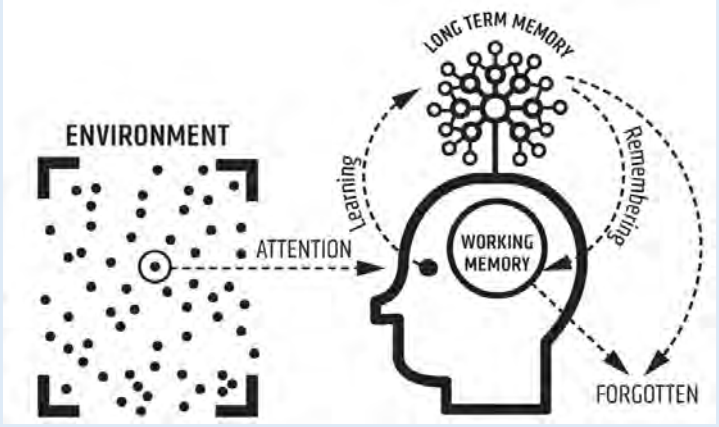
Knowledge Organiser Booklet Year 8 Term 3

Our working memories can only store a limited amount of information, whereas our long term memories can store limitless information. To learn successfully, we need to store core knowledge into our long term memories, so we can retrieve it when we need it.

For instance if you are at work or in the shops and need to work out a 25% discount, you cant memorise 25% of every number, so you need to be able to quickly recall the method for calculating a percentage. Committing core knowledge to our long-term memories is a life-hack. It makes thinking about difficult things easier.

Using a knowledge organiser with regular retrieval activities is a way for you to store core knowledge & subject specific words, into your long term memory so it is there when you need it.



Contents

Clicking on the subjects below will take you directly to the knowledge organisers for each subject. These are to support learning that has taken place this past term. Use these to help reinforce the key knowledge. Use some of the strategies explained in the introduction to help you retain this important information.

Blended Learning Expectations

Make sure you have **access to a computer at home** (If you don't please make pastoral staff aware or email langley.homelearning@taw.org.uk)

Download Microsoft Teams on both your phone and computer. (If you don't know how to do this please ask a member of staff or do this in your next computing lesson)

Spend at least 2 hours a week using teams EVERY WEEK. (Engagement in teams can be tracked and monitored). You need to be accessing each of your class teams and recapping on the previous learning or completing additional tasks set by your class teacher.

If you have any issues with teams (e.g. login problems or missing classes etc then please email langley.homelearning@taw.org.uk)

Teams is a tool to support ongoing learning and should **only be used for educational purposes.**

How to complete homework your teacher has set

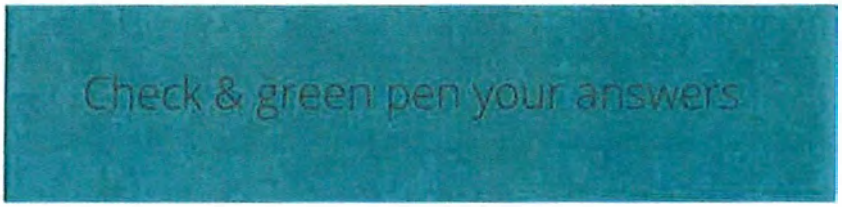
	LOOK, COVER, WRITE, CHECK	DEFINITIONS TO KEY WORDS	FLASHCARDS	DUAL CODING
STAGE 1	Look at & study an area of your knowledge organiser 	Write down the key words & definitions 	Write key words, dates/formulae, equations/quotes on one side & answers on the other	Draw pictures/diagrams/ cartoon strips 
STAGE 2	Cover up your knowledge organiser and write everything you remember 	Cover up the definitions. How many can you remember? Repeat. 	Include pictures or diagrams if it helps. Read through them. 	Label your pictures/diagrams/ cartoon strips 
STAGE 3	Check. Correct mistakes in green and add anything you missed. Repeat 	Check. Correct mistakes in green pen. Which ones do you find hard to remember? 	Test yourself and get someone to test you. 	Explain out loud to yourself or family/friend what your images show 

	SELF QUIZZING	MINDMAPS	PAIRED RETRIEVAL	SPEAK, COVER, WRITE, CHECK
STAGE 1	Use your knowledge organiser to create quiz questions. 	Create a mindmap of everything you can remember from your knowledge organiser 	Give a family member/friend the knowledge organiser to hold 	Read out loud the information from the knowledge organiser several times. 
STAGE 2	Write down the answers to your quiz 	Check your knowledge organiser & use a green pen to make any corrections. 	Get them to test you using the knowledge organiser 	Cover up your knowledge organiser and write everything you remember 
STAGE 3	Keep self-quizzing until you get all the answers correct 	Add additional information to your mindmap or make connections to other knowledge 	Write down your answers to their questions 	Check. Correct mistakes in green and add anything you missed. Repear. 

Retrieval Placemat

Look at your knowledge organiser. Now cover it up and write down Key vocabulary & definitons from memory:

First time: Look. Cover. State 3 facts	Second time: Look. Cover. State 3 facts	Third time: Look. Cover. State 3 facts



Look at the knowledge organiser again. Now cover it up and without looking, explain a concept or idea in your own words

Re-read your answer above. Look at the knowledge organiser again. Now cover it up and improve on your previous explanation in green pen.

Retrieval Relay

Look at your knowledge organiser. Now cover it up.

First time: Write down everything you can remember

Second time: Look. Cover. Write down everything you can remember

Third time: Look. Cover. Write down everything you can remember

Write down everything here that you didn't remember:

Vocabulary focus 1

Look at your knowledge organiser. Select a key word and write it here:

Write a definition of the key word in your own words - not the same as the one on the knowledge organiser:

Write a sentence with the key word in it:

Create a question where the key word is the answer:

What other words are connected to this key word?

Draw a picture or diagram to help you remember this key word:

Vocabulary focus 2

Definition:

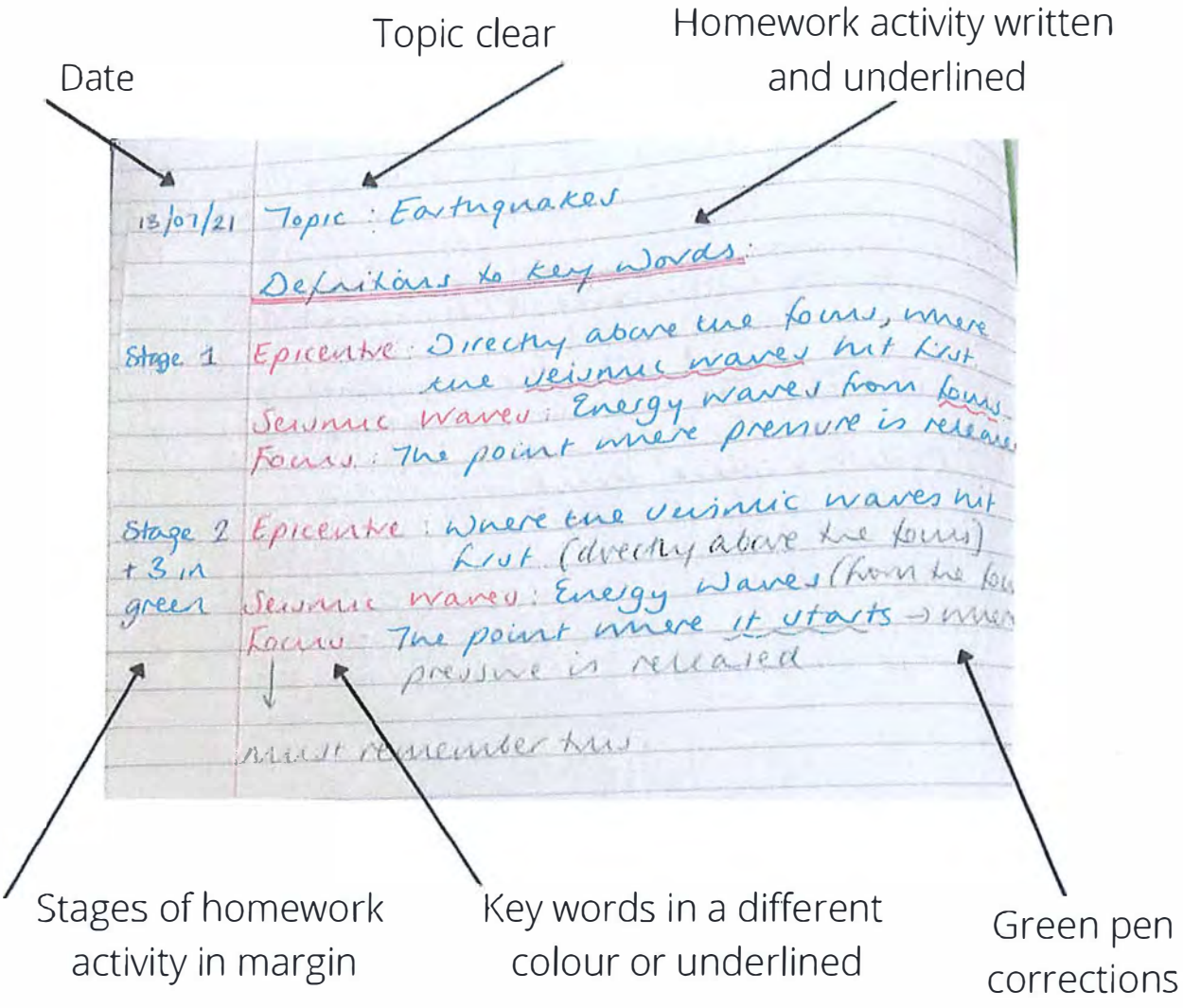
Characteristics:

Key word:

Examples:

Non-examples:

