is to use your knowledge of English to help you work out the meanings of Spanish words, but be careful. There are some that can trip you up.

¿Qué tiempo hace?		What's the weather like?	
hace calor	it's hot	llueve	it's raining
hace frío	it's cold	nieva	it's snowing
hace sol	it's sunny	¿Qué haces cuando	What do you do when
hace buen tiempo	it's nice weather	llueve?	it's raining?

KNOWLEDGE ORGANISER

Algunas preguntas		Some questions	
¿Qué...?	What/Which...?	¿Cómo...?	How/What...?
¿Cuándo...?	When...?	¿Cuántos...?	How many...?
¿Dónde...?	Where...?		

Las estaciones		The seasons	
la primavera	spring	el otoño	autumn
el verano	summer	el invierno	winter

¿Qué te gusta hacer?		What do you like to do?	
Me gusta...	I like...	navegar por Internet	to surf the net
Me gusta mucho...	I really like...	salir con mis amigos	to go out with my friends
No me gusta...	I don't like...	ver la televisión	to watch TV
No me gusta nada...	I don't like at all...	porque es...	because it is...
chatear	to chat online	porque no es...	because it is not...
escribir correos	to write emails	interesante	interesting
escuchar música	to listen to music	guay	cool
jugar a los videojuegos	to play videogames	divertido/a	amusing, funny
leer	to read	estúpido/a	stupid
mandar SMS	to send text messages	aburrido/a	boring

Present tense -ar verbs

You use the present tense to talk about what usually happens: I surf the net, I send texts.

To form the present tense of **-ar** verbs, you take off the **-ar** and add a different ending for each person.

hablar	to speak		
hablo	I speak	hablamos	we speak
hablas	you speak	habláis	you (plural) speak
habla	he/she speaks	hablan	they speak

MFL Knowledge Organiser - Spanish

¿Qué estudias? What do you study?

Estudio...	I study...	informática	ICT
ciencias	science	inglés	English
dibujo	art	matemáticas	maths
educación física	PE	música	music
español	Spanish	religión	RE
francés	French	teatro	drama
geografía	geography	tecnología	technology
historia	history		

¿Cuál es tu día favorito? What is your favourite day?

Mi día favorito es el lunes/ el martes.	My favourite day is Monday/Tuesday.	Porque...	Because...
Los lunes/martes estudio...	On Mondays/Tuesdays I study...	por la mañana	in the morning
¿Por qué?	Why?	por la tarde	in the afternoon
		estudiamos	we study
		no estudio	I don't study

Adjectives

Adjectives describe nouns. Their endings change to agree with the noun they describe. Adjectives fall into three main groups. The endings for each group work like this:

	singular		plural	
	masculine	feminine	masculine	feminine
ending in -o/-a	divertido	divertida	divertidos	divertidas
ending in -e	importante	importante	importantes	importantes
ending in a consonant	útil	útil	útiles	útiles

Palabras muy frecuentes High-frequency words

algo	something	¿Por qué?	Why?
donde	where	porque	because
hay	there is/there are	también	also, too
o	or	tampoco	nor/neither
pero	but	y	and

Opiniones Opinions

¿Te gusta el dibujo?	Do you like art?	aburrido/a	boring
Sí, me gusta (mucho) el dibujo.	Yes, I like art (a lot).	difícil	difficult
No, no me gusta (nada) el dibujo.	No, I don't like art (at all).	divertido/a	funny
¿Te gustan las ciencias?	Do you like science?	fácil	easy
Sí, me encantan las ciencias.	Yes, I love science.	importante	important
		interesante	interesting
		práctico/a	practical
		útil	useful

¿Cómo es tu insti? What's your school like?

Es...	It's...	grande	big
antiguo/a	old	horrible	horrible
bonito/a	nice	moderno/a	modern
bueno/a	good	pequeño/a	small
feo/a	ugly		

¿Qué haces durante el recreo? What do you do during break?

Como...	I eat...	Bebo...	I drink...
un bocadillo	a sandwich	agua	water
unos caramelos	some sweets	un refresco	a fizzy drink
chicle	chewing gum	un zumo	a juice
una chocolatina	a chocolate bar	Leo mis SMS.	I read my text messages.
fruta	fruit	Escribo SMS.	I write text messages.
unas patatas fritas	some crisps	Nunca hago los deberes.	I never do homework.

¿Qué hay en tu insti? What is there in your school?

En mi insti hay...	In my school, there is...	una clase de informática	an ICT room
un campo de fútbol	a football field	una piscina	a swimming pool
un comedor	a dining hall	unos laboratorios	some laboratories
un gimnasio	a gymnasium	unas clases	some classrooms
un patio	a playground	No hay piscina.	There isn't a swimming pool.
una biblioteca	a library		

Present tense verbs

There are three groups of verbs in Spanish:

-ar verbs	-er verbs	-ir verbs
estudiar to study	comer to eat	vivir to live
estudio I study	como I eat	vivo I live
estudias you study	comes you eat	vives you live
estudia he/she studies	come he/she eats	vive he/she lives
estudiamos we study	comemos we eat	vivimos we live
estudiáis you (plural) study	coméis you (plural) eat	vivís you (plural) live
estudian they study	comen they eat	viven they live

Expresiones de tiempo Time expressions

normalmente	normally	primero	first
a veces	sometimes	luego	then

MFL Knowledge Organiser - Spanish

¿Cuántas personas hay en tu familia? How many people are there in your family?

En mi familia hay...	In my family, there are...	mis primos	my cousins
personas.	people.	¿Cómo se llama tu madre?	What is your mother called?
mis padres	my parents	Mi madre se llama...	My mother is called...
mi madre	my mother	¿Cómo se llaman tus primos?	What are your cousins called?
mi padre	my father	Mis primos se llaman...	My cousins are called...
mi abuelo	my grandfather	y...	and...
mi abuela	my grandmother	su hermano	his/her brother
mi bisabuela	my great-grandmother	sus hermanos	his/her brothers
mi tío	my uncle		
mi tía	my aunt		

Palabras muy frecuentes High-frequency words

además	also, in addition	un poco	a bit
bastante	quite	mi/mis	my
porque	because	tu/tus	your
muy	very	su/sus	his/her
¿Quién...?	Who?		

¿De qué color tienes los ojos? What colour are your eyes?

Tengo los ojos...	I have... eyes.	marrones	brown
azules	blue	verdes	green
grises	grey	Llevo gafas.	I wear glasses.

Possessive adjectives

Possessive adjectives are the words for 'my', 'your', 'his', 'her', etc. These words agree in number with the noun they are describing:

	singular	plural
my	mi hermano	mis hermanos
your	tu hermano	tus hermanos
his/her	su hermano	sus hermanos

Los números 20 - 100 Numbers 20 - 100

veinte	20	setenta	70
treinta	30	ochenta	80
cuarenta	40	noventa	90
cincuenta	50	cien	100
sesenta	60		

KNOWLEDGE ORGANISER
MI familia y mis amigos
MODULE 4

Adjectives

Adjectives describe nouns. Their endings change to agree with the noun they describe. Adjectives fall into three main groups:

- ending in -o or -a
- ending in -e
- ending in a consonant.

	singular		plural	
	masculine	feminine	masculine	feminine
ending in -o	pequeño	pequeña	pequeños	pequeñas
ending in -e	inteligente	inteligente	inteligentes	inteligentes
ending in a consonant	azul	azul	azules	azules

Note: **joven** (young) adds an accent in the plural to keep the same sound: **jóvenes**.

¿Cómo es? What is he/she like?

Es...	He/She is...	joven	young
No es muy...	He/She isn't very...	viejo/a	old
alto/a	tall	Tiene pecas.	He/She has freckles.
bajo/a	short	Tiene barba.	He has a beard.
delgado/a	slim	mis amigos	my friends
gordo/a	fat	mi mejor amigo/a	my best friend
guapo/a	good-looking	su mejor amigo/a	his/her best friend
inteligente	intelligent		

Ser and estar

In Spanish, there are two verbs meaning 'to be': **ser** and **estar**.

- You have already met **ser** when describing characteristics of people, houses, etc. **Soy** alta. **I am** tall. **Mi casa es** antigua. **My house is** old.
- estar** is used for location: **Mi casa está** en la costa. **My house is** by the sea.

¿Cómo tienes el pelo? What's your hair like?

Tengo el pelo...	I have... hair.	rizado	curly
castaño	brown	largo	long
negro	black	corto	short
rubio	blond	Soy pelirrojo/a.	I am a redhead.
azul	blue	Soy calvo.	I am bald.
liso	straight		

¿Cómo es tu casa o tu piso? What is your house or flat like?

Vivo en...	I live in...	cómodo/a	comfortable
una casa	a house	grande	big
un piso	a flat	moderno/a	modern
antiguo/a	old	pequeño/a	small
bonito/a	nice		

Tener (to have)

tengo	I have
tienes	you have
tiene	he/she has

Mnemonics

One way of remembering new words is to invent a mnemonic: a rhyme or saying that sticks easily in the mind. Here's an example from the word list above, but it's best to make up your own - you'll find them easier to remember/harder to forget.

Bon
Offers
Nice
Invitations
To
Others

You can't learn every word like this - it would take ages! But it's a great way of learning those words that just don't seem to stick.

¿Dónde está? Where is it?

Está en...	It is in...	un pueblo	a village
el campo	the countryside	el norte	the north
la costa	the coast	el sur	the south
una ciudad	a town	el este	the east
el desierto	the desert	el oeste	the west
la montaña	the mountains	el centro	the centre

tenemos	we have
tenéis	you (plural) have
tienen	they have

MFL Knowledge Organiser - Spanish

¿Qué hay en tu ciudad? What is there in your town?			
Hay...	There is...	una universidad	a university
un castillo	a castle	En...	In...
un centro comercial	a shopping centre	mi barrio	my neighbourhood
un estadio	a stadium	mi ciudad	my town, my city
un mercado	a market	mi pueblo	my village, my town
un museo	a museum	No hay museo.	There isn't a museum.
un parque	a park	No hay nada.	There's nothing.
una piscina	a swimming pool	unos museos	some museums
una plaza	a square	unas tiendas	some shops
un polideportivo	a sports centre	muchos museos	a lot of museums
un restaurante	a restaurant	muchas tiendas	a lot of shops
una tienda	a shop		

Estrategia 5
Verbs that you see everywhere!

You can use the verb **tener** in lots of situations:

Tengo una serpiente.
Tengo dos hermanastras.
Tengo doce años.

Tener is a 'high-frequency' verb. Learning verbs like this will help you to say a lot more in Spanish!

You have met several other high-frequency verbs in *¡Viva!*. Try to find four different ways of finishing each of these sentences:

1 Voy... 2 Juego... 3 Es... 4 Hago...

¿Te gusta vivir en...? Do you like living in...?			
Me gusta mucho vivir en...	I like living in... a lot.	porque hay/es...	because there is/it is...
No me gusta nada vivir en...	I don't like living in... at all.		

¿Qué vas a hacer? What are you going to do?			
Voy a salir con mis amigos.	I am going to go out with my friends.	Vamos a jugar al voleibol.	We are going to play volleyball.
Vas a ver la televisión.	You are going to watch TV.	Vais a chatear.	You are going to chat.
Va a ir de paseo.	He/She is going to go for a walk.	Van a hacer los deberes.	They are going to do their homework.

¿Qué hora es? What time is it?			
Es la una.	It's one o'clock.	Son las ocho menos veinte.	It's twenty to eight.
Son las dos.	It's two o'clock.	Son las nueve menos cuarto.	It's quarter to nine.
Es la una y cinco.	It's five past one.	Son las diez menos diez.	It's ten to ten.
Son las dos y diez.	It's ten past two.	Son las once menos cinco.	It's five to eleven.
Son las tres y cuarto.	It's quarter past three.	Son las doce.	It's twelve o'clock.
Son las cuatro y veinte.	It's twenty past four.	¿A qué hora?	At what time?
Son las cinco y veinticinco.	It's twenty-five past five.	a la una	at one o'clock
Son las seis y media.	It's half past six.	a las dos	at two o'clock
Son las siete menos veinticinco.	It's twenty-five to seven.		

MODULE 5	MI ciudad	Palabras muy frecuentes High-frequency words			
KNOWLEDGE ORGANISER	aquí	here	hasta	until	
	a ver	let's see	más	more	
	con	with			

En la cafetería In the café			
Yo quiero...	I want...	gambas	prawns
bebidas	drinks	jamón	ham
un batido de chocolate/ de fresa	a chocolate/strawberry milkshake	pan con tomate	tomato bread
un café	a coffee	patatas bravas	spicy potatoes
una Coca-Cola	a Coca-Cola	tortilla	Spanish omelette
una Fanta limón	a lemon Fanta	¿Algo más?	Anything else?
un granizado de limón	an iced lemon drink	No, nada más.	No, nothing else.
un té	a tea	¿Y de beber?	And to drink?
raciones	snacks	¿Cuánto es, por favor?	How much is it, please?
calamares	squid	Son cinco euros setenta y cinco.	That's 5,75 €.
croquetas	croquettes		

¿Qué haces en la ciudad? What do you do in town?			
Salgo con mis amigos.	I go out with my friends.	a la cafetería	to the cafeteria
Voy...	I go...	a la playa	to the beach
al cine	to the cinema	de compras	shopping
al parque	to the park	de paseo	for a walk
a la bolera	to the bowling alley	No hago nada.	I do nothing.







Music Knowledge Organiser

AFRICAN MUSIC ACTIVITY SHEET



TASK 1

Read the description of some untuned African percussion instruments below and connect them to the correct pictures (or write the numbers and the letters they match up with)

<u>Instrument Name & Description</u>	<u>Image</u>
1 – Djembe - A drum which is wider at the top than at the bottom	
2 – DunDun – A drum which is the same size at the top and the bottom	
3 – Axatse – A hollow gourd with beads attached often in a netlike design	
4 – Gankogui – A type of metal Agogo bell with two different sized heads	
5 – Guiro – A dried hollow tube with slits that are scraped using a beater	
6 – Caxixi – A basket-shaped instrument filled with seeds that you shake	

TASK 2: Choose an instrument from those given about and start thinking about how you would build, construct and make it. Jot down your ideas giving a “step by step” plan.

MEMBRANOPHONES, IDIOPHONES, AEROPHONES & CHORDOPHONES



African musical instruments can be sorted into four different categories, depending on how the sound is produced on that particular instruments: **MEMBRANOPHONES, IDIOPHONES, AEROPHONES** and **CHORDOPHONES**.

TASK 1: Draw lines to match the following grouping of instruments, its meaning and an example

<u>Group of Instruments</u>	<u>Meaning</u>	<u>Example</u>
Membranophone	Stringed Instruments	Shaker
Idiophone	Instruments which produce their sound by vibrations	Ocarina
Aerophone	Drums and instruments with skins	Dundun
Chordophone	Wind Instruments	Kora

TASK 2: Which group of instruments would the following African musical instruments below to? **MEMBRANOPHONES, IDIOPHONES, AEROPHONES** or **CHORDOPHONES**?

The **MBIRA** or ‘thumb piano’



The **DJEMBE**



The **BALAFON**



The **AXATSE**



Music Knowledge Organiser

West African Music

African instruments are often made from plants and animal products such as hide and bone. African musicians are very fond of **PERCUSSION** instruments and use a wide variety of drums (called **MEMBRANOPHONES**) Drums are traditionally used as an accompaniment to singing, dancing, working and communicating between villages. Drummers are typically the most respected members of their community.



Characteristic Rhythms and Metres, Traditional Rhythm Patterns

& Repetition and Ostinato

REPETITION and **CYCLIC RHYTHMS** used to organise music. A repeated rhythm pattern (**OSTINATO** or **TIMELINE**) is used as a basis for **IMPROVISATION** to “hold the piece together”. Use of **SYNCOPIATION**, **POLYRHYTHMS** (shown below right), **CYCLIC RHYTHMS** and **CROSS-RHYTHMS** (shown below left). **MASTER DRUMMER** can give musical ‘cues’ to performers to change rhythms during a performance and can also choose to **ACCENT** different beats within a **RHYTHM CYCLE**.



Pitch & Melody and Harmony & Tonality

Most African melodies are based on a “limited number of pitches” - four, five, six or seven note **SCALES** and are normally short and simple, often expanded by **REPETITION** and **IMPROVISATION**. The pitch in African drumming is largely determined by the tuning of the drums. African singers often create vocal harmony by singing in thirds, fourths or fifths. **UNISON** and **PARALLEL OCTAVE** harmony is also common. The basic form of African Vocal Music is **CHORAL SINGING** known as **CALL AND RESPONSE** where one singer (**SOLOIST**) or small group of singers sings a line and the whole group (**CHORUS**) makes a reply (often a fixed **REFRAIN**) – like a “musical conversation” – in alternation with the “lead singer”. The soloist often **IMPROVISES**. African singers often “shout words” (**VOCABLES**) and male and female singers enjoy using their highest **VOCAL REGISTER** known as **FALSETTO**. African singing can be accompanied by instruments but can also be unaccompanied (**A CAPPELLA**).

Ornamentation

The **MASTER DRUMMER** can elaborate and decorate his solo drum part with **ACCENTS** and playing in a technically demanding style to “show off” to the rest of the drum ensemble and audience.

Texture

In West Africa, drum ensembles have 3-5 players each with a distinctive method of striking their drum and playing interlocking rhythms. This creates a **THICK** and complex **POLYPHONIC** texture.

Dynamics

Since African Drumming is often performed outside and at social gatherings and celebrations, the dynamics are generally **LOUD (FORTE - f)** or **VERY LOUD (FORTISSIMO - ff)**, but like changes in tempo, can be indicated by the **MASTER DRUMMER**.

Tempo

FAST – designed for dancing and social gatherings – tempo will match the dance steps. The **MASTER DRUMMER** can both establish the tempo as well as speed up (**ACCELERANDO**) or slow down (**DECELERANDO**) or even set a new tempo with musical ‘cues’.

Ensemble

A **MASTER DRUMMER** often leads giving signals to the rest of the group to change rhythms or sections of the piece and can also control the **TEMPO**. He often **IMPROVISES** highly complicated rhythms and can indicate the ending of a piece of music as well as playing the “**CALL**” to **CALL AND RESPONSE SECTIONS** which are ‘responded’ by the drum ensemble.

Form & Structure and Phrasing

The structure of a piece of African drumming depends on the **MASTER DRUMMER** and has no fixed or determined length, entirely dependent on the rhythms used.

Origins and Cultural Context of the Traditional Music

African Drumming is ‘traditional’ and handed down via the **ORAL TRADITION** (not written down). Not performed ‘at a concert’, rather everyone joins in by dancing or playing an instrument, singing or clapping. Combines other art forms and heard at special occasions and celebrations. Many Africans believe that music serves as a link to the spirit world.

Musical Characteristics of Folk Music

Traditional drums such as the **DJEMBE**, **TALKING DRUM** and **DUNDUN** remain popular in African music today, often combined with a number of percussion instruments, stringed instruments and woodwind instruments. **RHYTHM** remains a key feature of African drumming.

Impact of Modern Technology on Traditional Music

African music has been a major influence on the development of popular music contributing rhythms, structures, melodic features and the use of improvisation to such styles as blues, gospel and jazz, brought over to America by slaves. High quality recordings of traditional African music are now possible with advanced recording techniques

Artists, Bands & Performers of African Drumming



Bolokada Conde



Ladysmith Black Mambazo



TALKING DRUM



DUNDUN

Other percussion instruments such as clappers, maracas, scrapers, gongs and xylophones (called **BALAFONS**) produce their sound by vibration and are known as **IDIOPHONES**.

Instrumentation – Typical Instruments, Timbres and Sonorities



BALAFON

MBIRA

FLUTE

GOURD

MARACAS

KORA

Stringed instruments (**CHORDOPHONES**) such as bows, lyres, zithers, harps and the **KORA** are popular as well as some woodwind instruments (**AEROPHONES**) such as whistles, flutes, reed pipes, trumpets and horns.



Music Knowledge Organiser

Elements of Music Quiz

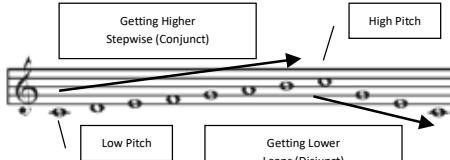




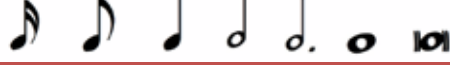








1. Which of the elements of music means the highness or lowness of a sound? _____ (1)
2. What does the music element **TEXTURE** mean? _____ (1)
3. What other word can the musical element **TIMBRE** be known as? _____ (1)
4. Which musical element describes no sound or absence of sound? _____ (1)
5. What does the musical element **TEMPO** mean? _____ (1)
6. The loudness or softness of a musical note or sound can be described as which of the Elements of Music? _____ (1)
7. Spiky, Smooth, Detached, Slurred, Legato, Staccato – which of the elements of music are these words describing? _____ (1)
8. Look at the images of three percussion instruments below. Which of the following words best matches each instruments' own unique **TIMBRE**? – Metallic, Wooden, Hollow. (3)



9. Look at the images below containing a selection of instruments and performers. In each box, write down whether the sound or music created would be either a **THIN** or a **THICK** texture? (6)

Music Knowledge Organiser

Exploring the Elements of Music

<p>A. Pitch</p> <p>The highness or lowness of a sound.</p>  	<p>B. Tempo</p> <p>The speed of a sound or piece of music.</p> <p>FAST: <i>Allegro, Vivace, Presto</i> SLOW: <i>Andante, Adagio, Lento</i></p> <p>GETTING FASTER – <i>Accelerando (accel.)</i></p> <p>GETTING SLOWER – <i>Ritardando (rit.) or Rallentando (rall.)</i></p> 	<p>C. Dynamics</p> <p>The volume of a sound or piece of music.</p> <p>VERY LOUD: <i>Fortissimo (ff)</i> LOUD: <i>Forte (f)</i> QUITE LOUD: <i>Mezzo Forte (mf)</i> QUITE SOFT: <i>Mezzo Piano (mp)</i> SOFT: <i>Piano (p)</i> VERY SOFT: <i>Pianissimo (pp)</i></p> <p>GETTING LOUDER: <i>Crescendo (cresc.)</i> GETTING SOFTER: <i>Diminuendo (dim.)</i></p> 	<p>D. Duration</p> <p>The length of a sound.</p>  <p>SHORT → LONG</p> 
<p>E. Texture</p> <p>How much sound we hear.</p> <p>THIN TEXTURE: (<i>sparse/solo</i>) – small amount of instruments or melodies.</p>  <p>THICK TEXTURE: (<i>dense/layered</i>) – lots of instruments or melodies.</p>	<p>F. Timbre or Sonority</p> <p>Describes the unique sound or tone quality of different instruments, voices or sounds.</p>  <p><i>Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzy, Crisp, Metallic, Wooden etc.</i></p>	<p>G. Articulation</p> <p>How individual notes or sounds are played/techniques.</p> <p>LEGATO – playing notes in a long, smooth way shown by a SLUR.</p>  <p>STACCATO – playing notes in a short, detached, spiky way shown by a DOT.</p> 	<p>H. Silence</p> <p>The opposite or absence of sound, no sound. In music these are RESTS.</p>  
<p>I. Notation</p> <p>How music is written down.</p> <p>STAFF NOTATION – music written on a STAVE (5 lines and spaces)</p>  <p>GRAPHIC NOTATION/SCORE – music written down using shapes and symbols to represent sounds.</p> 		<p>J. Where is music used</p> <p>Music can create an atmosphere or ambience e.g., <i>supermarkets and restaurants</i>.</p> <p>Music can create an image e.g., <i>in response to art, a story, a poem, a character, a situation</i> – this is called PROGRAMME MUSIC.</p> <p>Music can be calming e.g., <i>end of an evening in clubs and bars</i>.</p> <p>Music can be used for spiritual reasons e.g., <i>worship, meditation, reflection, hymns and chants, yoga, and spiritual reflection</i>.</p> <p>Music can be used for commercial purposes e.g., <i>advertising, TV themes</i>.</p>	

Music Knowledge Organiser

THE GUITAR

A. How to Read Guitar Chords

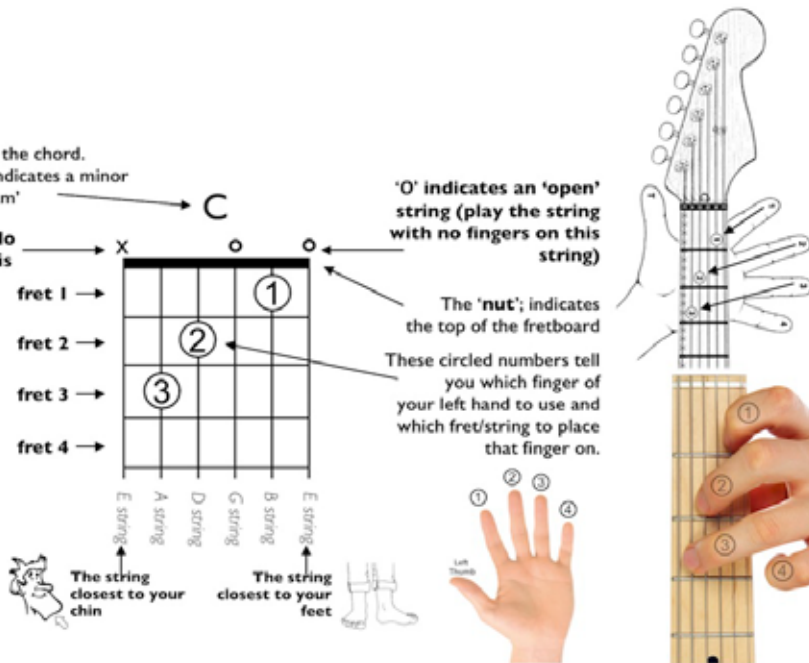
The name of the chord.
A small 'm' indicates a minor chord, e.g. 'Am'

'X' means do not play this

'O' indicates an 'open' string (play the string with no fingers on this string)

The 'nut'; indicates the top of the fretboard

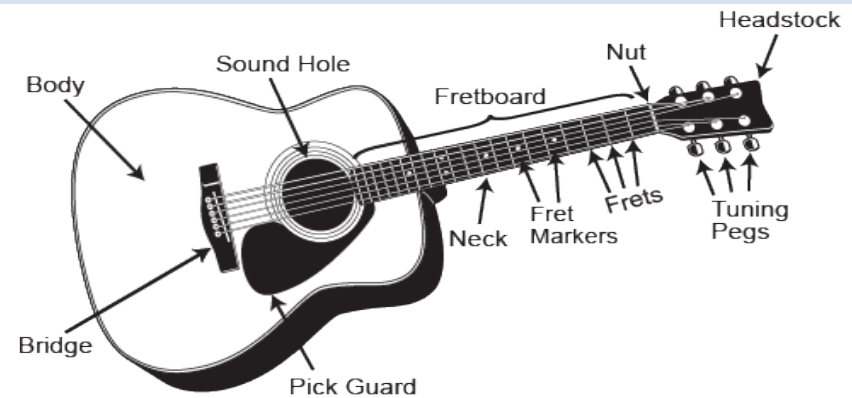
These circled numbers tell you which finger of your left hand to use and which fret/string to place that finger on.