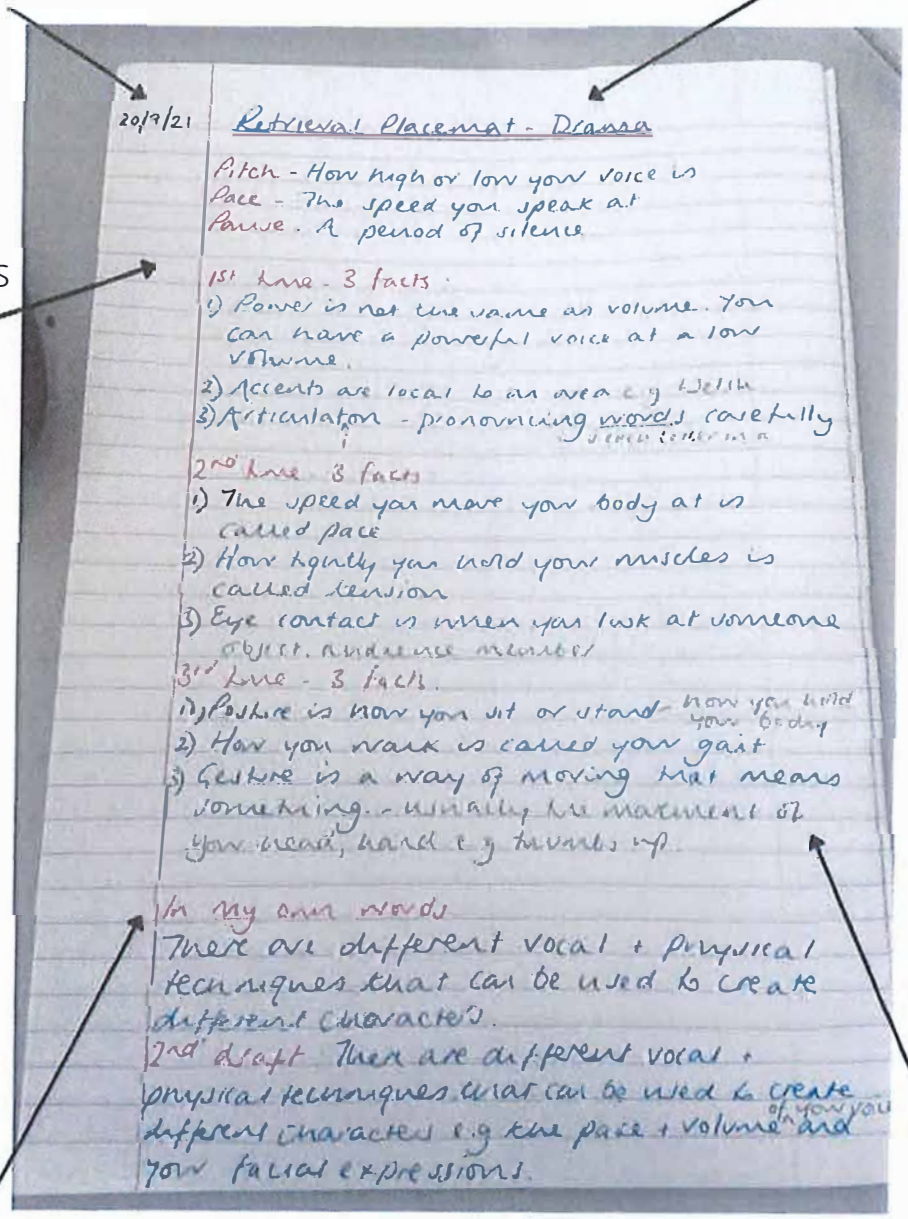
What should my knowledge organiser homework look like?



What should my knowledge organiser homework look like?

Homework activity written and underlined

Date



Key words in a different colour

Green pen corrections

Stages of homework activity as subtitles

Art

Year 8: Unit 5: Architecture

Architecture

Threshold Concept (TC28) - Understand the main components of an artist research page.
Threshold Concept (TC29) - Knowledge and understanding of Antoni Gaudi.
Threshold Concept (TC30) - Knowledge and understanding of Cubism.
Threshold Concept (TC31) - Understand how collage, using photos, can be used to inform a final art outcome.

SCAN ME
Cubism

Keywords
Architecture, Architect, Facade
La Sagrada Familia, Antoni Gaudi,
Cubism, George Braque, Pablo Picasso

Bronze
… understand what an artist research page is.
… understand how to cut out appropriate images.
… select basic information and write this on the page.
… recognise Antoni Gaudi's art style.
… understand what Cubism is.

Formal Elements of Art
Colour, Line, Shape, Form, Tone, Texture Pattern

Cubism was a **revolutionary** new approach to representing reality. It was invented around 1907 by the artists **Pablo Picasso and Georges Braque.**

'The word 'Cubism' came from a comment made by an art Critic who described the appearance of George Barques' paintings as looking like cubes.

The Weeping Woman (1937) Pablo Picasso

This portrait appears fragmented but contains different angles in the same image.

Key Stage 3
Lesson Objective
To learn about **Antoni Gaudi** and produce an A4 research page on the Artist.

Keywords
background title facts opinion research images copy
analysis mood content form context process
line tone colour pattern texture shape form

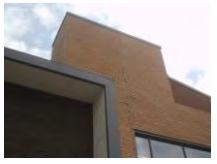
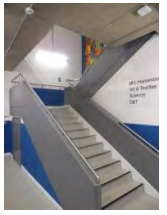
Grade 4 or lower	Grade 5 to 6	Grade 7 to 8	Grade 9+
1) A basic **background** is produced. 2) A basic **title** is produced. 3) Keywords linked with **facts** about the artist are researched. 4) There is a basic **opinion** about the artist's work. 5) There is limited **research** and selection of images. 6) The **images** are arranged with some thought. 7) There is a basic **copy** of the chosen image(s).	1) A creative **background** is produced that links to the artist(s). 2) A skilful and creative **title** is produced. 3) Keywords/sentences **(facts)** about the artist are researched. 4) There is an **opinion** about the artwork with reasons. 5) A range of different images are **researched** and selected. 6) The **images** are well presented 7) There is a skilful **copy** of the chosen image(s).	1) A very effective **background** is produced that links to the artist(s). 2) A very skilful and creative **title** is produced. 3) Many interesting **facts** about the artist are researched. 4) There is in depth **analysis** of the artwork (MC FC P) with **opinion.** 5) There is evidence of in depth **research** when selecting images. 6) **Images** are presented in a creative way. 7) There is a very skilful and accurate **copy** of the chosen image(s).	

Studying the work of different artists and completing an artists research page helps to give you ideas for your own work perhaps through similar subject matter, theme or style.

SCAN ME
Antoni Gaudi

Gaudi designed patterns and styles of architecture.

View of school architecture.

SCAN ME
How to cut neatly using scissors
Watch from 1:33 to 2:50

Materials
GraphitePencil
Colouring pencil
Acrylic paint

SCAN ME
Rule of Thirds

Using the 'rule of thirds' create a final piece based on Gaudi's designs but with a Cubist influence.

Year 8: Unit 6: Architecture

Architecture

TC31 - Understand how collage, using photos, can be used to inform a final outcome.
TC32 - Understand that the internet should not always be used as source material.
TC33- Understand that artist's work of past and present can be used to influence a final outcome.
TC23 - Understand that art can be created using mixed media.

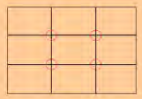
Bronze

… understand what a 'collage' is.
… understand how to cut out appropriate images.

Materials
Graphite pencil
Colouring Pencil
Fineliners
Acrylic Paint

Formal Elements of Art
Colour, Line, Shape, Form, Tone, Texture
Pattern

What makes a good image?



Rule of thirds

The **Rule of Thirds** is the process of dividing an image into **thirds**, using two horizontal and two vertical lines.

This imaginary grid has nine parts with **four intersection points**.

When you position the most important elements of your image at these intersection points, you produce a much more natural image.

Rule of Thirds

If the image is in the centre of the picture, it doesn't always make it interesting

If the image is on one of the crossed lines it can make the image more interesting.

Media is the material and tools used by an artist, composer or designer to create a work of art, for example, "pen and ink" where the pen is the tool and the ink is the material.

Mixed media is a word (term) used to describe artworks composed from a combination (group) of different media or materials.

Collage describes both the technique and the resulting work of art in which pieces of paper, photographs, and fabric etc are arranged and stuck down onto a surface.

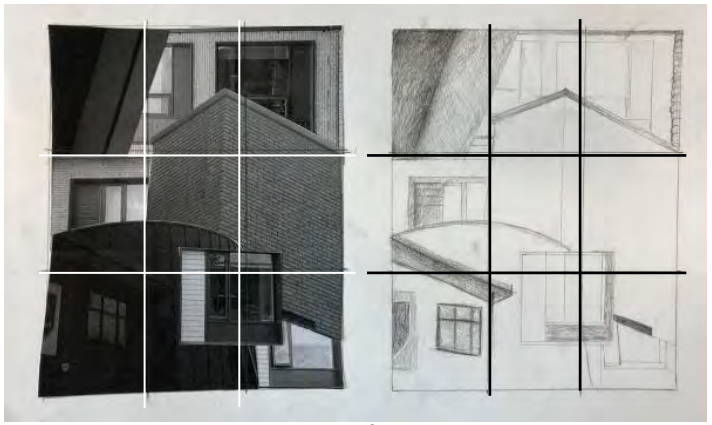
SCAN ME
Colouring Pencil Techniques

Studying the work of different artists helps to give you ideas for your own work. Through similar subject matter, theme or style your chosen artist will in some way have an influence on your final piece of work.

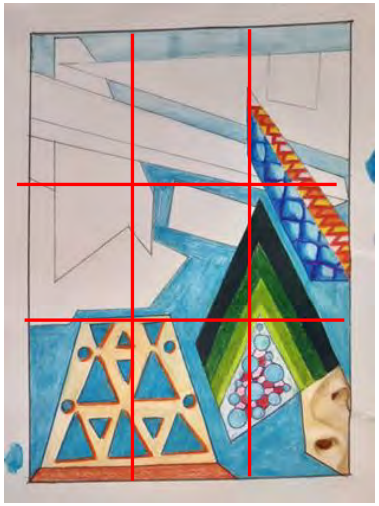
You could take your **own photograph** on our phone or with a camera rather than rely on someone else's image from the internet

SCAN ME
Rule of Thirds

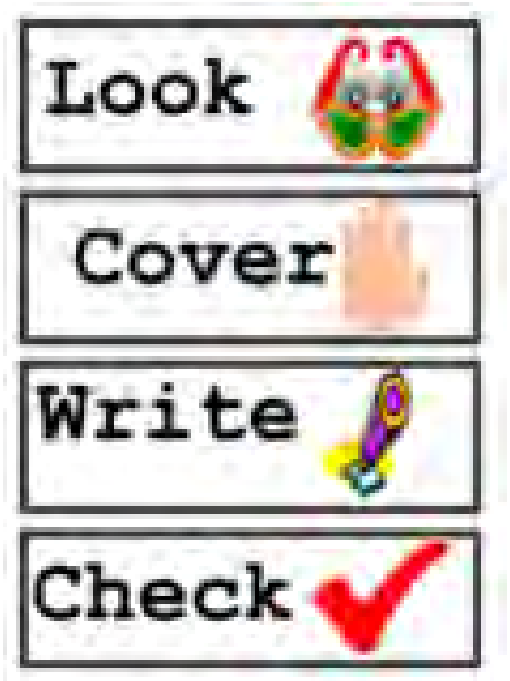
SCAN ME
How to cut neatly using scissors
Watch from 1:33 to 2:50



Cut out the shapes that you find interesting and arrange them on your grid which highlights the 'Rule of Thirds'.



Computing



Read through your knowledge organiser. Next, cover it up or put it away and try tho write down as many of the key facts that you can remember. Use your knowledge organiser to check the fact you have written down. Correct any you may have got wrong.

Computing Year 8 Unit:
Mobile App Development

Threshold concept—

- Identify when a problem needs to be broken down
- Identify when there are issues with code
- Use block-based programming to a basic level

Keyword	Definition
Sequence	Placing a set of instructions in an order
Event	An action that occurs as a result of the user
GUI	A visual way of interacting with a computer
Programming	The process or activity of writing computer programs.
Decomposition	When we break a problem or task down into smaller parts to make it easier to tackle
Abstraction	The process of filtering out – ignoring - the characteristics of patterns that we don't need in order to concentrate on those that
Algorithmic thinking	A way of getting to a solution through the clear definition of the steps needed
Variables	Value that can change, depending on conditions or on information passed to the program
Selection	Selection is a decision or question.
Operators	+, -, *, / =, =>, =

DECOMPOSITION
Breaking down a problem into smaller chunks. This makes it more manageable and easier to understand.
1

PATTERN RECOGNITION
Looking carefully in lines of code for patterns, similarities and trends.
2

ABSTRACTION
Filtering out and focusing on what is important. Ignoring what is not important.
3

ALGORITHM DESIGN
A plan and step by step instructions on how to solve the problems.
4

DEBUGGING
Looking through your program to find errors and then fixing them.
5

USER INPUT

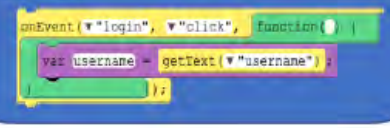
Text boxes – allowing the user to input a string.

Checkboxes - allowing for the user to indicate a yes or no response.

Button – linked to an event that will capture and process the data when it is clicked

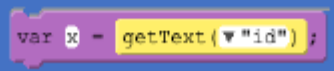
EVENT HANDLER

You can use an **event handler** to determine when to collect the data and what to do with it once it has been collected and linked with a variable.



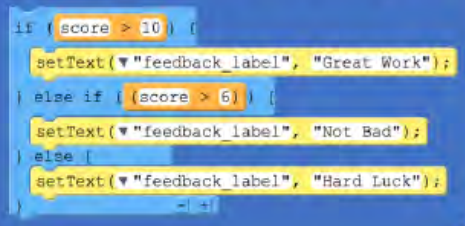
GETTEXT

getText ("id") is a built-in subroutine that collects the text entered into a textbox; "id" is to be replaced with the name given to the text box.



SELECTION – BOOLEAN LOGIC (IF/ELSE/ELIF)

Selection is the process of making a **decision** based on a **condition**. Selection allows you to add more avenues and routes to your coding.



Design and Technology

You can make your own questions. This process takes a lot of time, but if you create a study group you can each create a few questions and trade. However it is important that you write what Key facts or knowledge you expect to see in any answer.

Threshold Concept

- How people's physical, intellectual, emotional and social well-being are linked.
- To recognise what is health and well-being and what influences it.

What are P.I.E.S.:

Physical
Intellectual
Emotional
Social

All of these make up the definition to what is health and well-being.

Physical

Intellectual

Emotional

Social

As we move through the life stages our P.I.E.S. develop. We focus on the three primary life stages:

- Childhood (0-18)
- Adulthood (18-65)
- Old Age (65+)

Using this information you should be able to:

- Define what is health and well-being
- Describe the different life stages.

You should be able to use this knowledge to describe how humans develop physically, intellectually, emotionally and socially across the different life stages.

Humans grow and develop across all life stages. However our growth and development can be influenced by several factors, mainly, healthy eating.

In order to have a healthy balanced diet, you must consume the correct amount of the five food groups. Having a healthy balanced diet can affect your growth and development across all three life stages. A mothers diet can even influence her unborn child's growth and development!

The five food groups!

Fruit and vegetables

Proteins

Carbohydrates

Dairy

Fats and sugars

We also experience every day feelings that can impact our growth and development. One of these is stress. Stress is the body's reaction to feeling under pressure.

Stress gets to us all. However, there are plenty of ways we can deal with stress.

There are numerous ways in which we can deal with stress. Some of the most effective are either listening to music or spending time in nature. This helps relax the body and in turn can relax the mind, helping to cope with stress.

Impact of life events on P.I.E.S.

Often life events can have an impact on our health and well-being. This means that certain life events can impact on your physical, intellectual, emotional and social health. There are two types of life events, **expected** and **unexpected**.

These are some examples of different life events that occur across the life stages;

First day of school
First words
First job
Making a friend
Buying a house
Retiring
Getting married
Having a child

Unit guiding question: What is the purpose of a mechanism?

The threshold concept that is truly essential to enable you to access future learning is ...

Mechanisms convert one type of motion into another.

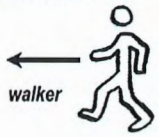
Understand different types of motion and what mechanisms are used to convert them from one to another.

Understanding that there are inputs processes and outputs for every mechanical system.

SCAN ME

There are 4 types of motion

Linear motion
The walker goes along in a straight line.

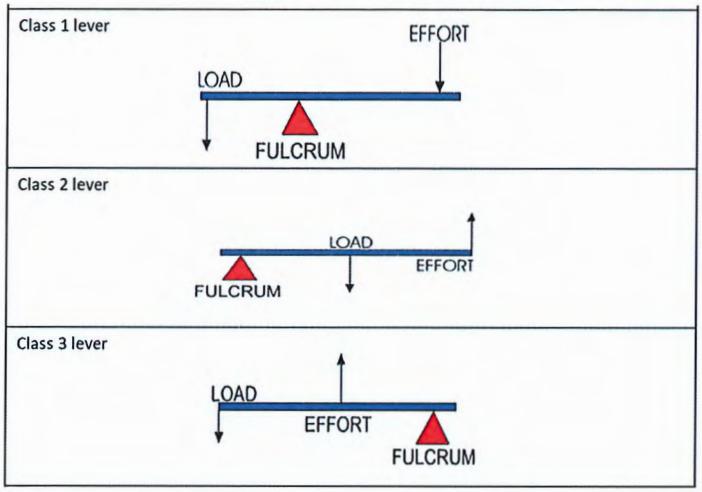


Reciprocating motion
The weightlifter lifts the weights up and lowers them. He does work in both directions.

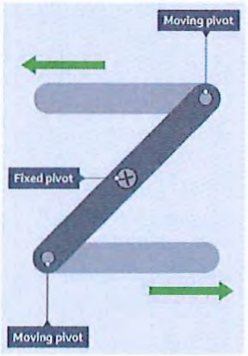
Rotary motion
A person cartwheeling

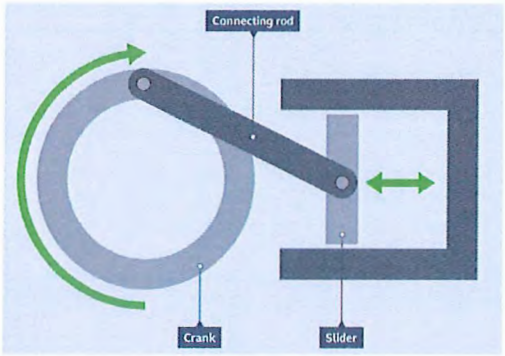
Oscillating motion
The footballer's leg swings back and forth. Only the first half of the action performs work.

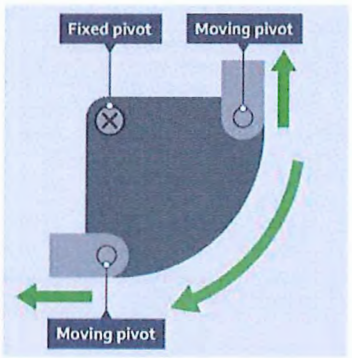
Levers are simple machines. There are 3 classes of lever determined by where the load, effort and fulcrum are positioned.



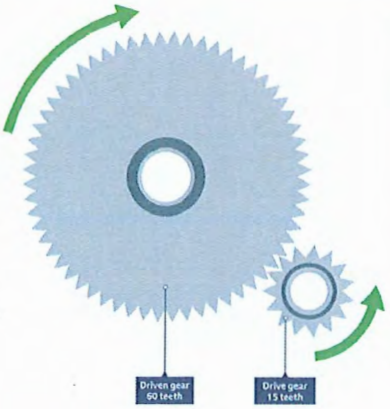
Some mechanisms are combinations of levers linked together. These are called linkages. They convert one type of motion into another.







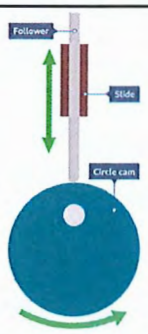
Gears are wheels with teeth around the outside. When several wheels are interlocked, they can transfer motion from one place to another and can change the speed and direction of the output.

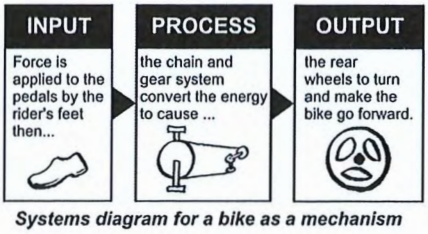


Cam mechanisms have two main parts:

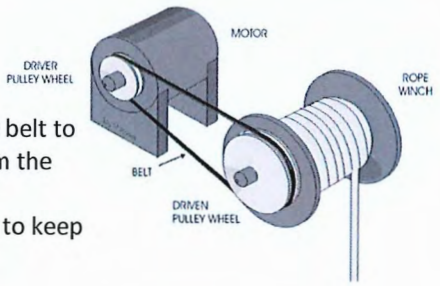
a **cam** - attached to a crankshaft, which rotates.

a **follower** - touches the cam and follows the shape, moving up and down





Systems diagram for a bike as a mechanism



Pulley and belt systems use the belt to transmit motion and power from the driver shaft to the driven shaft.
The pulley wheels have grooves to keep the band or belt in place.

Metals.

Learn about Ferrous and non ferrous metals and their source.

Stick Figure.

Learn to draw **accurately** and in **proportion.**
Understand Anthropometrics

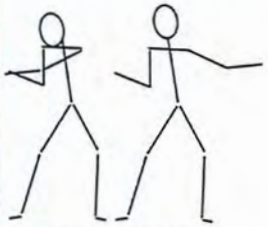
Research.

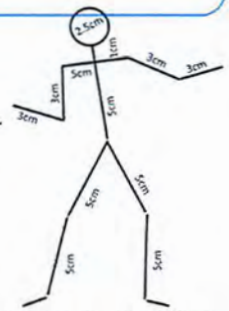
Find suitable sporting action figure. Consider including sporting equipment to the design

Develop research into a stick figure design.

Trace a skeleton on picture. Convert skeleton from 3D to 2D. Transform 2D skeleton into accurate full size figure using the dimensions given.


Trace skeleton


3D Skeleton 2D Skeleton


Scale up 2D Skeleton = Full size

Brazing.

Clean metal with Emery Cloth.
Using Flux & Brazing alloy to joint the pieces together

Objectives:
To work independently from instructions you have written

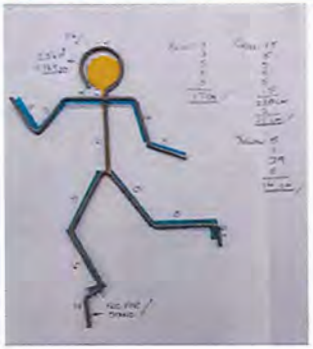
To use hand tools in a safe way to avoid injury

Modelling.

Using 3 different colours of card, make a card model. Arrange pieces and **develop** a **final design** - glue pieces in position to create the **Template** of your design.

Form metal to 'Template'

Hold 'work' in vice and 'form' into shape by bending.
CHECK against your template to see if it is 'formed' accurately



Material Preparation

File sharp edges from all ends of the material.
N.B. Cuts & Scratches will cause infection! Yuk!