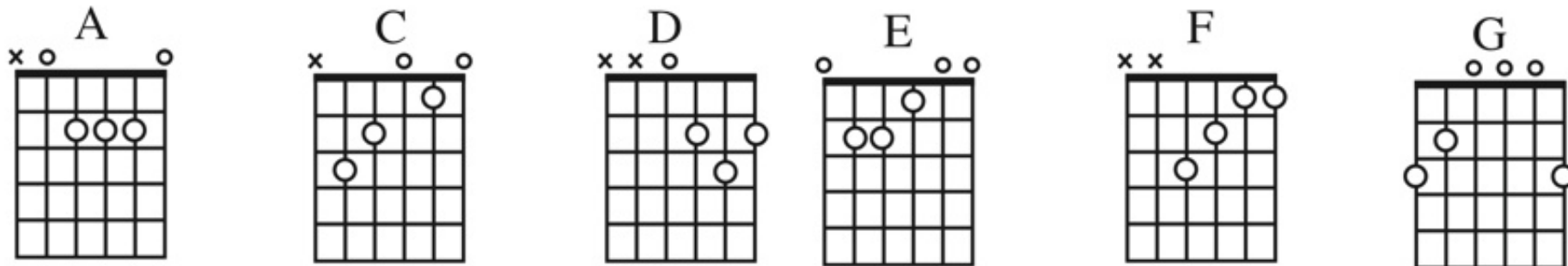
B. Elements of music

Dynamics	Playing strings harder/softer
Timbre (tone)	Playing strings with fingers/pick, choosing guitar amp/acoustic guitar
Pitch	Playing higher pitched strings/ moving fretted hand toward the guitar body
Articulation	Playing each note/chord individually (picking) or using techniques such as Hammer ons/pull offs for a legato sound

C. Parts of a Guitar



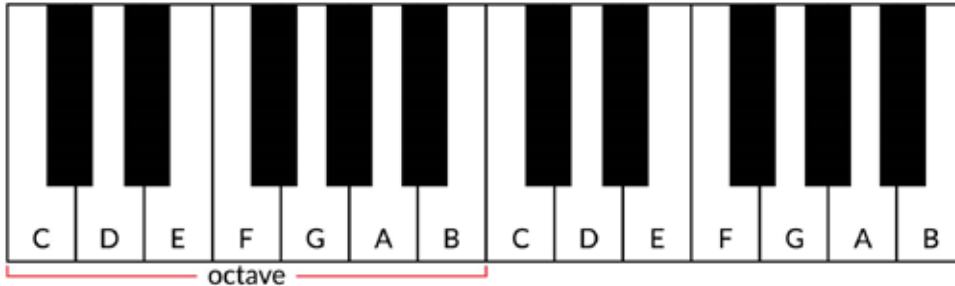
D. Guitar Chords



Music Knowledge Organiser

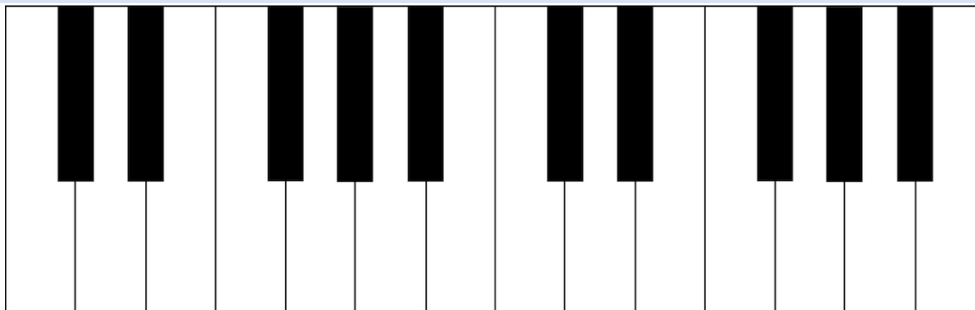
Keyboard Skills

A. Layout of a Keyboard/Piano



A piano or keyboard is laid out with **WHITE KEYS** and Black Keys (see section G). **C is to the left of the two Black Keys** and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of a piano keyboard.

D. Complete the Piano



E. Left Hand/Right Hand (1-5)



Exploring Treble Clef Reading and Notation



B. Treble Clef & Treble Clef Notation

A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written. The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is *usually* used for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin. The stave or staff is made up of 5 **LINES** and 4 **SPACES**.



Every Green Bus Drives Fast. Notes in the **SPACES** spell "FACE"



Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.



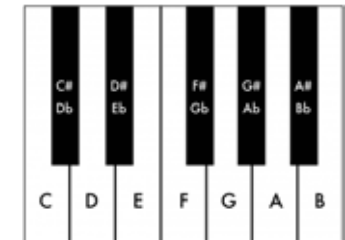
C. Keyboard Chords



Play one – Miss one – play one – miss one – play one

F. Black Keys and Sharps and Flats

There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone (e.g. C# is higher in pitch (to the right) than C). The b symbol means a **FLAT** which lowers the pitch by a semitone (e.g. Bb is lower in pitch (to the left) than B). Each black key has 2 names – C# is the same as Db – there's just two different ways of looking at it! Remember, black notes or keys that are to the **RIGHT** of a white note are called **SHARPS** and black notes to the **LEFT** of a white note are called **FLATS**.



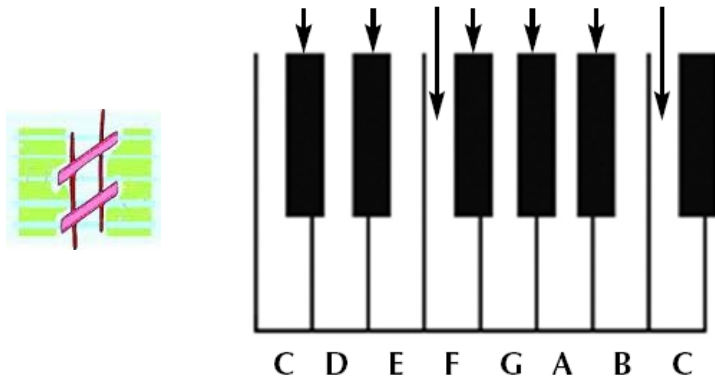
Music Knowledge Organiser

Sharps and Flats

Name _____ Form _____

Sharps

1. Label the sharps on the keyboard below:



2. Draw the sharps on the staff below:

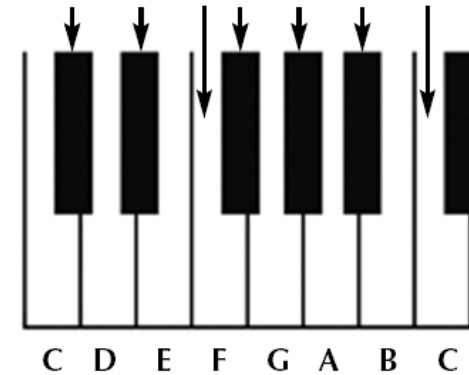


3. Write the letter names of the pitches in the spaces below.



FLATS

4. Label the flats on the keyboard below:

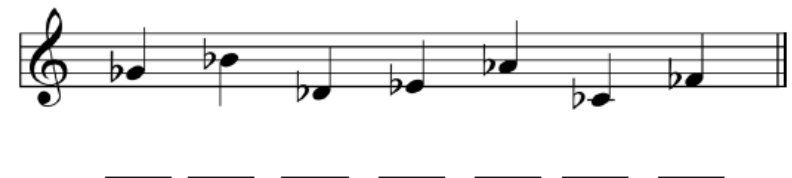


b

5. Draw the flats on the staff below:



6. Write the letter names of the pitches in the spaces below.



Music Knowledge Organiser

Listening and describing music

Listen to two different pieces of music or songs of your choice. They could be something that you particularly like or your favourite songs or pieces of music. Try to stay away from two songs or pieces of music in the same style or from the same artist of band/group. Instead choose two **CONTRASTING** pieces of music e.g. your favourite "pop song", a piece of "classical" music that you know, a piece of jazz or a piece of music from a film or video game that you like. Describe the two pieces of music in the boxes below.

Title: _____	Style: _____
Composer: _____	Performer(s): _____
Describe what you are hearing....	
The Dynamics _____	
The Tempo _____	
The Texture _____	
The Pitch _____	
Any other ELEMENTS OF MUSIC that you can hear (Duration, Articulation, Silence, Timbre/Sonority) or INSTRUMENTS, MOOD or ATMOSPHERE _____	
Purpose/Occasion (what is the music used for?) _____	
Why do you like this piece of music/song? _____	

Title: _____	Style: _____
Composer: _____	Performer(s): _____
Describe what you are hearing....	
The Dynamics _____	
The Tempo _____	
The Texture _____	
The Pitch _____	
Any other ELEMENTS OF MUSIC that you can hear (Duration, Articulation, Silence, Timbre/Sonority) or INSTRUMENTS, MOOD or ATMOSPHERE _____	
Purpose/Occasion (what is the music used for?) _____	
Why do you like this piece of music/song? _____	

MUSICAL MATHS

Find the total value of the beats in each of these sums

1. ♪ + ♪ + ♪ + ♪ + ♪ + ♪ = _____

2. ♪ + ♪ + ♪ + ♪ + ♪ + ♪ = _____

3. ○ + ♪ + ♪ + ♪ = _____

4. ♪ + ♪ + ♪ + ♪ + ♪ = _____

5. ♪ + ♪ + ♪ + ♪ + ♪ + ♪ = _____

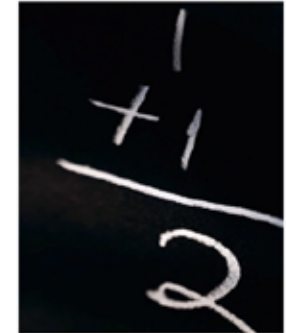
6. ♪ + ♪ + ♪ + ♪ + ♪ + ♪ + ♪ = _____

7. ♪ + ♪ + ♪ + ○ + ♪ + ♪ = _____

8. ♪ + ♪ + ♪ + ○ + ♪ + ♪ = _____

9. ♪ + ♪ + ♪ + ♪ + [X] + ♪ + ♪ + ♪ = _____

10. ♪ + ♪ + ♪ + ♪ + ♪ + ♪ + ♪ + ♪ + ♪ + ♪ = _____



Music Knowledge Organiser

Exploring Rhythm and Pulse



A. Key Words

PULSE – A regular **BEAT** that is felt throughout much music. Certain beats of the pulse can be emphasised to establish regular pulse patterns e.g.

1 2 3 4, 1 2 3 4 = a 4-beat pulse

1 2 3, 1 2 3 = a 3-beat pulse (often called a **WALTZ**)

1 2, 1 2, 1 2 = a 2-beat pulse (often called a **MARCH**)

RHYTHM – A series of sounds or notes of different lengths that create a pattern. A rhythm usually fits with a regular pulse.

Everyday sentences can be used to create rhythms. The patterns made by words create rhythms and this rhythm has a 4-beat pulse:

Music is my favourite



ACCENT – Emphasising or stressing a particular note or notes. Accents affect the **ARTICULATION** and are shown with this symbol >

DURATION – The length of a sound – long/short

TEMPO – The speed of a sound or piece of music – fast/slow

TEXTURE – Layers of sound or how much sound is heard – thick/thin

STRUCTURE – The organisation of sound or how sounds are ordered

SILENCE – The absence of sound or no sound, shown in music by **RESTS**.

RHYTHM GRID NOTATION – A way of writing down and recording rhythms using boxes



B. Time Signatures

A **TIME SIGNATURE** tells us how many beats (and what type of beats) there are in each **BAR** of music and is made up of two numbers at the beginning of a piece of music.



Top Number = **HOW MANY BEATS**

Bottom Number = **TYPE OF BEAT**

2/4 = **TWO CROTCHET** beats per **BAR**



e.g. a **MARCH**

3/4 = **THREE CROTCHET** beats per **BAR**



e.g. a **WALTZ**

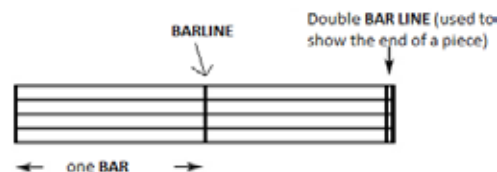
4/4 = **FOUR CROTCHET** beats per **BAR**



Bottom Numbers:

2 = Minim 4 = Crotchet 8 = Quaver

BARS AND BARLINES



C. Ostinatos, Cyclic and Polyrhythms

RHYTHMIC OSTINATO – a short repeated pattern made up of notes of different lengths but without a particular pitch.

CYCLIC RHYTHM – a rhythm which is repeated over and over again (in a cycle) many times.