Material Requirements

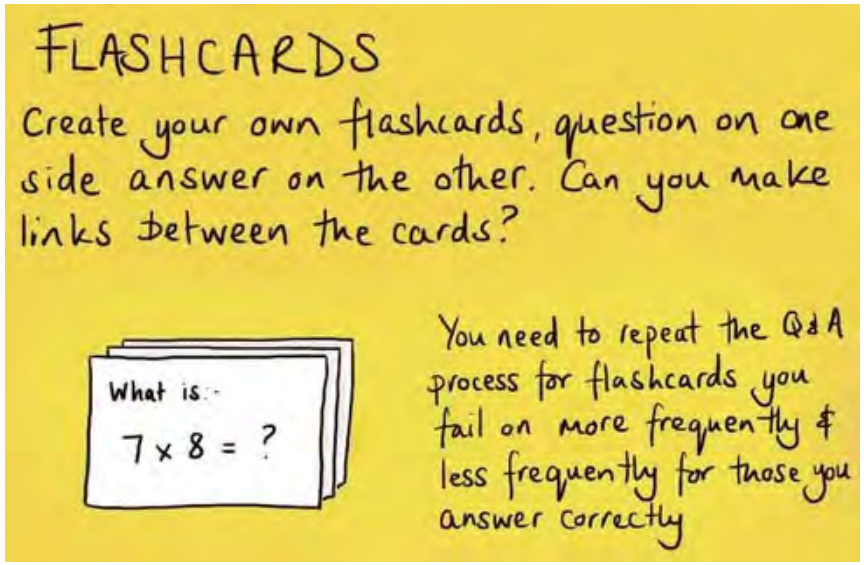
Add the total length of each colour to find out EXACTLY how long each of the THREE pieces needs to be. DON'T FORGET to add 2cm for the 'stand peg'

Length of material for head:
Diameter of head x PI (2.5 x 3.14) = 7.8cm

Essential Knowledge

- You will learn how to analyse a design brief
- You will learn about anthropometrics and learn about the importance of proportion and the sizes of the human body
- You will learn how to analyse pictures and discuss them.
- You will learn about metals and their properties.
- You will learn about using accurate measurements
- You will develop your design skills and learn the importance of annotation.
- You will learn how to work with and shape metal as well as how to join metal
- You will evaluate the work of others and your own work

Drama



Create a flash card with all the key facts you want to learn (this can be drawn in your book). On the next page try writing down as many facts or as much of the knowledge as you can. If you find you are getting certain facts wrong then these are where you need to focus and relearn.

Noughts and Crosses – Malorie Blackman

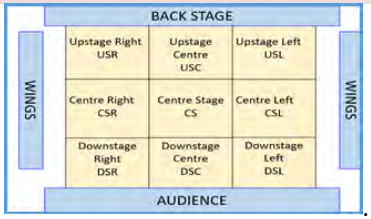
The script provides essential information to the actor and technical department. It suggests stage directions, pauses and the style of emotion the character should move or speak in. For the technical team, it prompts any lighting, sound or stage direction that is needed for the scene.

Director is responsible for the practical and creative interpretation of a script. They oversee the whole production.

A. Storyline

"Noughts and Crosses" is a book about a world where black people (Crosses) and white people (Noughts) are separated and don't get along because of their skin color. The story follows two teens, Callum and Sephy, who are from different sides of this divide, but they fall in love with each other anyway. The book is about love and racism and how they are related. It is set in a world where things are not equal and some people have more power than others.

B. Stage Positions



C. Characters

Callum McGregor
A white "Nought" and the protagonist of the story. He is intelligent, brave, and determined, but also struggles with feelings of anger and frustration about the oppressive society he lives in.

Sephy Hadley
A black "Cross" and the daughter of a powerful politician. She is privileged, but also kind and compassionate, and is drawn to Callum despite the racial divide that separates them.

Jasmine Hadley
Sephy's younger sister, who is passionate and outspoken about the injustices of their society.

Ryan McGregor
Callum's older brother, who is a political activist and outspoken critic of the racist and apartheid-like system they live in.

Kamal Hadley
Sephy's father, who is a powerful and influential politician. He is deeply conflicted about his love for his daughter and his loyalty to his community.

Meggie McGregor
Callum's mother, who is kind, supportive, and fiercely protective of her family.

Jude McGregor
Callum's grandfather, who is wise and has a deep understanding of the racial divide and the challenges his family faces.

D. Types of Theatre

In The Round— the audience sit around the stage on all sides. Performers enter and exit through the audience on walkways

Thrust stage sticks out into the audience, who sit on three sides. There is a back wall that can be used for hanging backdrops and large scenery.

Proscenium Arch— describes the frame that surrounds the stage. All the audience face the same way. The stage is raised. The seating is often tiered.

E. Vocal

Types of volume: Whisper, quiet, talking, loud, shouting.
Types of Pitch: Low, medium, high **Pause**: Stillness in a scene or dialogue
Pace: Speed of dialogue
Tone: Emotionally influenced dialogue
Emphasis: Putting importance on a word

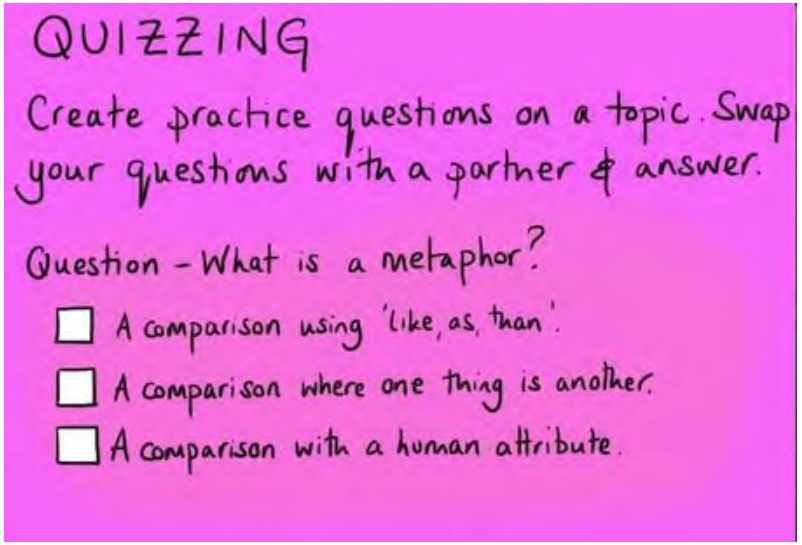
F. Physical

Gestures: Using movement to express emotion or direction
Facial expressions: Used to show emotion
Body language: Use to show the character profile/emotion
Levels: Used to show status/hierarchy
Gait: Character walk
Eye contact: Between actors/audience
Proxemics: Space between actors/audience

G. Performance Skills

Cross-cutting: To show contrast on stage.
Freeze Frame: To highlight a key moment.
Narration: To give the audience information about the story
Thought track: To give the audience information about a character
Direct address/aside: Speaking directly to the audience out of the scene

English



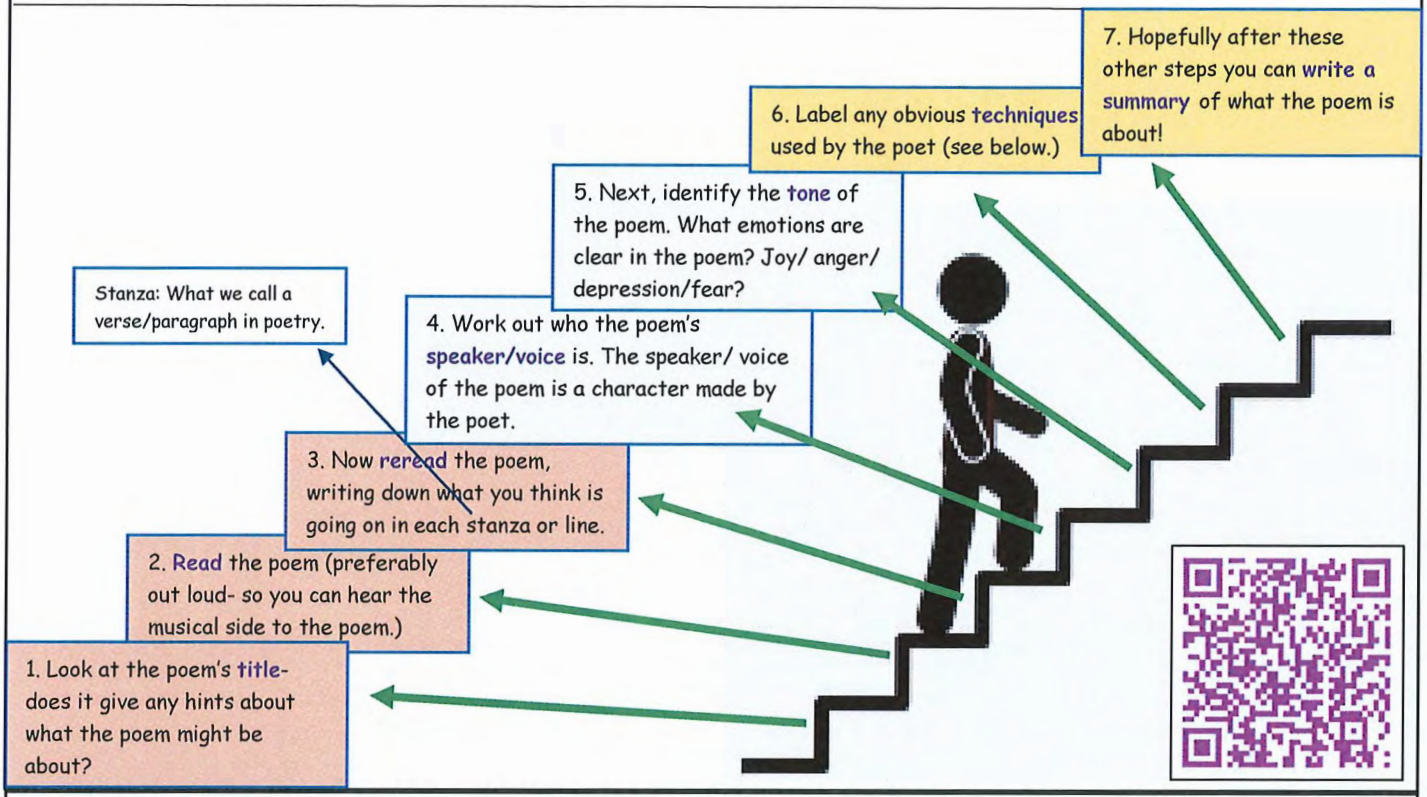
You can make your own questions. This process takes a lot of time, but if you create a study group you can each create a few questions and trade. However it is important that you write what Key facts or knowledge you expect to see in any answer.

Threshold Concept- Year 8- Poetry from Diverse Cultures:

TC1 - Understanding texts

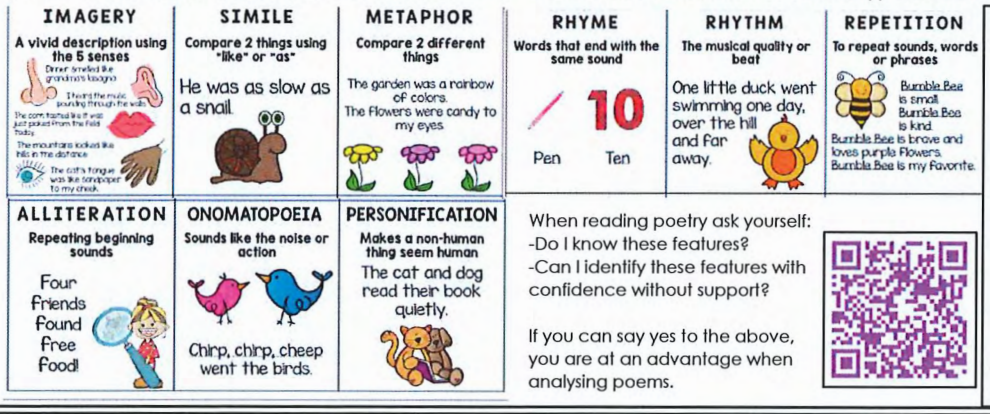
TC2 - Demonstrate an appreciation of the writer's craft through analysis and critically evaluative comments.

A step-by-step guide to understanding a poem you've never seen before.



Unique features of poetry.

See the below features of poetry. Some features are more unique to poetry, so make sure you attempt to identify and analyse the poets' use of these, as you'll do this less often than with features that are used in all types of literature (like metaphors, for example.)



When reading poetry ask yourself:
-Do I know these features?
-Can I identify these features with confidence without support?

If you can say yes to the above, you are at an advantage when analysing poems.

Can You See The Pride In The Panther?

Can You See the Pride In the Panther
As he grows in splendor and grace
Topling obstacles placed in the way,
of the progression of his race.

Can You See the Pride In the Panther
as she nurtures her young all alone
The seed must grow regardless
of the fact that it is planted in stone.

Can You See the Pride In the Panthers
as they unify as one.
The flower blooms with brilliance,
and outshines the rays of the sun.

Which features can you find in this poem?

Push yourself by explaining the poet's message.

The writer's uses this to... The poet's message seems to be...

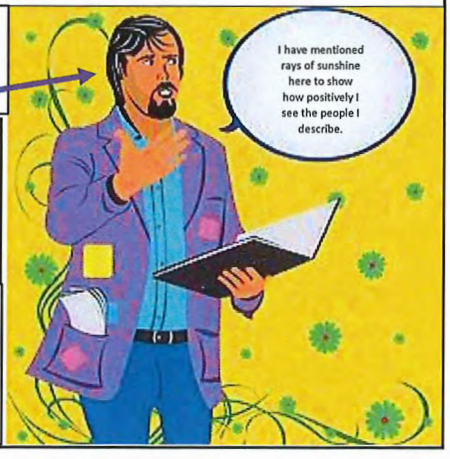
The poet's message is what the writer is trying to say about their topic choice. All the lines and features they've chosen link to this one message.

Once you've identified the message, you should mention this in all of your explanations of quotations and techniques!

Look at the example here of how poet's messages work.

Can You See the Pride In the Panthers
as they unify as one.
The flower blooms with brilliance,
and outshines the rays of the sun.

Great words/phrases to use when starting to describe writer's message:
-Intentionally,
-Purposely
-The poet expresses...



Enjoyed the poetry from this half term? Click this link for some more poems from diverse cultures!

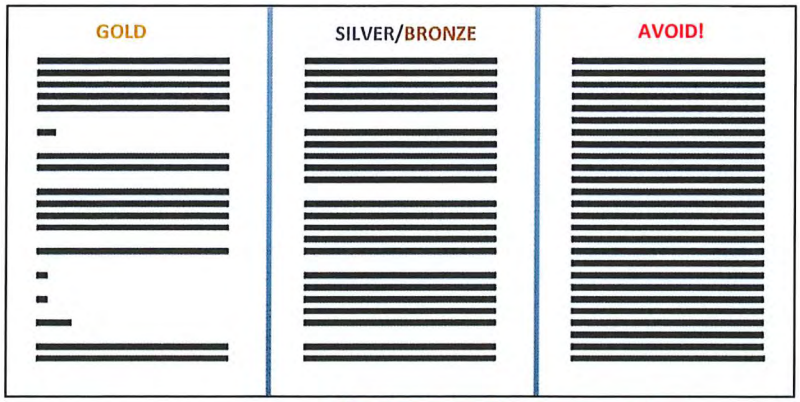
Poems From Other Cultures & Traditions | Revision World

Threshold Concept- Year 8- Writing accurately.

TC6 - Organise information and ideas, using structural and grammatical features to support coherence and cohesion of texts

TC7 – Use a range of sentence structures for clarity, purpose and effect, with accurate punctuation and spelling.

Paragraphing and cohesion when writing non-fiction and creatively.



When marking your work, your teacher will firstly look at the paragraphing choices you have made.

Being experimental with paragraphing (i.e. using one word/ sentence paragraphs **occasionally for effect**) can really help to improve the structure of your written pieces.

Cohesive devices- words that link paragraphs and sentences together.

ADDING	SEQUENCING	ILLUSTRATING
and as well as moreover furthermore in addition too on top of that another point is	first, firstly, first of all second, secondly.. third next meanwhile now subsequently	for example such as for instance in the case of as shown by illustrated by take... one example is..
COMPARING	**QUALIFYING**	**CONTRASTING**
similarly likewise as with like equally in the same way	but however although unless except apart from as long as if	whereas alternatively unlike on the other hand conversely having said that nevertheless however

When structuring your work, ask yourself these questions:

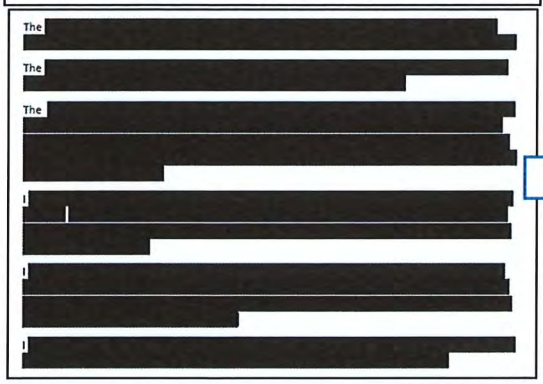
-Do I paragraph my work and vary my paragraphs, or do I play it too safe?

-Do I use words that link sentences and paragraphs together, or do I repeat words like "The" and "I" too often in my writing?

A range of sentence structures- opening with different words!

Starting sentences with linking words is great, but you can also improve your sentence structure choices by using lots of different

Problem: Sentences all beginning with the same word/ word type.



Solution: Sentences that vary in their choice of opener-> use the below chart to help you use different openers.

What I should start sentences with instead:	Example starts:
Verbs (ing words)	*Looking at the...*
Adverbs (ly words)	*Quietly,...*
Adjectives (describe words)	*Depressed, sweaty and exhausted...*
Connectives (words that link other ideas/ sentences)	*Because of the heat exuding from the room,...*
The pronoun "you"	*You- if you listened carefully enough- could just make out the...*
Prepositions (where, when, how, something happens)	*Down the middle of the scene, you could see...*
Unusually specific details of setting/character.	*An emerald rug lay messily on the floor, about ___ metre by __ metred in size and smelling of...*

Key word: varied- having lots of different elements.

Make sure your writing is varied!

Accurate intermediate punctuation.

We should be using full stops, capital letters and commas accurately, but to push further we should be consistent at using the below punctuation, too.

Name	Looks like:	How do we use it?
Exclamation mark	!	-To add emotion to a sentence -To show a sentence is a command.
Question mark	?	-To show when there is an end of a question.
Ellipses	...	-To create an additional pause.
Speech marks	" "	-To indicate when something is being said.
Brackets	( )	-To show part of a sentence is extra information
Apostrophes	'	-To show where a letter has gone missing when two words have joined (i.e. don't) -To show something owns something else. (i.e. The cat's fur).

When writing, ask yourself these questions:

-Do I know how to use all of these punctuation pieces confidently and accurately?

-Do I use all of this punctuation regularly in my work, not forgetting any piece?

Literacy

Sparx Maths

Make sure you are regularly testing your knowledge using the resources provided by the school on platforms such as Sparx, Educake and Linguascope. You will have been issued with user names and passwords to access your accounts.

Literacy Knowledge Organiser

Key Punctuation

Full Stop

Full stops are used at the end of a statement.

Question Mark

Use these to indicate a question is being asked.

Comma

Use commas in lists and to separate extra information.

Apostrophe

Use apostrophes to show possession or missing letters.

Colon

Use this to introduce a list or to join two parts of a sentence.

Semi-colon

Use this to join two closely related, equally important parts of a sentence.

Exclamation Mark

Use this to emphasise strong feelings such as shock, surprise or anger.

Brackets

Use these to add extra, non-essential, information to a sentence.

Frequently Misused Words:

✗	✓
Alot	A lot
Would of	Would have
Eachother	Each other
Aswell	As well
Inbetween	In between

Homophones

There – Place or position. **Their** – belonging to them. **They're** – They are.	**Where** – Place or position. **Were** – Plural past tense of 'to be'. **We're** – We are/We were.
To – Preposition to show motion. **Too** – Adverb meaning 'also'. **Two** – Number.	**Your** – belonging to you. **You're** – You are.

Spelling Strategies

Pictures

H +  ear = hear

Invent Mnemonics

Accommodation = Cosy Cottages; Magnificent Mansions

Necessary = 1 collar, 2 socks 

Critical self-checking

Does it look right?

Syllables

Ad – ver - tise - ment

Letter Pattern Links

light bright sight

fight might

Other versions of the word

definite, finite, finish

Word origins

satis – enough

bicycle – two wheels

Dictionary

Look,

Say,

Cover,

Write,

Check

Words within words

business –

bus in ess

separate – there's a rat in separate

Parts of a sentence: subject, verb, object.	**Examples:** Every sentence must have a **subject** and **verb.**
subject: the person or thing carrying out the action. object: the person or thing that receives the action of the verb.	John **ran to the** shops. The opera **was sung by the** soprano.
Active Voice: When the subject of a sentence performs the verb's action, we say that the sentence is in the *active voice.*	**Passive voice:** When the subject is acted on by the verb. The passive voice is always constructed with a different form of *to be* plus the verb's past participle and contains by.
Arthur **read an interesting** novel.	**An interesting** novel ***was*** **read by** Arthur.
The progressive tense: a verb **tense** used to show an ongoing action in progress at some point in time.	**Examples:** The verbs in **the progressive form** use a **form** of "to be" + the present participle (an -ing verb).
Past progressive: contains **was, were** + an **-ing** verb.	She **was playing** football. We **were eating** dinner.
Present progressive: contains **is, are, am** + an **–ing** verb.	He **is reading** a book. They **are making** a cake. I **am painting** a picture.
Main clause: a clause that can form a complete sentence standing alone. Contains a subject and verb. If the main clause comes first no comma is needed.	**Subordinate clause:** a clause, typically introduced by a subordinating conjunction, that adds extra information and cannot stand alone.
I still had energy for my lessons. **I crept inside the room.**	I still had energy for my lessons **even though I cycled to school.** **Although I was feeling scared,** I crept inside the room.
Synonyms: words that have the same or similar meanings.	**Antonyms:** words that have the opposite meaning
talk-speak big-large	hot-cold light-dark

Hyphens: are used to combine words that have a combined meaning or are linked in the grammar of a sentence. They help avoid confusion.	**Examples:** **three-year-old** **rock-forming minerals** **long-term**
Man eating shark- suggests the man is eating shark.	**Man-eating shark** – suggests the shark eats man.
Semi colons, colons and dashes can be used to separate boundaries between two clauses.	**Example:**
Semi colons(;) separate two main clauses and are normally used instead of a coordinating conjunction.	Some people like sweets; others like chocolate.
Colons(:) are used to introduce related information.	He was missing two things: his hat and his coat.
Dashes- can be used in place of a colon when you want to emphasize the conclusion of your sentence.	The house rule is simple- clean up after yourself.
Semi colons, colons and bullet points can also be used in lists.	**Example:**
Semi colons(;) they are also used to separate items in a list that contain commas already.	My dream band would be: Ray, vocals; Arthur, guitar and backing vocals; Rifat, bass; and Tom, drums.
Colons(:) they are also used to present a list.	I ordered the following: eggs, beans, sausage, bacon and a cup of tea.
Bullet points. make a list easier to read. There are no capital letters or full stops needed.	Remember to: • wash up everything in the sink • dry the dishes with the towel • pack everything away on the shelf
Subjunctive form: it is used to express wishes, hopes, commands, demands or suggestions. Usually it is the third-person **form** of the verb with the -s dropped, but the verb to be is a special case.	**Example:** I wish **I were** able to fly. It is vital that she **attend** the meeting. If **I were** you, I'd accept the offer. I demand that they **be** counted again.