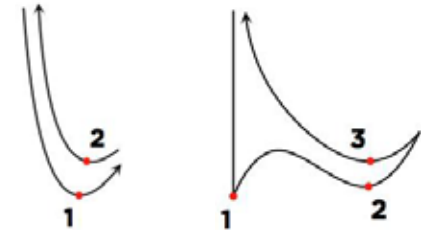
POLYRHYTHM - the use of several rhythms performed simultaneously, often overlapping to create a thick, **POLYRHYTHMIC TEXTURE**. A common polyrhythm often used in Latin-American and African Music is to play a 3-beat and 2-beat rhythm simultaneously as shown below. This is called a “3 against 2 Polyrhythm”

3 beat rhythm	X	X	X	X	X	X	
2 beat rhythm	X		X		X		X

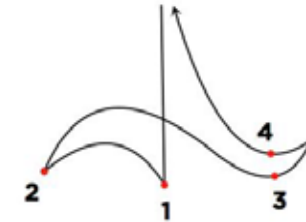
D. Conducting Pulses and Beats

Conducting a 2-beat Pulse/Beat (e.g. a **MARCH**)






Conducting a 3-beat Pulse/Beat (e.g. a **WALTZ**)



Conducting a 4-beat Pulse/Beat



E. Note Values - Note Names, Symbols and Duration






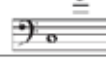

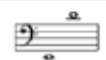
Note Name	Note Symbol	Note Value
Semibreve		4 beats
Minim		2 beats
Crotchet		1 beat
Quaver		½ of a beat
Pair of Quavers		2 x ½ beats = 1

Music Knowledge Organiser

Using Your Voice



A. Voice Types and Ranges

Voice Type	Vocal Range	Description	Famous Examples
SOPRANO		A high female voice	Renee Fleming, Maria Callas, Björk
TREBLE		A boy's high unbroken voice, sometimes referred to as a boy soprano	Aled Jones
MEZZO SOPRANO		A medium high female voice	Cecilia Bartoli, Katherine Jenkins, Beyoncé
COUNTER-TENOR		Male alto or soprano, sometimes referred to as <i>falsetto</i>	Andreas Scholl, Justin Hawkins of The Darkness
ALTO (CONTRALTO)		A high male or low female voice	Janet Baker, Kathleen Ferrier
TENOR		A high male voice	Pavarotti, Plácido Domingo, Jeff Buckley
BARITONE		A medium male voice	Bryn Terfel, Elvis Presley
BASS		The lowest male voice	Willard White, Paul Robeson, Barry White

B. Types and Styles of Singing

Each voice type has a **VOCAL RANGE** which gives the lowest and highest notes possible. However, many pieces of vocal music have a smaller range of notes *within* this where most of the pitches of the song lie – this is called the **TESSITURA**.

FALSETTO – a method of voice production where male voices sing in a particularly high register e.g. male altos or sometimes used by singers in popular songs

The **WORD SETTING** of a song may be **SYLLABIC** – each syllable is given one note only, or **MELISMATIC** – many different notes sung to a single syllable.

WORD PAINTING is often used in vocal music – taking the meaning of a particular word and expressing this music through music e.g. “low” – low pitched notes.

The **MELODIC CONTOUR** of a vocal line may be described as **CONJUNCT** (moving mainly by step) or **DISJUNCT** (moving mainly by leap)

VIBRATO – the effect of tiny and rapid fluctuations in the pitch of notes, used by singers to bring warmth and expression to the tone (a popular technique with solo opera singers)

Singing may be accompanied by an instrument, instruments, orchestra or band or may be unaccompanied – **A CAPPELLA**.

C. Vocal Textures

MONOPHONIC – a type of vocal texture which features a single melodic line which may be sung by one or more singers e.g. Gregorian Chant/Plainsong or a **UNISON** (all voices singing the same pitches at the same time) unaccompanied folk song

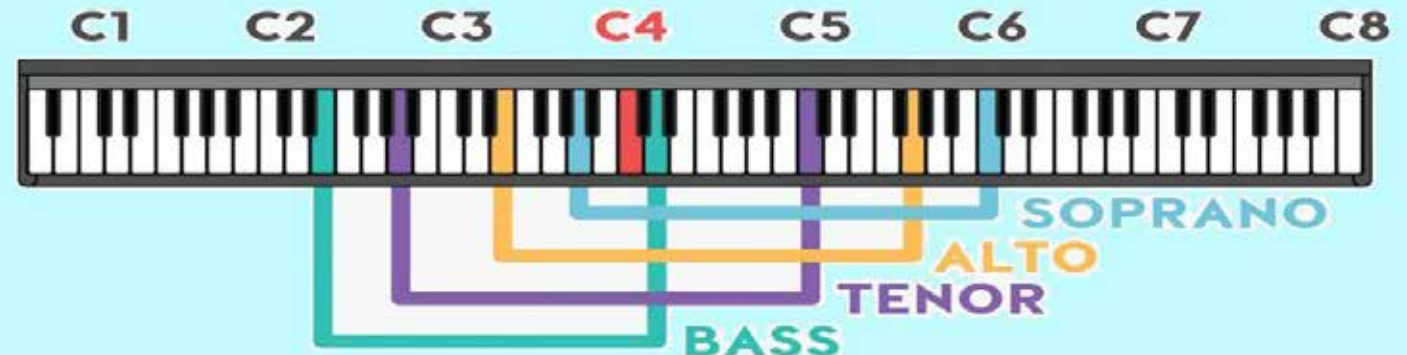
HOMOPHONIC – can be **BLOCK CHORDAL** (all voices singing same words at the same time, but using different pitches/notes creating **HARMONY** (opposite of **UNISON**)) or **MELODY & ACCOMPANIMENT** – voice(s) singing in unison or harmony with instrumental accompaniment

POLYPHONIC – a complex vocal texture where the voice parts weave in and out of each other creating a dense sound e.g. in passages using **IMITATION**.






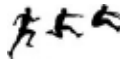






D. Breathing

- Breathe deeply from your lower lungs - imagine a rubber ring around your waist (your diaphragm)
- Breathe in and try to push the ring outwards.
- Breathe in through your nose and out through your nose and mouth.
- Avoid raising your shoulders as you breathe in - keep them relaxed and level.
- Relax! Tension will prevent you from making a good sound.










E. VOCAL RANGE ON PIANO








PE Keywords

<p>Athletics – the category of sports that involve running, jumping and throwing.</p>	<p>Baton - a tube that is passed from one relay race member to another. The runner holding the baton is the current runner for that team in the race</p>	<p>Changeover – the passing of the baton from the incoming teammate to the outgoing teammate.</p> 	<p>Discus - a throwing event in track and field where a discus is thrown for distance</p> 	<p>False start – an invalid start to the race, caused by a runner setting off before the starter said 'Go'.</p>	<p>Field event – all the events that do not take place on the track, such as long, triple and high jump and shot put, discus and javelin throws.</p>	<p>Finish Line – the line on the track that marks the end of all foot races. The runner whose torso (chest) crosses the line first is the winner of the race.</p>
<p>Fosbury Flop - a technique used in the high jump where the jumper's goes head first over the bar with their back toward the bar when going over it.</p> 	<p>High Jump - a track and field jumping event. Athletes must clear a high bar without knocking it over by jumping.</p>	<p>Hurdle - an obstacle in a race that runners must jump or clear while running.</p> 	<p>Javelin - a track and field throwing event where a spear-like javelin is thrown for distance.</p> 	<p>Long Jump - jumping event where athletes compete for the longest jump in distance.</p> 	<p>Middle Distance - The middle-distance races are the 800m, the 1500m. They rely more on endurance and pacing than just pure speed. Also, the runners don't stay in a single lane for the entire race.</p>	<p>Pace - the rate at which a runner is running. It's important in long distance races to have the proper pace; slow enough so the runner doesn't tire out before the end of the race, but fast enough to win.</p>
<p>Personal best – term for the athlete's best performance in an event.</p>	<p>Relay race - a race involving multiple runners (typically 4) where each runner runs a leg of the race handing off a baton to the next runner.</p>	<p>Sandpit - an area in a jumping event (i.e. long jump or triple jump) where the athlete lands.</p>	<p>Shot put - a field throwing event where a heavy ball is thrown for distance.</p> 	<p>Sprint - a short running race where acceleration and top speed are important. In a track and field competition there are generally three different sprint distances: 100m, 200m, and 300/400m. Runners remain in the same lane.</p> 	<p>Take-off board – small wooden rectangle that is on the long/triple jump runway for athlete to jump from.</p>	<p>Triple Jump - a track and field jumping event with three distinct phases to the jump including a hop, a step, and a jump</p>
<p>Ball-to-hand - The claim that the contact between the hand and the ball is completely accidental, the arm is in a 'natural position', therefore it shouldn't warrant a free kick.</p>	<p>Bicycle kick - The movement by a player where they jump up, throw both feet in the air and hit the ball in a pedaling motion to send the ball in the opposite direction they are facing. Also known as the overhead kick.</p> 	<p>Box-to-box player - A player that can successfully play both sides (defensive and attacking) of the game from midfield.</p>	<p>Brace - A word to describe the achievement of a player that scores two goals in one game. "Scoring a brace" is the way to go when using it in a sentence.</p>	<p>Clinical finish - A top notch shot that leads to a goal. The scorer of this goal is called the clinical finisher.</p>	<p>CDM - A reliable defensive midfielder with the primary assignment of staying close to the defensive.</p>	<p>CAM - An attacking minded midfielder playing in front of the midfield just behind the strikers.</p>
<p>Chip shot - A shot that is kicked from underneath the ball to provide some arc for it to go over the opponent</p>	<p>Dive - The exaggerated falling move of a player to deceive the referee in order to win their team a foul.</p>	<p>Class act - A player/manager that deserves praise especially with their attitude and manners off the field.</p>	<p>Clean sheet - The accolade a team/goalkeeper earns when a full game is played without conceding a goal.</p>	<p>Flick-on - A move where the offensive player hits a moving ball with their foot or head when it's passing by them without controlling it first.</p>	<p>Cracker - A breathtaking football match or an outstanding goal, mainly from a long distance.</p>	<p>Control - Getting the ball under your control i.e. you are in a position to completely influence what happens to the ball.</p>
<p>Handball - When the outfield player uses any part of the arm on the ball.</p>	<p>Dummy run - An off-the-ball run made by an attacking player to create space for their teammate with the ball. Used to trick opponents by pretending to move towards the ball.</p>	<p>Feint - The dribbling of the ball in one direction after faking the dribble in the other direction with a drop of the shoulder.</p> 	<p>First-time ball - Transferring the ball to a teammate with one single touch when a pass is received.</p> 	<p>Man on - The loud cry to inform a teammate with the ball that an opponent is approaching or dangerously close by.</p>	<p>Game of two halves - A cliché that commentator's resort to when a match has consisted of two halves with huge difference in character and score.</p>	<p>Goal Side - A defensive player places themselves between the attacker they are marking and the goal they are defending.</p>
<p>Hospital ball - A reckless pass that's within reach of two players from opposing teams that can give rise to injuries.</p>	<p>Hug the by-line - The instruction given to wing players to stay closer to side-lines to create space and stretch the pitch as wide as possible. Used when your team is in possession of the ball.</p>	<p>Howler - An inexplicable mistake by a player that generally proves costly.</p>	<p>In his/her pocket - Refers to one defensive player having dominated an opposition player.</p>	<p>Park the bus - Playing ultra-defensive not to concede any goals, chiefly applied by team with the edge on the scoreboard.</p>	<p>Nutmeg - Kicking or putting the ball through an opponent's legs.</p>	<p>Off the line - The act of saving the ball from crossing the line, clearing the ball.</p> 
<p>Penalty - When an attacking player is fouled or a defender handles the ball in the penalty area.</p>		<p>On paper - Indicates how the events should play out in theory, the expected scenario based on pre-existing statistics and conditions.</p>			<p>Play on - A potentially controversial possession where the referee does not blow their whistle after concluding there's no reason to stop the game.</p>	<p>Poacher / Fox in the box - A cunning and skilled striker that's extremely dangerous in the penalty area.</p>