Simple tenses	Example
Past - when an action took place at a specific time and is now finished.	I walked into the monster's cave.
Present - when an action is taking place now.	I walk into the monster's cave.
Future - when an action will take place in the future.	I will walk into the monster's cave.

Progressive tenses	Example
Past progressive - used for a continuous action in the past. **The past tense of 'to be' + present participle of the verb (verb ends in –ing).**	I was walking in the monster's cave. He/She was... You/We/They were...
Present progressive - used for an action that is happening at the moment of speaking. **The present tense of 'to be' + present participle of the verb (verb ends in –ing).**	I am walking in the monster's cave. He/She is... You/We/They are...
Future progressive - used for an action that is will be continuing in the future. **The present tense of 'to be' + present participle of the verb (verb ends in –ing).**	I will be walking into the monster's cave. He/She will be... You/We/They will be...

Perfect tense	Example
Past perfect - is used to say when an action was completed in the past. **The past tense of 'to have' + past participle of verb.**	I had walked in the monster's cave.
Present perfect - is used to say when: 1) An action has recently finished using 'just', 2) An action that has started in the past and is still going. 3) The time period has not finished. 4) When the time period is not important or known. 5) The action is repeated in a period between the past and now. **The past tense of 'to have' + past participle of verb.**	I have just walked in the monster's cave. I have worked in the bank for five years. I have not seen her today. I have studied French, Russian and German. I have eaten at that restaurant several times.
Future perfect –is used to say when an action will have been completed in the future. **The future tense of 'to have' + past participle of verb.**	I will have walked in the monster's cave.

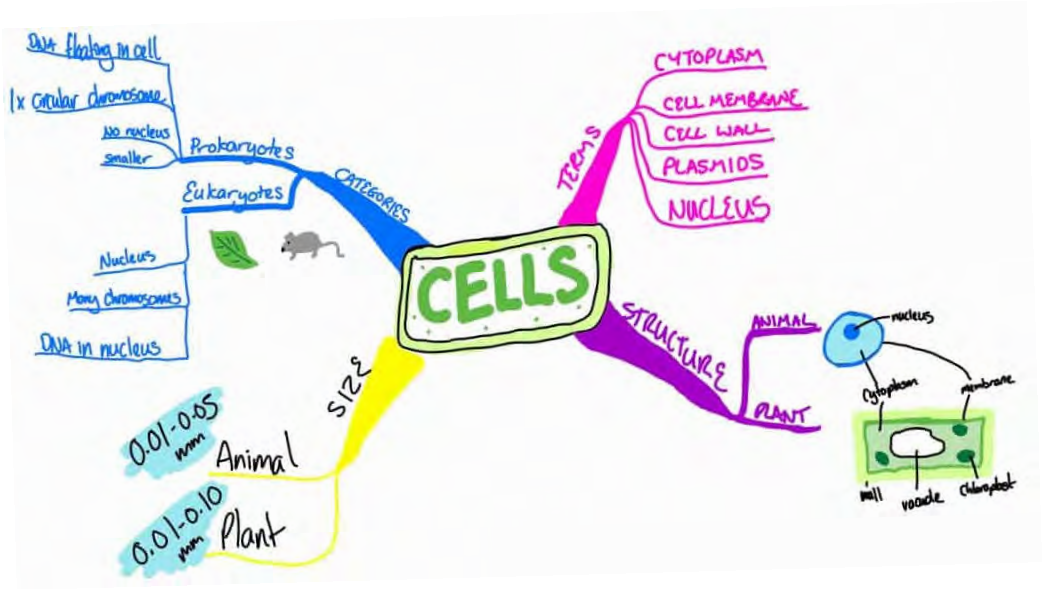
Word class: Nouns	
Proper noun - name, place, month- always starts with a capital letter	e.g. John, South Woodford, March James went to the supermarket.
Concrete nouns - things you experience through your five senses	e.g. table, pencil, chocolate, music In my bag I have many things including an apple.
Abstract nouns - ideas and concepts; you can't touch them	e.g. truth, justice, anger I feel hope for the future.
Pronoun - replaces a proper noun or common noun	e.g. he, she, they, it John had a bookmark; he used it in his book.
Collective noun - a noun that refers to a group of individuals	e.g. herd, class, pack A gaggle of geese were at the pond.

Word class:	
Adjective- describes a noun	e.g. blue, small, gentle The white snow blanketed the floor.
Verb - an action, state or occurrence	e.g. run, was, work The sun is hot so I play in the garden.
Adverb - modifies the meaning of an adjective, verb or other adverb. Expresses manner, place, time or degree	e.g. slowly, regularly, soon I liked the cuddly rabbit best.

Word class: Determiner	A modifying word that determines the kind of reference a noun or noun group has
Article - tells us the definite or indefinite	e.g. a/an, the The tree is beautiful in autumn.
Quantifier - indicates quantity	e.g. few, many, some Lots of fun was had at the party.
Possessives - indicates who it belongs to	e.g. my, its, his That is her coat.
Demonstratives - points to something specific	e.g. this, that, those These computers are for sale.
Numbers - tells us how many	e.g. one, two, three Seven dwarves accompanied Snow White.

Word class:	
Prepositions - show the relationship between the noun or pronoun and other words in a sentence. They describe, for example, the position of something, the time when something happens, or the way in which something is done	e.g. after, in, with He moved here after the end of the war.
Co-ordinating conjunction - a conjunction placed between words, phrases, clauses, or sentences of equal importance (main clause)	e.g. for, and, nor, but, or, yet, so I like chocolate but I don't like sweets.
Subordinating conjunction - a conjunction that introduces a subordinating clause	e.g. while, since, although I went to the cinema after I had eaten my dinner.

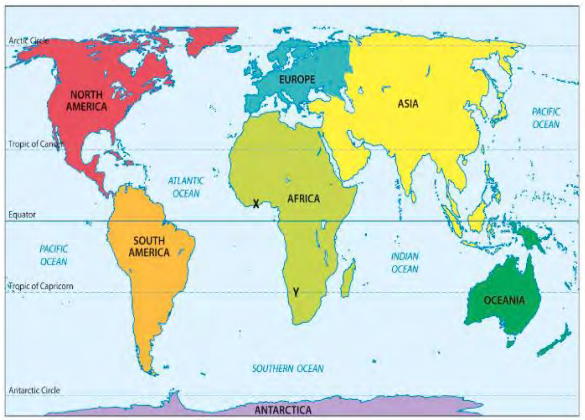
Geography



Organise your ideas into a concept map, like the one below that summarises 'cells'. In a concept map, you take the main ideas and link them together with phrases that explain the relationship between the concepts. But, always try to make the concept map from memory first! Then check it with the knowledge organiser

Africa Knowledge Organiser

What and where is Africa?



Africa is not a country. It is one of the worlds continents. It contains 54 countries many have their own language and Culture.

A little History

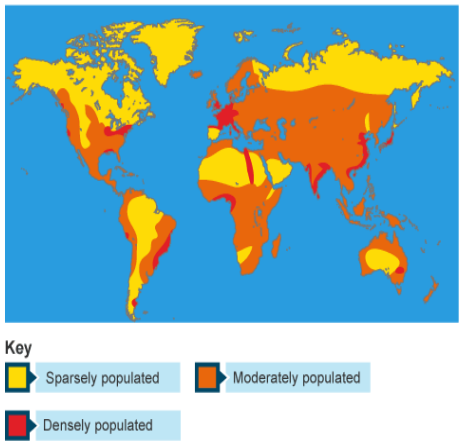
The European colonisers took away resources like gold timber and rubber. So, they got richer, and Africa did not.
European slave traders took at least 10 million Africans to work on plantations in North America this made the Europeans richer

Africa Today

Africa is the second largest continent in both area and population.
Africa has a population of 1.3 billion people.

Africa has a young population, over half are under 20 years old.
60% of African's depend on farming for a living.
There are hundreds of different ethnic groups- many have their own traditions.

Population distribution in Africa



Is Africa a Densely or sparsely populated Continent and Why?

Densely populated: An area that is crowded with People.

Sparsely populated: An Area that has few people living in it.

What are Africa's Main Physical Features

- Sahara Desert
- Mount Kilimanjaro
- Victoria Falls
- Atlas Mountains

- The Nile
- Lake Chad
- Ethiopian Highlands
- Mt Kenya
- Kalahari Desert

Africa Knowledge Organiser

Africa's Biomes

A biome is a large region with its own distinct climate, plants, and animals. The climate dictates the way the biome is like. That's because plants and animals adapt to suit the climate.

Climate Zones

Hot Desert
Hot in the day- cold at night.
Very little rain
Very strong winds
Plants and animals must be able to adapt to the heat and wind

Savanna
The savanna is warm all year, with a rainy season.
It is rolling grassland, with scattered trees.
You may see Lions and elephants

Rainforest
Warm and wet all year.
There are thousands of species of plants.
Animals include chimps and gorillas, many kinds of monkey, snakes, hippos, and hundreds of birds.

Semi Desert.
Life is hard here.
People raise animals: cattle, goats, sheep, camels. Some grow crops such as maize.
Rain often fails leading to plants and animals dying.

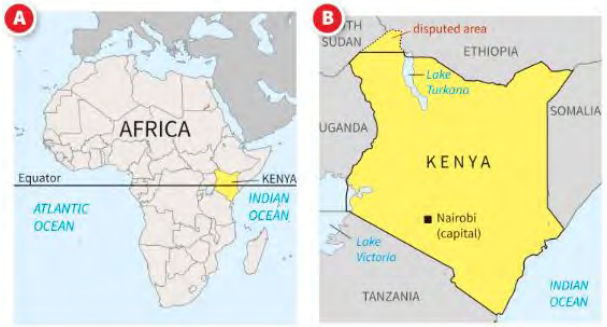
Africa's Natural Wealth

Africa has many natural resources which it can use to earn money.

- It has large deposits of metal ores, including copper, uranium and iron and gold.
- It has 8% of the worlds known oil and gas reserves- and may find more.
- But natural resources are never spread evenly. Only some countries have diamond mines, for example.
- Most of the big companies who extract the ores, diamonds, oil, and gas are in fact foreign companies. Much of their profits leave Africa.
- Most Countries grow **cash crops** like cotton, tea, coffee, rubber, fruits, and flowers for export.
- Most of the exported materials are **processed** in the countries that buy them. For example, copper is turned into electric cables. **This adds value.** Cables can be sold for a lot more than the copper itself.

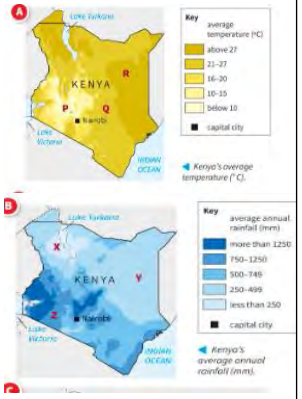
Year 8 Kenya Knowledge Organiser

Where is Kenya?



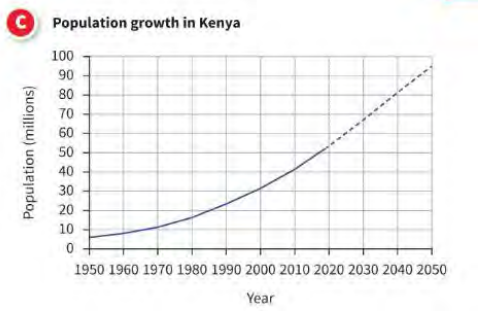
Kenya is a country in East Africa. It lies across the Equator and borders the Indian ocean. Its capital is Nairobi. Look at the disputed area on map B. It is called the Ilemi triangle. Kenya controls it, but south Sudan claims it too.

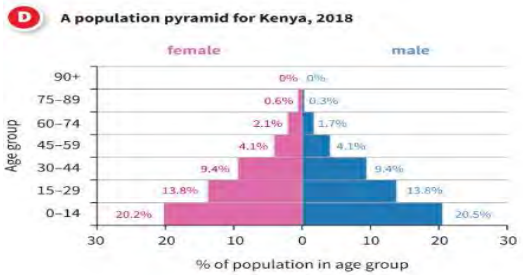
The eastern half of Kenya is low and flat. The high and mountainous land lies in the western half. Mount Kenya is Kenya's highest mountain (5199 m), it is an extinct volcano. Lake Victoria lies west of the rift valley. It is the largest lake in Africa by area.
The Chalabi area is so dry it's a desert.



Kenya lies across the equator, where the sun's heat is the strongest. So, most of Kenya is hot all year round. Most of the rain in Kenya falls in the rainy seasons March-May and October-December.

Population Growth in Kenya





The population is rising fast, by 2050 it is predicted to have a population of 95 million.
There are two reasons for this: Better health care, there are more doctors and clinics. So, people are living longer and less babies are dying.
A high fertility rates most women are having 4 children on average.
Graph D shows a population pyramid. It shows the % of Kenya's population in each age group in any given year.
In 2018 40.7% of the population were under 15.

Nairobi Today

Today, Nairobi is a lively vibrant city, and truly multi-ethnic. The west of the city has wealthier areas, were the people of all races live. The east and the south are low-income areas.

Over 60% of Nairobi's population live in slums. Their homes are shacks with no running water or toilets, and often have no electricity. People queue for public toilets and taps.

Africa Knowledge Organiser

How Kenya Earns money from Flowers?

The flowers are cut. Some are made into bouquets, with supermarket labels. They are put in boxes.	The boxes are taken to the airport in a cooled truck and loaded into cargo plane to the UK.	Within 48 hours, the flowers are in pails in the supermarket, ready for shoppers to buy.

What does everyone do?

Some farmers are pastoralists they rear animals- cattle, goats, camels, and sheep.	Most of Kenya's farmers are subsistence farmers. They grow crops just to feed themselves and their family.	More and more farmers are growing cash crops- crops to sell. Like tea, coffee, fruit, and vegetables. Cash crops can be exported.	A service for sending money by mobile phone. You pay cash at the booth, then text a code to another person, who collects the money at another booth.

On Safari

Kenya's top national parks and reserves

Go on safari in Kenya! See lions, leopards, hippos, rhinos, elephants, giraffes, monkeys, wildebeest, crocodiles and more.
Kenya has 65 **national parks** and **reserves** where wildlife is protected, some are lakes.
The government needs money, it can earn some from tourism and tourism creates jobs.
The local people the Maasai were cleared off their land they have always used for grazing, to make way for the reserves causing conflict.

How's Kenya Doing?

44% of Kenyans have no electricity in their homes.
28% have no access to piped water, at home or in street pipes.
41% have no access to a proper toilet.
1 in 3 live on less than £1.50 per day.
Poverty is worst in the north and northeast of Kenya.

History

You can make your own questions. This process takes a lot of time, but if you create a study group you can each create a few questions and trade. However it is important that you write what Key facts or knowledge you expect to see in any answer.

Year 8 – History Knowledge Organiser – Unit 5 – Why did World War Two happen?

Key Terms

Armistice	Both sides agree to stop fighting for a certain amount of time.
Abdication	A monarch is forced to step down from their role as king/queen.
Republic	A country ruled by the government for the people.
Treaty	An agreement made between countries.
Reparations	Payments made to cover the cost of damages.
Opposition	Going against something.
Traditional	The belief that the way of life that has been carried out in a country should not be changed e.g. women should stay at home and look after children instead of working.

Key events in order

World War One ends in an armistice. Both sides agree to stop fighting in 1918.

→ The Kaiser abdicated and Germany becomes the Weimar Republic.

→ 1919 the Treaty of Versailles is very harsh on Germany and makes it very weak.

→ Adolf Hitler and the Nazi Party gain popularity in Germany.

→ 1933 Hitler become chancellor of Germany. By 1934 Germany is ruled by the Nazi Party.

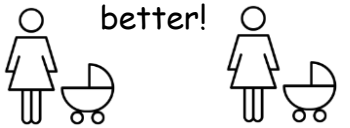
Key changes in Nazi Germany

Dictatorship
Germany became a dictatorship ruled by Hitler as the 'Fuhrer' (father) of Germany. The idea of a republic ended in 1934.

Children
Children were forced to join Nazi youth programmes and education changed to focus on war for boys and motherhood for girls.

Men
Men were encouraged to either work in agriculture to feed Germany or in the armed forces to fight for Germany.

Women
Women were encouraged to not work, to stay home and get married. The more children a women had the better!



Threshold Concepts linked to this unit:

TC23	Germany changed from a monarchy to a republic and ended as a dictatorship between 1918 and 1939
TC24	It is important to use historical perspective when analysing the significance of different groups and events.

Key Fact
The Treaty of Versailles was harsh to try and prevent World War One ever happening again. Many Historians believe that the harshness of the Treaty was the main reason why the Nazi Party was able to take control in Germany.

Year 8 – History Knowledge Organiser – Unit 6 – How significant was World War Two?

Key Terms

World War	A war fought by a large number of countries throughout the world.
Lebensraum	The Nazi idea that Germany needed more space for the German people, this meant taking over other countries.
Evacuation	Removing children and vulnerable people from a warzone to somewhere safer.
Home Front	The actions taken by people in their home country to defend people during a war.
Minorities	Groups of people which make up smaller numbers of the overall population e.g. Jewish people.
Isolationism	The idea that a country removes itself from issues which involve other countries.
Imperialism	The idea of growing an empire by taking over other countries and controlling people from around the world.

Key events in order

September 1939, Nazi Germany invades Poland. World War Two begins.

1940, Italy begins its quest to conquer Africa.

1941, Nazi Germany invades Russia. The USSR change sides.

1941, Japanese bomb Pearl Harbour bringing the USA into the war.

May 1945, Germany surrenders. The war still continues in the Pacific.

Key countries in World War Two

Germany
Under Nazi rule Germany was the cause of World War Two. The Nazi aim to take over more land and eliminate people it didn't see as worthy gave the Allies a clear enemy to fight against.

URRS/ Russia
The USSR started World War Two and a Nazi ally. By 1941 this had changed and the USSR joining with the Allies was one of the key reasons why the Nazi's would lose.

Japan
The Japanese were fighting for control of China and believed that the USA was a threat to their ability to win. Their attack on Pearl Harbour brought the USA into World War Two.

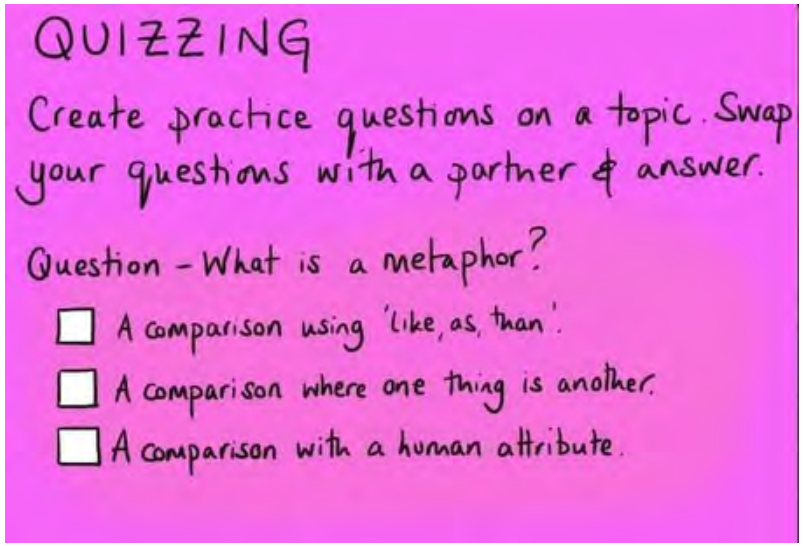
Italy
Under dictator Mussolini, Italy used World War Two to attempt to conquer large parts of Africa to expand the Italian empire. This led to fighting taking place across a number of different continents.

Threshold Concepts linked to this unit:

TC25	World War Two was a global war because of the countries involved as well as the involvement of soldiers and civilians.
TC26	Which events are seen as significant can change based on who is looking back at them and their own personal interpretations based on a number of factors such as their own heritage.

Key Fact
Just like World War One, World War Two was a total war. This means it was fought by soldiers and civilians. It was much clearer why the fighting was happening in World War Two so civilians played an even bigger role in the war.

Maths



You can make your own questions. This process takes a lot of time, but if you create a study group you can each create a few questions and trade. However it is important that you write what Key facts or knowledge you expect to see in any answer.

YEAR 8 - DEVELOPING GEOMETRY...

@whisto_maths

Angles in parallel lines and polygons

What do I need to be able to do?

By the end of this unit you should be able to:

- Identify alternate angles
- Identify corresponding angles
- Identify co-interior angles
- Find the sum of interior angles in polygons
- Find the sum of exterior angles in polygons
- Find interior angles in regular polygons

Keywords

Parallel: Straight lines that never meet
Angle: The figure formed by two straight lines meeting (measured in degrees)
Transversal: A line that cuts across two or more other (normally parallel) lines
Isosceles: Two equal size lines and equal size angles (in a triangle or trapezium)
Polygon: A 2D shape made with straight lines
Sum: Addition (total of all the interior angles added together)
Regular polygon: All the sides have equal length, all the interior angles have equal size.