PE Keywords

Put in a shift - The situation where a player fulfills their given tasks but fails to make a strong impression on the pundits or put their fingerprints on the game.	Run it off - An instruction for a player that's suffered a minor injury to carry on playing to see if they are able to continue playing for the team.	Showboat - Showing off when the team is winning by a large margin, often seen as disrespecting the opposition.	Sitter - A simple miss by an attacker that was immensely easy to score.	Step-Over - Similar to the feint. The player pretends to take the ball to the side but steps over the ball. The player then moves the ball in the opposite direction.	Switch play - Moving the ball from one side to the other in a quick fashion, mostly by a long pass. e.g., from left to right midfield.	Target man - A tall striker that's often targeted by crosses, long balls, and high passes for their aerial superiority and strength to hold the ball upfront for the team.
Theatrical - An adjective to describe a player's tendency for over-the-top reactions.	Track Back - Getting back in a defensive position when your own team has lost possession of the ball.	Treble - Winning three major competitions in a single season.	Wingback - A position in football where you are out wide or left. Your role is both as a winger when in possession but also a defender when out of possession.	(Hit the) woodwork - Having the ball strike one of the posts or crossbar of the goal. 	Base Line - The line at the back of the court that runs parallel to the net. 	
Service Box - The two boxes on either side of the net at the front of the court. The serve must hit, diagonally into this box to start the point.	Tramlines - The external court lines that run parallel to the singles lines. These lines are considered 'out' in singles, but 'in' when playing doubles.	Serve - The serve (or service) starts the point. Players will usually hit an over-arm stroke (although they can hit underarm) from behind the baseline into the service box diagonally opposite them. A player has two serves per point, called a first and a second serve. 	Forehand - The shot played when the palm of the dominant hand is facing forward. For instance, if you are right handed, the forehand will be played on the right hand side of the body. The stroke goes from low to high. 	Backhand - The shot played when the back of the dominant hand is facing forward. For instance, if you are right handed a backhand is a shot you play on the left side of the body. This is usually played with two hands to gain more control. The stroke goes from low to high. 	Volley - A stroke where a player hits the ball back over the net (using a forehand or backhand) before the ball bounces on their side of the court.	Singles - A tennis game played by two opponents.
In - A call made when a ball falls within the playing area.	Out - A call made when a ball lands outside the playing area.	Ace - A point won by the server when the receiver doesn't touch the ball.	Game - The building blocks of a set. Each set comprises of at least six games.	Remember: in tennis, the server's score is always called first. If they win the first point of the game we say 15-love. If they lose it we say love-15.	Points - The aim of each tennis game is to be the first player to score four points.	Doubles + Mixed Doubles - A match between teams of two players. In doubles tennis, the tram lines come in to play.
Let - Most commonly called when a player's serve hits the net but lands in the correct service box. A let can also be called if a point is interrupted by an outside interference. In the event of a let a point is replayed.	Fault - When the ball does not land in the opponents court. A fault can be called if a serve, forehand, backhand or volley lands outside the playing area.	Match - In professional tennis a match is determined by the best of three or five sets.	Set - A set is usually comprised of six games. However, if the players are tied at five games all the set becomes the first to seven games.	Clearance Kick (Rugby League) - a kick of the ball down field which relieves pressure on a side under heavy attack.	15 - when a player wins the first point of a tennis game. If the opponent wins the next point we say 15-all.	Love - meaning zero.
Backs (Rugby League) - the group of players normally numbered Nos. 1 to 7 who do not participate in scrums, except for the scrum-half.	Advantage (Rugby) - unlike most other sports, referees can play advantage after a foul for what can seem an eternity, but once he calls "advantage over" then that's that.	Charge Down - the blocking of a kick by an opposition player.	Chip over - a short shallow kick usually delivered over the head of an onrushing defender to be quickly retrieved or caught by the kicker or one of his/her supporting players.	Front Row - the common name for the prop/hooker/prop combination at the front of a scrum 	30 - when a player wins two points in a tennis game.	30 - when a player wins two points in a tennis game.
Drop Out - the way play is re-started, using a drop-kick, after the defending side has touched the ball down behind its own try-line or when the ball has gone out over the dead-ball line.	Blindside (Rugby League) - from a set piece, PTB, the short side of the field. Also called the Weakside.	Dummy - a feigned pass intended to deceive an opponent about to make a tackle. 	Grubber - a kick of the ball which causes the ball to bounce and roll along the ground.	Deuce - when the score is 40-40 it is called Deuce. A player must win two consecutive points from deuce to win a tennis game.	40 - when a player wins three points in a tennis game.	40 - when a player wins three points in a tennis game.
	Forward Pass - all passes must go backwards, and this is an illegal pass where the ball goes forwards. The penalty is a scrum in favour of the other side.	Forwards (Rugby League) - the group of players normally numbered 8 through 13 who tend to be the bigger stronger players		Drop Goal (Rugby League) - a kick between the posts by an attacking side which, if successful, scores one point. It differs from a punt in that the ball must hit the ground before being kicked. 	50 - when a player wins four points in a tennis game.	Advantage - the point played after deuce. If the player with the advantage wins the point the tennis game is over.
				Half-back - the back wearing No. 7 who leads a team around the pitch	60 - when a player wins five points in a tennis game.	Conversion (Rugby League) - a kick at the posts after the awarding of a try, scoring two points if successful. The kick must be attempted directly from a spot perpendicular to the spot where the try was awarded. Usually taken with a place kick, it can be rushed when the kicker makes a move towards the ball. If taken as a drop kick it is uncontested.







PE Keywords

<p>High Ball - a ball kicked very high into the air placing any player attempting to catch it under extreme pressure by on rushing opposition players.</p>	<p>Knock On - losing, dropping, or knocking the ball forward from a player's hand resulting in the ball being awarded to the other team in a scrum.</p>	<p>Offsides (Rugby League) - during PTB, scrums, etc an imaginary line is present over which any player crossing before the set piece is completed commits a penalty.</p>	<p>Penalty - any number of infractions or violations which award the other team a kick.</p>	<p>Penalty Kick (Rugby League) - an uncontested kick awarded to a team for a major infraction by the other team. The kick can be taken directly at goal and scores two points if successful. If the ball is kicked to touch, then the throw-in is awarded back to the team which kicked the ball out of bounds.</p>	<p>Penalty Try - the awarding of a try due to a blatant or repeated violation by an opposing side that prevents an obvious try from being scored.</p>	<p>Play the ball (PTB) – When you are tackled and stand up to play the ball correctly with your foot.</p>
	<p>Stand off (Rugby League) - the back wearing No. 6 who leads a team around the pitch.</p>	<p>Tackle – When you halt an attackers progress by taking him to the floor.</p> 	<p>Ruck (Rugby League) – The tackle area where the PTB is.</p>		<p>Try - a score of five points awarded when the ball is carried or kicked across the tryline and touched down to the ground by a player.</p> 	<p>Try line - the goal line extending across the pitch.</p>
<p>Scrum - the formation used in the set play re-starting play after a knock-on or forward pass. The forwards from each side bind together and then the two packs come together to allow the scrumhalf with the feed to deliver the ball to the scrum. A scrum can also be awarded or chosen in different circumstances by the referee.</p>	<p>Backs (Rugby Union) - the group of players normally numbered Nos. 9 to 15 who do not participate in scrums and line-outs, except for the scrum-half.</p>	<p>Binding - the careful method players grip and grasp each other to form a secure scrum, ruck, or maul. This is a critical skill to ensure the safety of players.</p>	<p>Tap Penalty - a quickly taken penalty where a player taps the ball a couple of inches with his foot and immediately catches it and surges forward, done to catch the opposition unawares.</p>	<p>Touch, touchline - the out of bounds line that runs on either side of the pitch. The non-contact version of rugby is also commonly called touch.</p>		<p>Turnover - when one side takes possession of the ball from their opponents.</p>
<p>Drop Goal (Rugby Union) - a kick between the posts by an attacking side which, if successful, scores three points. It differs from a punt in that the ball must hit the ground before being kicked.</p> 	<p>Feed - the rolling of the ball into the scrum by the scrum-half.</p>	<p>Blindside (Rugby Union) - from a set piece, ruck or maul, the short side of the field. Also called the Weakside.</p>	<p>Forwards (Rugby Union) - the group of players normally numbered 1 through 8 who bind together into scrums, line up for line-outs, and commit themselves to most rucks and mauls.</p>		<p>Conversion (Rugby Union) - a kick at the posts after the awarding of a try, scoring two points if successful. The kick must be attempted directly from a spot perpendicular to the spot where the try was awarded. Usually taken with a place kick, it can be rushed when the kicker makes a move towards the ball. If taken as a drop kick it is uncontested.</p>	<p>Clearance Kick (Rugby Union) - a kick of the ball into touch which relieves pressure on a side under heavy attack.</p>
<p>Lineout - the set play re-starting play after the ball has been taken out or kicked to touch. Both sets of forwards will line up opposite each other with the side with throw calling a play. The throw must be directly down the middle of the two lines.</p>	<p>Drop Goal (Rugby Union) - a kick between the posts by an attacking side which, if successful, scores three points. It differs from a punt in that the ball must hit the ground before being kicked.</p> 	<p>Feeder - a common name for a rugby jersey. Also the name of a player in a lineout, usually at the 2, 4, and 6 positions, jumping to catch or intercept the throw.</p>	<p>Half-back (Rugby Union) - the back wearing No.9 who normally feeds the ball into a scrum and retrieves the ball at the base of scrums, rucks, and mauls. Can also be called the Scrum-half.</p>			<p>Free Kick - an uncontested kick awarded to a team usually for a minor penalty by the other team. The kick cannot be taken directly at the posts except by a drop goal.</p>
<p>Mark - the place indicated by the referee where the scrum should form; also a player inside his own 22 can, on catching a ball kicked by the opposition on the full, call for a "mark". If the referee agrees, the player can then re-start play in much the same way as if he had been awarded a free-kick.</p>	<p>Maul - typically after a runner has come into contact and the ball is still being held by a player once any combination of at least three players have bound themselves a maul has been set. The primary difference from a ruck is that the ball is not on the ground.</p>		<p>Offsides (Rugby Union) - during rucks, scrums, lineouts, and mauls an imaginary line is present over which any player crossing before the set piece is completed commits a penalty.</p>	<p>Penalty Kick (Rugby Union) - an uncontested kick awarded to a team for a major infraction by the other team. The kick can be taken directly at goal and scores three points if successful. If the ball is kicked to touch, then the throw-in is awarded back to the team which kicked the ball out of bounds.</p>	<p>Ruck (Rugby Union) - typically after a runner has come into contact and the ball has been delivered to the ground once any combination of at least three players have bound themselves a ruck has been set. The primary difference from a maul is that the ball is on the ground.</p>	<p>Lifting - the act of lifting the lineout jumper into the air in order to more easily catch or intercept the throw.</p> 
						<p>Scrum-half - the back wearing No.9 who normally feeds the ball into a scrum and retrieves the ball at the base of scrums, rucks, and mauls. Can also be called the half-back.</p>

Religious Studies Knowledge Organiser – Year 7 – How has the idea of a belief in God developed?

Animism		The belief that animals, trees, mountains etc can be worshipped as gods.
Monotheism		The belief in one God (Christians, Muslims + Jews are examples)
Polytheism		The belief in many gods (Hindus are examples)
Atheism		The belief that there are no gods.

Christians, Jews and Muslims believe God is:

Omnipotent		God is all powerful
Omniscient		God knows everything
Omnibenevolent		God loves all things
Omnipresent		God is everywhere
Judge		God will judge everyone
Creator		God made the universe

Christians show what they believe about God by:

Praying eg: The Lord's Prayer, reading the **Bible**, singing **hymns**, making art + building grand buildings etc

Native American Beliefs



Have many stories, one of which describes the **Thunderbird** which flaps its wings, creating thunder and controls the weather. Once a flood occurred, caused because Thunderbird was unhappy with how people were behaving. These beliefs are ways in which people have tried to understand the world around them. When Europeans settled in America they wanted to destroy these traditions because they didn't understand them + they wanted everyone to follow their own beliefs.

What do Buddhists believe?



- They do not believe in God and think humans control all the good + bad in the world.
- They **meditate** to think clearly about answers in life and they show **compassion** (love) for all.
- Believe in **reincarnation**, when you die you are reborn + live again.

Parable of the Blind Men + The Elephant



Blind men were trying to work out what an elephant was. Each felt a different part eg: trunk, leg, tail. All arrived at a different conclusion. **Some people use this parable to explain about God - different religions have different ways of understanding and describing what God is like.**

What do Christians believe about Jesus?



- *He was God **incarnate** (come to earth in human form.)
- *He was **crucified** + **resurrected** (showing people can live after death if they follow his teachings.)
- *He performed miracles eg: cured the ill + brought someone back to life.
- *Taught **parables** about how people should live eg: The **Good Samaritan** about helping those in need.
- *He taught people to care for the needy and forgive people.

Muslims and Christians have many beliefs which are the same eg: both believe in the same God (Muslims call this God **Allah**), both believe they will be **judged** on how they behave and that good people will be rewarded in **heaven**. However, Christians believe Jesus was the son of God, Muslims do not, they both have different holy books – Christians the **Bible** and Muslims the **Qur'an**. Muslims also believe in the teachings of Muhammad – Christians do not.



Some good sentence starters:

Muslims/ Christians/ Buddhists **believe** that.....

I **believe** that.....

The **reason** why is.....

Some people may **agree/ disagree** and say.....









The Design Argument (or Teleological) by **William Paley** says a watch is well designed so much have a designer. A human is even better designed so must also have one...God. The **First Cause Argument (or Cosmological)** created by **Thomas Aquinas** says everything has a cause and the first cause for the universe must be God. **Evolution** says things are not designed but adapted through natural selection and some say a reason for the universe is the **Big Bang** or unknown.

Religious Studies Knowledge Organiser – Year 7 – Where Can Wisdom Be Found Today?

Jesus	Founder of Christianity
Abraham	Founder of Judaism
Muhammad	Founder of Islam

Guru Nanak	Founder of Sikhism
The Buddha	Founder of Buddhism

Sacred Books from World religions:

The Bible		Christian sacred book
The Torah		Jewish sacred book
The Qur'an		Muslim sacred book
The Guru Granth Sahib		Sikh sacred book
The Vedas		Hindu sacred book
The Tripitaka		Buddhist sacred book

Christianity – Jesus and Parables

Christians believe Jesus taught **parables**. These are stories which have a meaning for Christians today. **The Parable of the Good Samaritan** teaches people to help those in need, whoever they might be and **The Parable of the Sheep and Goats** teaches Christians to give to the hungry, thirsty and needy.



Some believe what makes someone wise is if they have the following characteristics:

- **Intelligence**
- **Humility**
- **Open mindedness**
- **Compassion**



How is the Guru Granth Sahib shown respect?

- * A special fan, called a **chauri** is waved over it.
- * It is placed in a decorative cover called a **rumalla**.
- * It is placed in a bed when not being read.
- * It is used to choose the name of a baby.
- * The teachings are put into practice every day.

What Do Humanists Believe?

Humanists are a group of people who do not believe in the existence of God. They believe all human life is special and we should show care and concern for everyone and live the best lives we can. They reject any kind of **supernatural** belief and believe science has the answer to most questions people ask.



The Life of Guru Nanak.

Guru Nanak is believed to have been born in **1469** in the **Punjab**. He was born into a Hindu family but had friends of other religions. He was very interested in religion and often spoke of his belief in **ik onkar** (one God) and that this should unite people of all religions. He taught equality for all, sharing of wealth to those in need and showing devotion to God.



Langar

One teaching from the **Guru Granth Sahib** which is important for Sikhs today is the idea of **sewa**, or service to others. This is shown in the **gurdwara** through **langar**. Langar is the giving of food to those in need and happens every day, for anyone – Sikh or non Sikh.

Whilst receiving langar everyone sits in **pangat** (or a straight line) – this symbolises equality. All the community helps with either making the food or handing it out. In this way they are helping others.



The Khalsa.

The **Khalsa** are a group of Sikhs who devote their lives to the teachings of Sikhism. It was started by Guru Gobind Singh in 1699. Today Sikhs agree to follow the 5 Ks as a sign of their commitment. These are:

- Kesh** – uncut hair **Kanga** – a comb
- Kara** – iron bracelet **Kachera** – shorts
- Kirpan** – dagger

All Sikh men have the name singh (lion) added to their name and women kaur (princess)



Some good sentence starters:

Sikhs/ Christians **believe** that.....

I **believe** that.....





The **reason** why is.....

Some people may **agree/ disagree** and say.....



Religious Studies Knowledge Organiser – Year 7 – Is the Earth a Sacred Place?



Environment		The area where animals and plants live.
Interdependent		When things rely upon each other to survive.
Sustainable		Maintaining something
Extinct		When a species dies out



The Bible

The Bible says that God made the world in 7 days. In **Genesis 1.1** it says '**In the beginning God created the heavens and the earth.**'

Christians, Jews and Muslims believe that God made the first two humans, Adam and Eve and they were given the role of **stewards**. This means they were expected to look after the earth for God.

Tu B'Shevat

Tu B'Shevat is a Jewish New Year for trees! At this time new trees are planted and people are reminded that fruit from trees less than three years old should not be eaten. This encourages a stronger tree and more fruit in years to come. In this way **sustainability** is encouraged.

In Judaism there is a belief known as **tikkun olam**. This means to repair the world. Jewish people therefore believe they should do what they can to heal the planet. This may include:

- recycling
- using less fuel
- using less transport.
- being more environmentally friendly



Sukkot is a Jewish festival which connects with the environment and a part of Jewish history. The **exodus** (where Jewish people fled Egypt to Israel) is remembered and every year Jews build **Sukkahs**. These are outdoor shelters where meals are held and people remember their reliance upon the environment for life.



The Polluted Ganges

Many religious rituals have polluted the Ganges. The flowers that are placed in the river have many **pesticides** on them which are killing fish and wildlife.

The company **Phool** has been set up which gathers in these flowers and turns them into leather and incense!



The **Golden Mahseer** is an endangered fish, the **Ganges dolphin** and the **Ganges shark** are also endangered. The WWF is helping protect these animals and many Hindus believe that protecting the Ganges will give them good **karma** – this means they will be **reincarnated** in a better way.

The River Ganges

The River Ganges is a place of **pilgrimage** for Hindus. They believe it was created by the goddess **Ganga** and sustains life for millions of people who live by it.

***Yoga** is often performed near the Ganges – it is believed it makes someone's mind purer.

* Ashes of cremated relatives are scattered in the river – it is believed it will lead to a better **reincarnation**.

*The **Puranas** (ancient Hindu scriptures) states that being near the river removes sin.



*The **kumbh mela** is the largest gathering of people in the world and takes place every 12 years. Hindu mythology says that people who bathe in the Ganges at this time will have all sins removed and will have a pure mind.



*Every evening **arti** rituals take place. This is where clay lamps are lit and floated down the river. It is a sign of thanks for the life the Ganges gives.

Some good sentence starters:

Hindus/ Christians/ Buddhists/ Jews **believe** that.....

I **believe** that.....

The **reason** why is.....

Some people may **agree/ disagree** and say.....



One Earth Sangha

This is a Buddhist organization which works with communities to improve the environment. They believe in **dharma** – that it is a duty to care for the world. It is believed you can only live in peace and harmony when the environment is in peace and harmony.



Science Knowledge Organiser - Cells

Cells and Life Processes

All living things can: **Move, Reproduce, Sense, Grow, Respire, Excrete** and need **Nutrients**

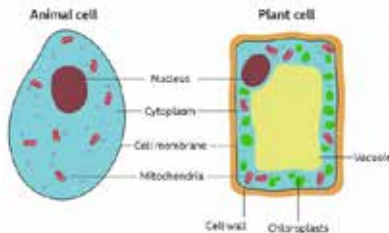
Animal cells usually have an **irregular shape**, and **plant cells** usually have a regular shape.

Animal cells are made up of

- a cell **membrane** (selective barrier)
- a **nucleus** (containing DNA and controlling the cell)
- **cytoplasm** (jelly-like fluid where reactions take place)

Plant cells also contain

- a cell **wall** (to support the cell - cellulose)
- a **vacuole** (containing cell sap and helping to keep the cell firm)
- **chloroplasts** (where photosynthesis occurs)



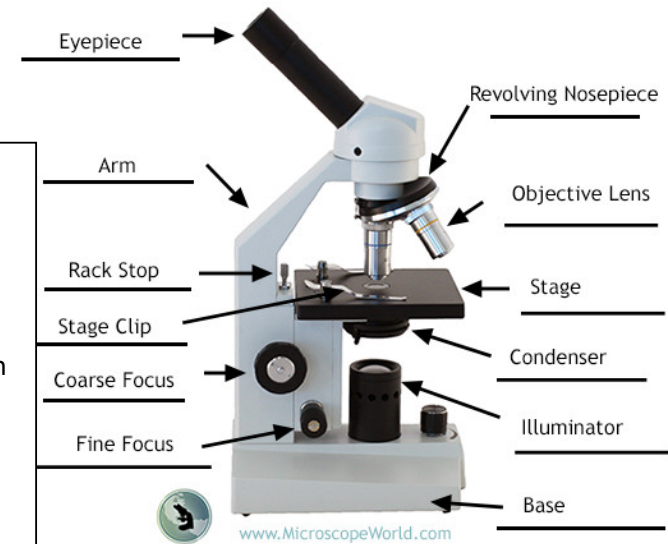
Tissue → a group of similar cells
Organs → a group of different tissues
System → a group of organs

Fine and coarse focussing knobs: resolution

Objective lens: increasing magnification.

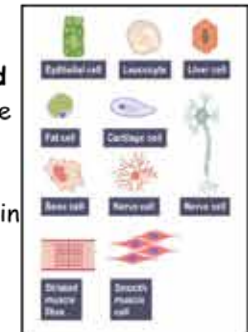
Preparing an onion cell with methyl blue or iodine.

When drawing cells, use pencil and ruler.



Cell specialisation

Humans are **multicellular**. That means we are made of lots of cells, not just one cell. Multicellular organisms need **specialised organ systems** to carry out a function. They work together like a team to support the different processes in an organism. E.g. **Sperm cell** (adapted to contain the male DNA and swim to the egg cell); **Ciliated cell** (waft mucus); **Red blood cell** (haemoglobin for oxygen transport, large surface area); **Nerve cell** (long, carries electrical impulses); **Root hair cell** (large surface area, thin cell wall, no chloroplasts).



- Function of skeleton: protect organs, allow movement and support
- Joints → where 2 or more bones meet. Allow movement
- Ligaments → connect 2 bones to allow movement.
- Tendons → where muscles are connected to bones. Allow movement.

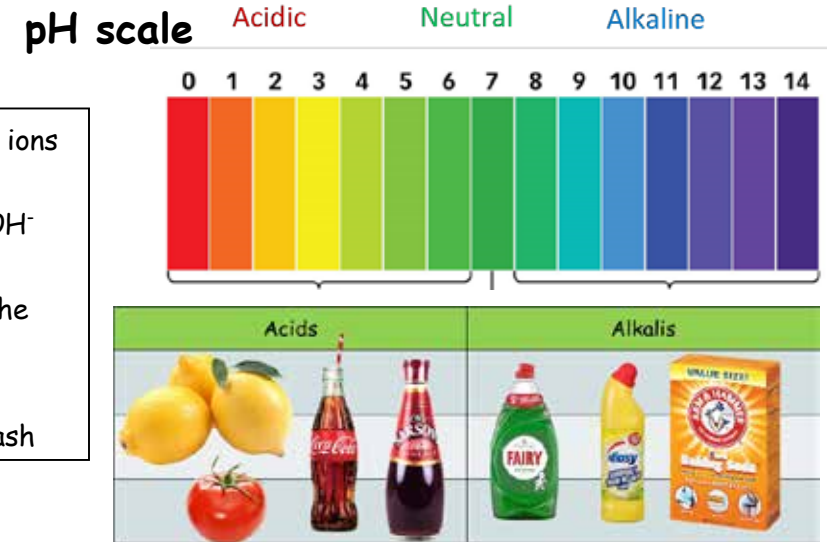
Diffusion

Diffusion - the spreading out of the particles of any substance in solution, or particles of a gas, resulting in a **net movement** from an area of higher concentration to an area of lower concentration

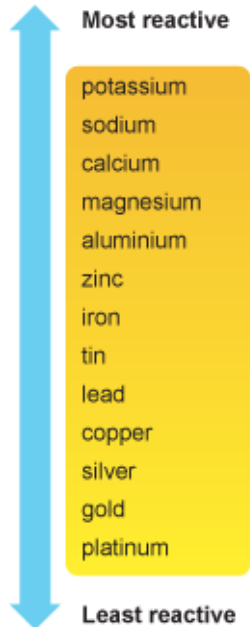
- Oxygen/carbon dioxide in lung **alveoli** and fish **gills**
- Carbon dioxide/oxygen (**Leaf** - thin)
- minerals and water (**root**)

Antagonistic muscle pairs → one muscle relaxes whilst the other contracts. For example, bicep/triceps.

Science Knowledge organiser - Chemical Reactions



Reactivity series



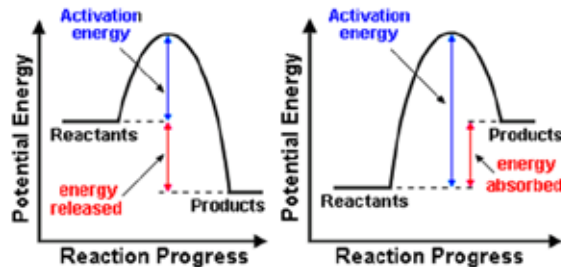
Physical and Chemical Reactions

Physical change	Chemical change
Reversible. Products can be turned back into reactants.	Irreversible. Products cannot be turned back into reactants.

- Acids: release H⁺ ions in solution
- Alkalis: release OH⁻ ions in solution
- Corrosive: burn the skin
- Irritant: cause itchiness and a rash

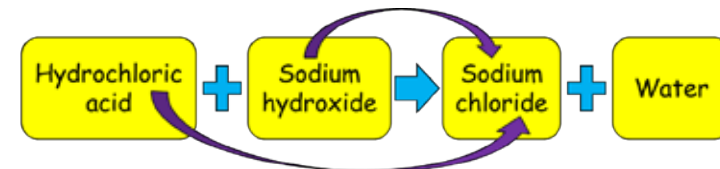
Exothermic reactions → release heat energy. Temperature increases.

Endothermic reactions → take in heat energy. Temperature decreases.

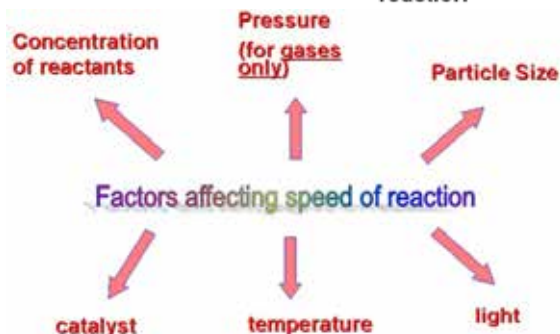


Catalysts
Lower the energy needed for a reaction to begin.
Increase rate of reaction

Neutralisation: acid + alkali → salt + water



1st word of salt → comes from 1st word of alkali
2nd word of salt → comes from the acid



Indicators

Indicator	Acid	Alkali	Water
Universal indicator	Red	Purple	Green
Red litmus	Red	Blue	Red
Blue litmus	Red	Blue	Blue
Phenolphthalein	Colourless	Pink	Colourless
Methyl orange	Red	Yellow	Yellow

Metal and Acid reactions

Metal + acid → salt + hydrogen

Testing for hydrogen: hold a lit splint over a test tube. If hydrogen is present, a squeaky pop will be heard.



Science Knowledge Organiser - Ecology

Food chain



Classification



vertebrates

Kingdom	Main characteristics
Animalia 	multicellular; heterotrophic feeders so no chlorophyll; no cell walls; complex cell structure with nucleus
Plantae 	multicellular; autotrophic feeders using chlorophyll; cell walls made of cellulose; complex cell structure with nucleus
Fungi 	multicellular; cell walls not made of cellulose; saprophytic feeders so no chlorophyll; complex cell structure with nucleus
Protocista 	mostly unicellular (a few are multicellular); complex cell structure with nucleus
Prokaryotae 	unicellular; simple cell structure with no nucleus

Field Work

Use a quadrat to estimate the population size in an area.

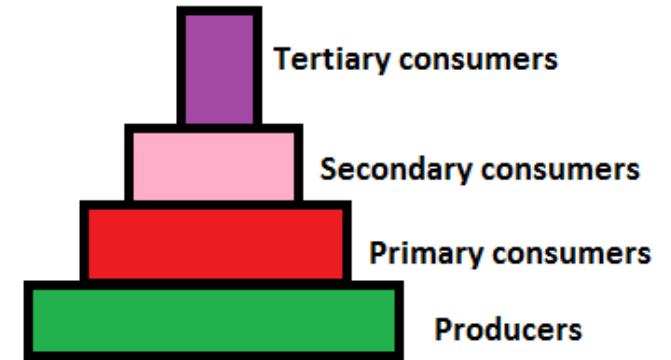
Random sampling: Place quadrat down randomly and count how many daisies (for example) there are. Continue this for at least 10 times filling in amounts in a table. Calculate a mean.

Transect Sampling: Systematic sampling, place the quadrat down at regular intervals, again counting how much of something, fill in your table and calculate a mean.

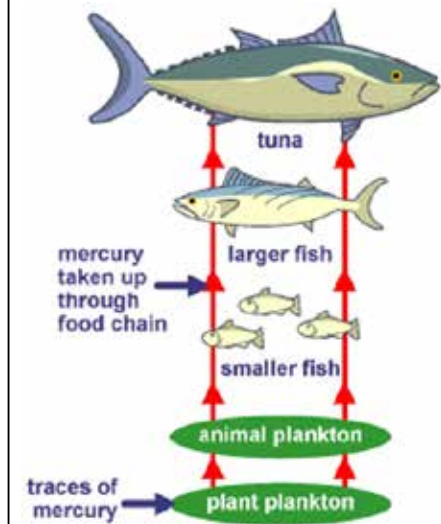
From this, graph your results and conclude on your findings.



Pyramid by numbers



Bioaccumulation:
The gradual accumulation of toxic substances that is taken up through a food chain. The organisms absorb the toxic substances faster than they can excrete them.



Adaptation:

Animals adapt in order to survive their environments. They adapt in the following ways; **behavioural, structural and physical adaptations**

Science Knowledge Organiser - Energy

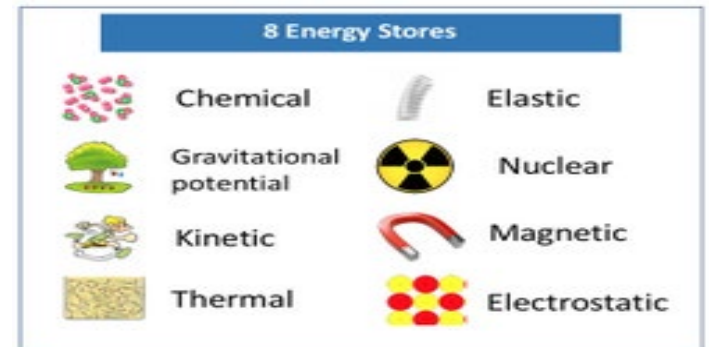
Energy source	How does it work?	Advantages	Disadvantages
Biofuel	Decaying animal/plant material burned to provide energy. Material can be replaced	Material can be replaced Cheap and readily available Carbon neutral: the amount of CO ₂ given off is used in growth	Transportation and processing may still use fossil fuels Must be replanted Farmland used for food may have to be taken
Wind	Turbines turned by wind to power generators	Wind doesn't run out Can be grouped as farms No running costs	Installation can be expensive Need a windy day Aesthetics (do they look good?) Inefficient
Water	Movement of tide at sea or across estuaries turns turbines to power generators	Can generate lots of electricity Can act as flood defenses	Costly installation Few estuaries are suitable Could impact wildlife Could reduce tidal flow
Solar	Either: converts energy from the sun into electricity, or panels heat water	Near infinite supply of energy Houses have their own electricity supply No running costs	Sun isn't always out Potentially expensive
Geothermal	Pump cold water into ground that returns to surface as steam, turning turbines	Potentially infinite resource Has been used successfully in countries such as New Zealand	Can be expensive to set up Not suitable for all countries Geothermal activity could change

Energy resources →

Non-renewable: cannot be replaced, e.g. fossil fuels

Renewable: can be replaced, e.g. solar power, wind turbines, biofuels.

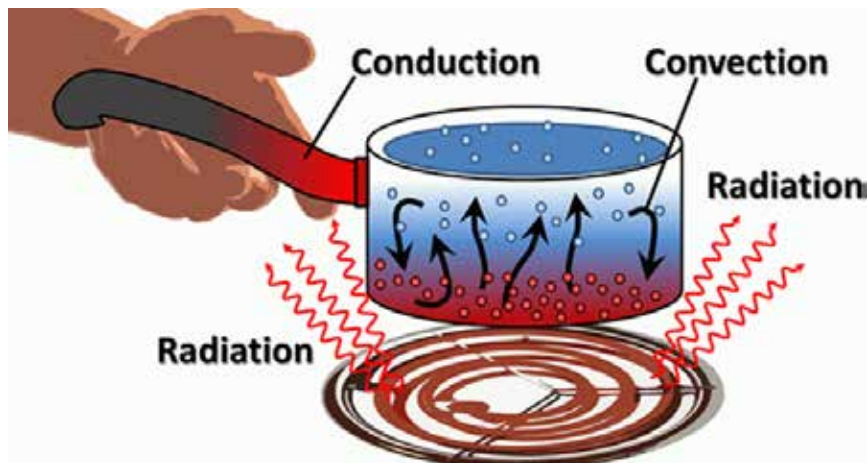
Types of Energy stores



Measuring energy content of food

$$\text{Energy transferred (J)} = \text{mass (g)} \times \text{specific heat capacity (J/g}^\circ\text{C)} \times \text{temperature (}^\circ\text{C)}$$

Heat Transfer

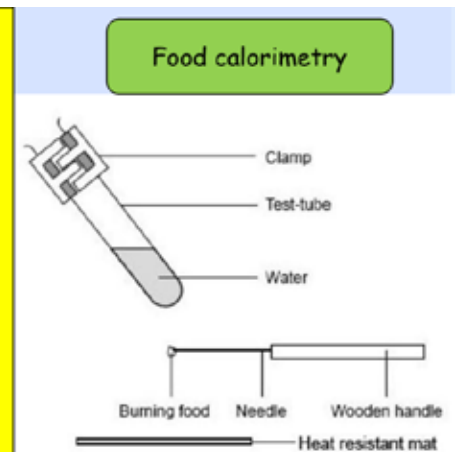


Conduction: occurs in solids, particles vibrate when they gain energy and knock into nearby particles.

Convection: heated particles become less dense, rise and displace cooler, denser particles which move down. Occurs in liquids and gases.

Radiation: energy from the sun transferred through waves.

- 1) Measure 10cm³ of water into a boiling tube.
- 2) Clamp the test tube in the stand at an angle.
- 3) Weigh a small piece of food and record the mass.
- 4) Take the temperature of the water and record it in the table.
- 5) Fix the food onto a needle/spoon.
- 6) Ignite the food in a Bunsen burner, immediately hold it 1cm below the test-tube
- 7) When the food burns out, stir the water and record the temperature.
- 8) Re-weigh any remaining food.

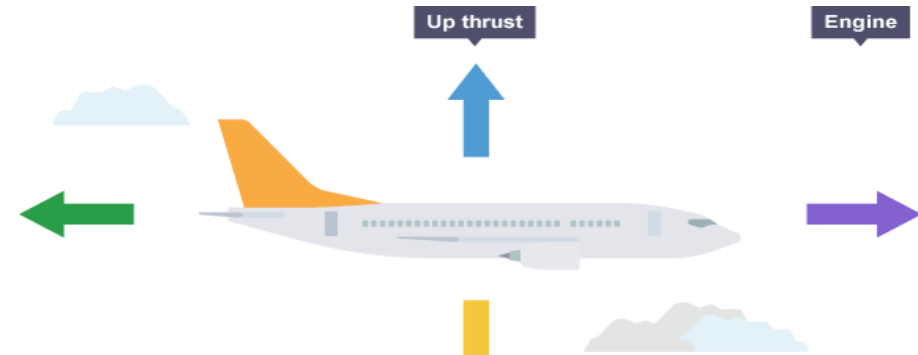


Science Knowledge Organiser - Forces

Force diagrams: Arrows represent forces, they show the size and direction of forces.

Forces ALWAYS come in pairs.

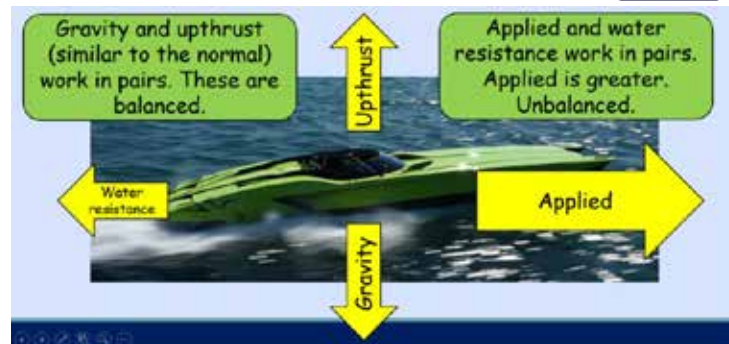
If you have balanced forces, you have no change in movement. Unbalanced forces will mean the subject either; changes speed, direction or shape.



Forces

Force	Description
Normal	The support exerted upon an object in contact with another stable object.
Tension	Acts in the opposite direction to movement
Frictional	Transfers force from object along ropes and cables
Applied	Acts on an object when you push/pull
Spring	Force exerted by a compressed or stretched object
Gravitational	The 'downward force' pulling us to the centre of the Earth
Magnetic	Attraction/repulsion by magnets
Electrical	Attraction/repulsion of charged objects
Air resistance	Exerted by air particles colliding with an object moving through the air.

Balanced forces



Friction →

The rougher the surface, the harder it is to move an object across it.

The rougher the surface, the greater the force needed to move objects across it.

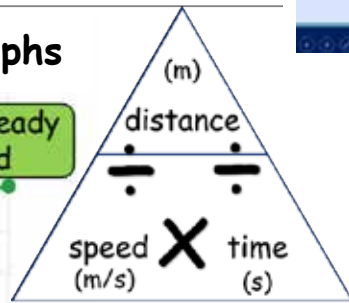
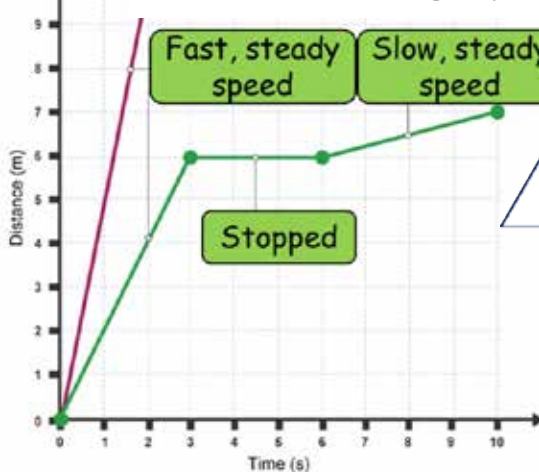
The rougher the surface, the greater the friction.

Air resistance →

Air particles collide with an object, slowing it down.

Objects can be streamlined to reduce the amount of collisions/friction, allowing the object to move smoothly.

Distance-time graphs

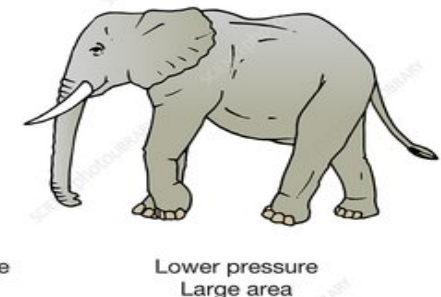


Pressure

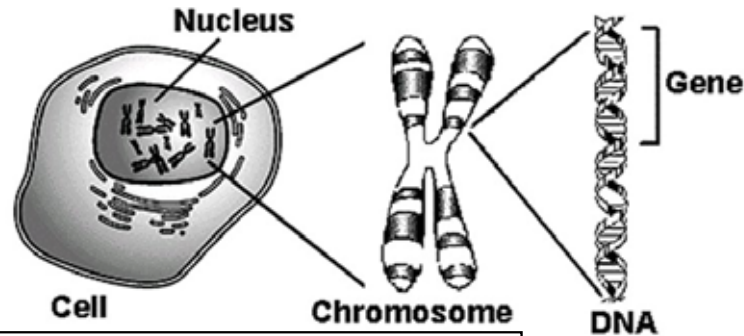
- Pressure = force ÷ area
- Pressure is the physical force exerted on an object.
- Pressure is higher when a force is exerted across a smaller surface
- E.g: stiletto shoes exert greater pressure than flat shoes.

Atmospheric pressure changes with altitude: The higher you go, the lower the weight of the air above you, so the lower the atmospheric pressure.

Liquid pressure changes with depth: The deeper you go, the greater the weight of the liquid above and the greater the liquid pressure.



Science Knowledge Organiser - Inheritance

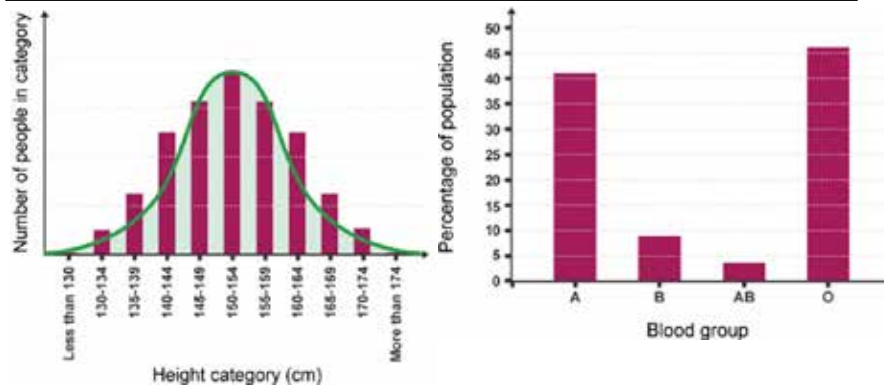


- A gene is a section of DNA that codes for a characteristic. Chromosomes are tightly coiled DNA.
- You inherit genes from your parents!
- You can have environmental characteristics and inherited characteristics. For example, inherited = eye colour environmental = a scar.



Variation

- Differences between living organisms
- Inherited variation: characteristics from birth from mum and dad (e.g. eye colour).
- Environmental variation: gained through life (e.g. scars).



Extinction can occur when new predators are introduced, new diseases develop, new competitors and changes in the environment that an organism is no longer adapted to.

Selective Breeding

- Farmers choose the organism they want to breed (high yield, desirable)
- Breed 2 desirable organisms together
- Choose the offspring with the desirable characteristics
- Continue to breed over many generations.
- Pros → can make all organisms large, resistant to disease, make more profit
- Cons → reduces diversity, more organisms prone to the same disease



Continuous variation: usually numerical characteristics that range from a number of values. E.g. height.

Discontinuous variation: grouped values. Eg. Blood group, eye colour.

Darwin's Theory of Evolution

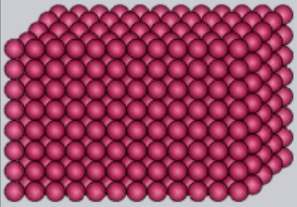
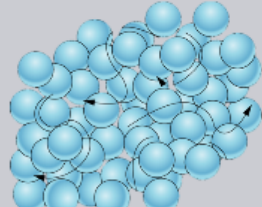
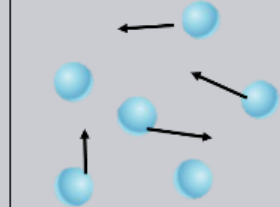
- All organisms have variation
- Those best adapted to their environment survive and reproduce
- These organisms pass on their genes

Organisms that cannot adapt cannot pass on their genes, so become extinct.



Science Knowledge Organiser - Particulate Matter

- Everything is made of particles, which are too small to be seen.
- A substance is made of one type of particle:
 - Examples of substances include - gold, water, sugar, oxygen
- A mixture is made of two or more different types of particle:
 - Examples of mixtures include - air, milk, paint.
- A particle of water is the same as any other particle of water.
- Particles of sugar are different to particles of water. The differences between particles can include their mass, state at room temperature and colour.

	Solid	Liquid	Gas
Are the particles close together?			
Do the particles move quickly?	Vibrate, little movement	Move slowly	Very fast movement

Changes of state

	Melting	Evaporating or boiling		Condensing	Freezing
Description	Solid to liquid	Liquid to gas	Description	Gas to liquid	Liquid to solid
Closeness of particles	Stay close together	Become much further apart	Closeness of particles	Become much closer together	Stay close together
Arrangement of particles	Regular to random	Stay random	Arrangement of particles	Stay random	Random to regular
Motion of particles	Start to move around each other	Become able to move quickly in all directions	Motion of particles	Stop moving quickly in all directions, and can only move around each other	Stop moving around each other, and only vibrate on the spot

Mixtures and separation →

Mixtures: 2 or more elements that are not chemically bound together

Solute: substance that dissolves.

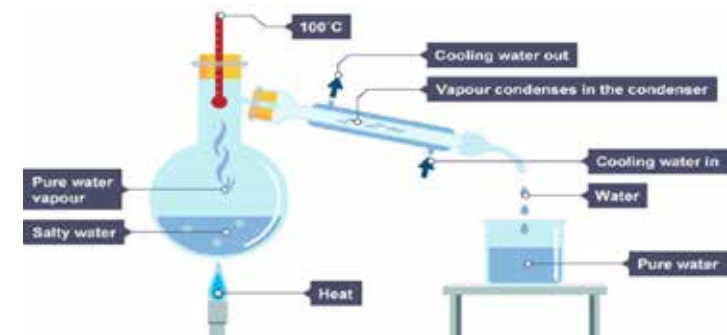
Solvent: the substance solutes dissolve in.

Solution: the mixture of solute and solvent.

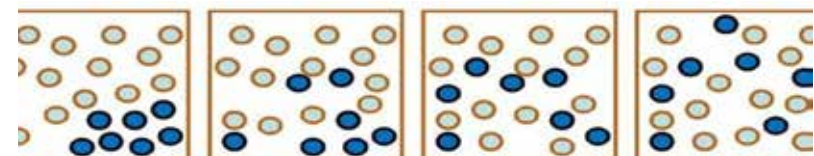
Filtration: particles in a mixture that are small enough to pass through the filter do so, particles that are too big cannot.

Evaporation: heating a solution causes water to evaporate, leaving the substance that has a higher boiling point in the container

Distillation: (see below) similar to evaporation, but water condenses and it transferred to container.



Diffusion: The movement of particles from a high concentration to an area of low concentration.

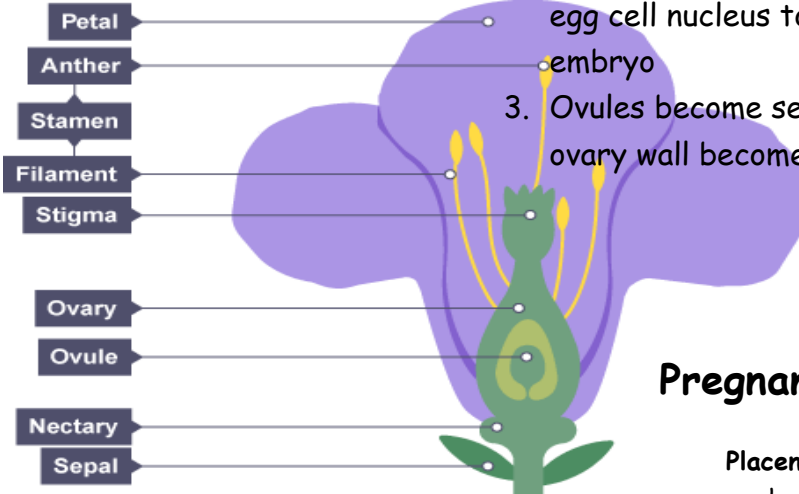


Science Knowledge Organiser - Reproduction

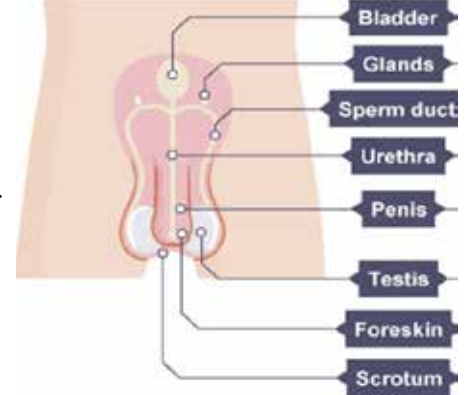
Sexual reproduction: 2 parents fuse, offspring have variation.
Asexual reproduction: 1 parent cell divides, forming identical offspring

1. Pollen tube grows into ovule
2. Pollen nucleus fertilises egg cell nucleus to form embryo
3. Ovules become seeds, ovary wall becomes fruit

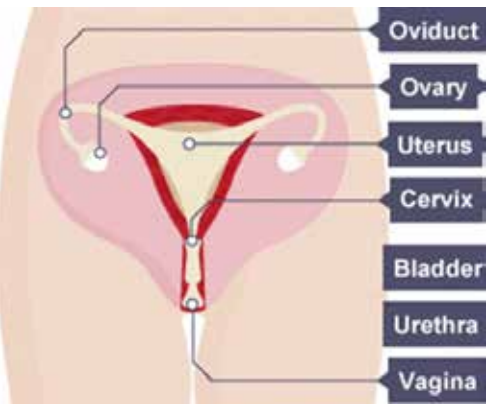
Plant Reproduction



Male reproductive system



Female reproductive system



Seed Dispersal

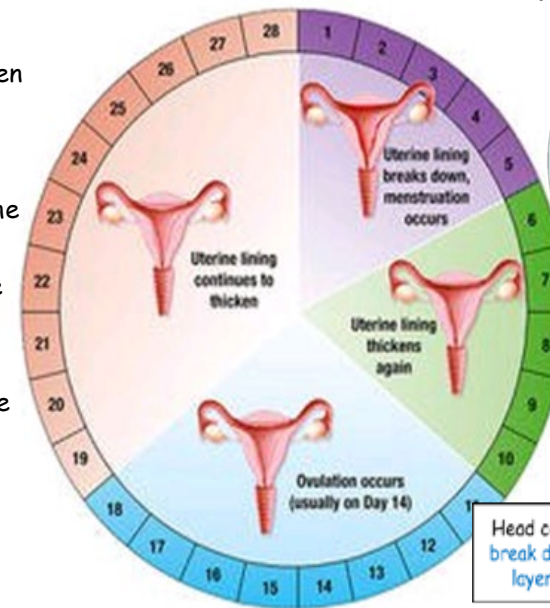
Method	Detail
Wind	Seeds have lightweight parts, wings or parachutes
Animals (inside)	Brightly coloured and tasty fruits contain seeds with indigestible coats, so that the seeds pass through the animal's digestive system undamaged
Animals (outside)	Fruits have hooks that attach them to the fur of passing animals
Self-propelled	Have a pod that bursts open when ripe, throwing the seeds away from the plant

Pregnancy and the menstrual cycle

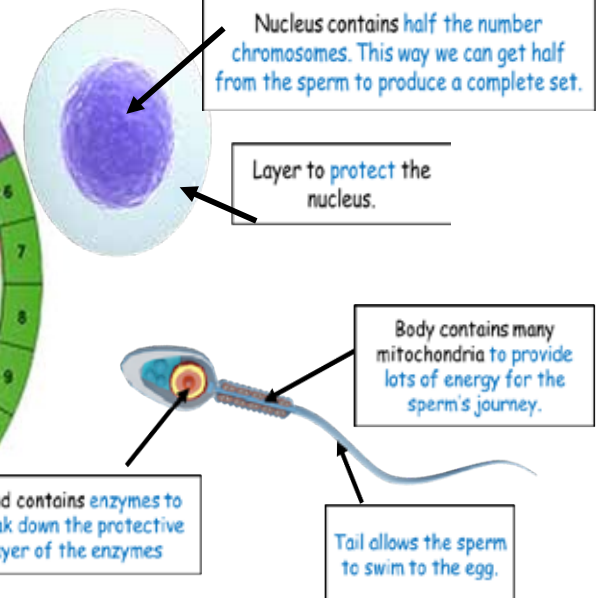
Placenta → allows exchange of gases between the bloodstreams of the mother and foetus.

Umbilical cord → joins the foetus to the placenta. This is important because it allows waste to be removed and food and oxygen to diffuse into the baby's blood stream.

Amniotic sac → helps protect the foetus and keep it warm.



Female and male gametes



Science Knowledge Organiser - Space

Our solar system consists of 8 planets that orbit the sun. Pluto is no longer classed as a planet as it is too small.

The planets in order are;

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus,

Neptune

The solar system also contains smaller objects like asteroids.

Different planets have different; gravity, temperature, mass, length of day, length of year. All of these things depend on how the planet moves compared to The Sun.



Phases of the moon

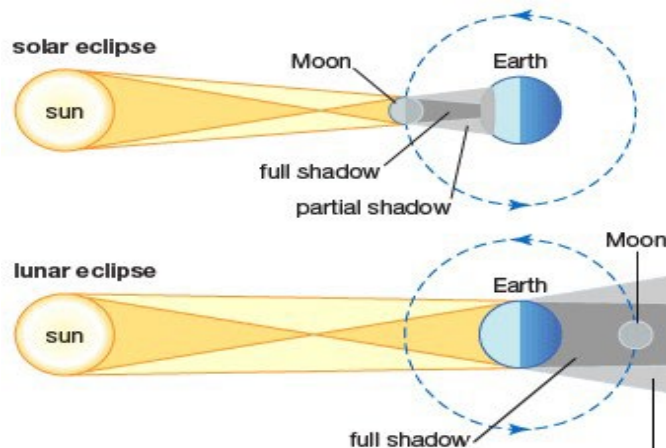
Phases of the moon are caused by the way the moon looks depending on its position between the Earth and the Sun. A month is when the moon completes one full orbit of the Earth. This is 28 days.



The Big Bang!

The Big Bang Theory is the theory of the creation of the universe. The theory states that around 13.7 billion years ago all of the matter in the universe was in one single point.

Eclipses



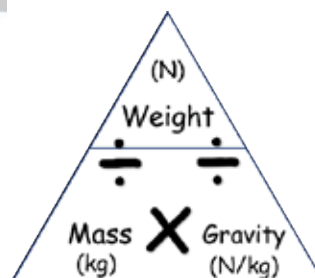
A day is where is Earth spins once on it's axis. This is 24 hours.

A year is when the Earth completes one full orbit of the sun. This is 365 days.

Satellites:

Uses of geostationary satellites; GPS, communication.

Uses of low polar satellites: weather, military, scientific observations



- Mass: amount of matter
- Weight = mass x gravity

The units for gravitational field strength are Newton's per kilogram, N/Kg.

The gravity on Earth is 10 N/Kg.

Mass never changes, your weight does as it is dependent upon the gravitational field strength.