Basic angle rules and notation (R)

Acute Angles
0°< angle <90°

Right Angles
90°

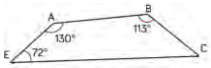
Obtuse
90°< angle <180°

Reflex
180°< angle <360°

Straight Line
180°

Vertically opposite angles
Equal
Angles around a point
360°

The letter in the middle is the angle
The arc represents the part of the angle



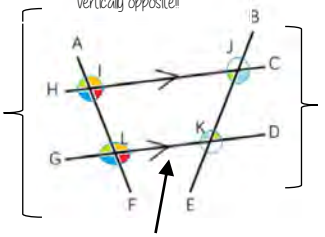
Angle Notation: three letters **ABC**
This is the angle at B = 113°
Line Notation: two letters **EC**
The line that joins E to C

Parallel lines

Still remember to look for angles on straight lines, around a point and vertically opposite!

Lines OF and BE are **transversals** (lines that bisect the parallel lines)

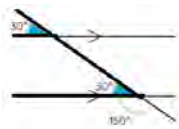
Corresponding angles often identified by their **"F shape"** in position



Alternate angles often identified by their **"Z shape"** in position

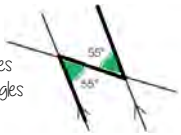
This notation identifies parallel lines

Alternate/ Corresponding angles

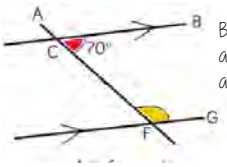


Because alternate angles are equal the highlighted angles are the same size

Because corresponding angles are equal the highlighted angles are the same size



Co-interior angles



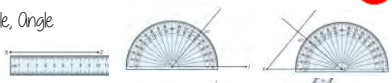
Because co-interior angles have a sum of 180° the highlighted angle is 110°

As angles on a line add up to 180° co-interior angles can also be calculated from applying alternate/ corresponding rules first

Triangles & Quadrilaterals

Link to steps (R)

Side, Angle, Angle



Side, Angle, Side

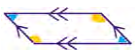
Side, Side, Side

Properties of Quadrilaterals

Square
All sides equal size
All angles 90°
Opposite sides are parallel

Rectangle
All angles 90°
Opposite sides are parallel

Rhombus
All sides equal size
Opposite angles are equal



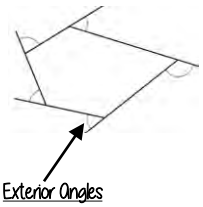
Parallelogram
Opposite sides are parallel
Opposite angles are equal
Co-interior angles

Trapezium
One pair of parallel lines

Kite
No parallel lines
Equal lengths on top sides
Equal lengths on bottom sides
One pair of equal angles

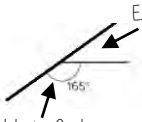
Sum of exterior angles

Exterior angles all add up to 360°



Exterior Angles
Are the angle formed from the straight-line extension at the side of the shape

Using exterior angles



Interior angle + Exterior angle = straight line = 180°
Exterior angle = 180 – 165 = 15°

Number of sides = 360° ÷ exterior angle
Number of sides = 360 ÷ 15 = 24 sides

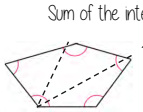
Sum of interior angles

(number of sides – 2) x 180

Interior Angles
The angles enclosed by the polygon

This is an **irregular** polygon – the sides and angles are different sizes

Sum of the interior angles = (5 – 2) x 180



This shape can be made from three triangles
Each triangle has 180°

Sum of the interior angles = 3 x 180
= 540°

Remember this is **all** of the interior angles added together

Missing angles in regular polygons

Exterior angle = 360 ÷ 8 = 45°

Interior angle = $\frac{(8-2) \times 180}{8} = \frac{6 \times 180}{8}$ = 135°

Exterior angles in regular polygons = 360° ÷ number of sides

Interior angles in regular polygons = $\frac{(\text{number of sides} - 2) \times 180}{\text{number of sides}}$

YEAR 8 - DEVELOPING GEOMETRY...

Area of trapezia and Circles

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Recall area of basic 2D shapes
- Find the area of a trapezium
- Find the area of a circle
- Find the area of compound shapes
- Find the perimeter of compound shapes

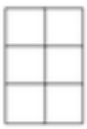
Keywords

Congruent: The same
Area: Space inside a 2D object
Perimeter: Length around the outside of a 2D object
Pi (π): The ratio of a circle's circumference to its diameter.
Perpendicular: At an angle of 90° to a given surface
Formula: A mathematical relationship/ rule given in symbols. E.g. b x h = area of rectangle/ square
Infinity (∞): A number without a given ending (too great to count to the end of the number) – never ends
Sector: A part of the circle enclosed by two radii and an arc.

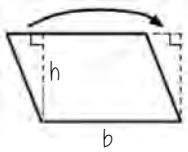
Area – rectangles, triangles, parallelograms

R

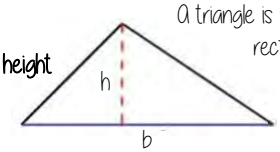
Rectangle
Base x Height



Parallelogram/ Rhombus
Base x Perpendicular height

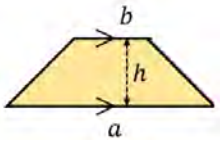


Triangle
½ x Base x Perpendicular height



A triangle is half the size of the rectangle it would fit in

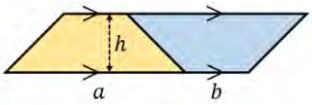
Area of a trapezium



Area of a trapezium

$$\frac{(a+b) \times h}{2}$$

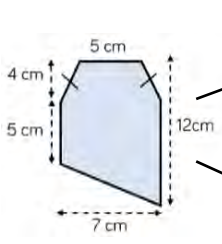
Why?

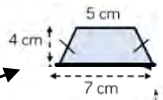


- Two congruent trapeziums make a parallelogram
- New length (a + b) x height
- Divide by 2 to find area of one

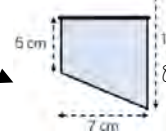
Compound shapes

To find the area compound shapes often need splitting into more manageable shapes first. Identify the shapes and missing sides etc. first.





Shape A - Isosceles trapezium



Shape B- nonstandard trapezium

Units

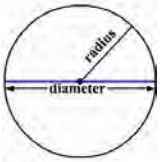
Shape A + Shape B = total area

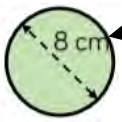
$$\frac{(5+7) \times 4}{2} + \frac{(5+8) \times 7}{2} = 24 + 45.5 = 69.5\text{cm}^2$$

Area of a circle (Non-Calculator)

Read the question – leave in terms of π or if $\pi \approx 3$ (provides an estimate for answers)

Area of a circle
$\pi \times \text{radius}^2$





Diameter = 8cm
∴ Radius = 4cm

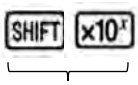
$\pi \times \text{radius}^2$
$= \pi \times 4^2$
$= \pi \times 16$
$= 16\pi$ cm²

Find the area of one quarter of the circle

Radius = 4cm

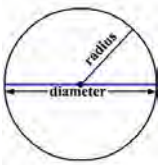
Circle Area = 16π cm²
Quarter = 4π cm²

Area of a circle (Calculator)



How to get π symbol on the calculator

Area of a circle
$\pi \times \text{radius}^2$



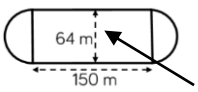
It is important to round your answer suitably – to significant figures or decimal places. This will give you a decimal solution that will go on forever!

Compound shapes including circles

Circumference
$\pi \times$ diameter

Compound shapes are not always area questions. For Perimeter you will need to use the circumference

Spotting diameters and radii



This dimension is also the diameter of the semi circles

Arc lengths = $\pi \times 64$
$= 64\pi$

Don't need to halve this because there are 2 ends which make the whole circle

Arc lengths + Straight lengths = total perimeter

$= 64\pi + 150 + 150$
$= (300 + 64\pi)$ m
OR = 501.1 m

Still remember to split up the compound shape into smaller more manageable individual shapes first

YEAR 8 - DEVELOPING GEOMETRY...

Line symmetry and reflection

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

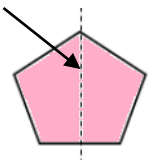
- Recognise line symmetry
- Reflect in a horizontal line
- Reflect in a vertical line
- Reflect in a diagonal line

Keywords

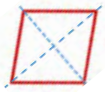
Mirror line: a line that passes through the center of a shape with a mirror image on either side of the line
Line of symmetry: same definition as the mirror line
Reflect: mapping of one object from one position to another of equal distance from a given line.
Vertex: a point where two or more-line segments meet.
Perpendicular: lines that cross at 90°
Horizontal: a straight line from left to right (parallel to the x axis)
Vertical: a straight line from top to bottom (parallel to the y axis)

Lines of symmetry

Mirror line (line of reflection)



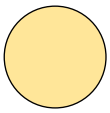
Shapes can have more than one line of symmetry.... This regular polygon (a regular pentagon has 5 lines of symmetry)



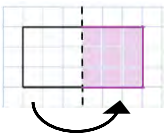
Rhombus
two lines of symmetry

Parallelogram
No lines of symmetry

A circle has an infinite amount of lines of symmetry

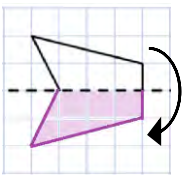


Reflect horizontally/ vertically (1)



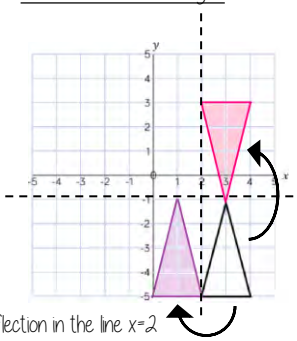
Note: a reflection doubles the area of the original shape

Reflection in a vertical line



Reflection in a horizontal line

Reflection on an axis grid

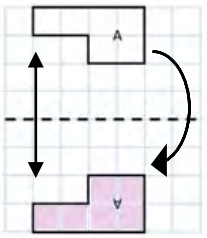


Reflection in the line y=-2

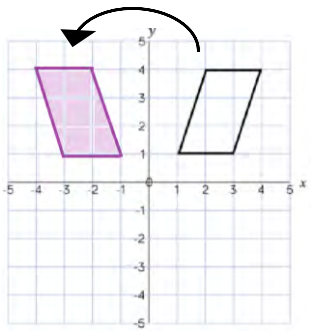
Reflection in the line x=2

Reflect horizontally/ vertically (2)

All points need to be the same distance away from the line of reflection



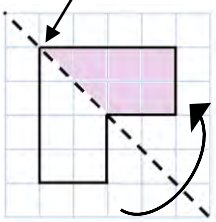
Reflection in the line y axis – this is also a reflection in the line x=0



Lines parallel to the x and y axis
REMEMBER
Lines parallel to the x-axis are y = ____
Lines parallel to the y-axis are x = ____

Reflect Diagonally (1)

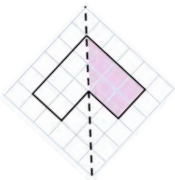
Points on the mirror line don't change position

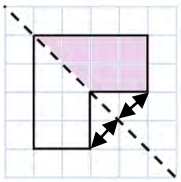


Fold along the line of symmetry to check the direction of the reflection

Turn your image

If you turn your image it becomes a vertical/ horizontal reflection (also good to check your answer this way)



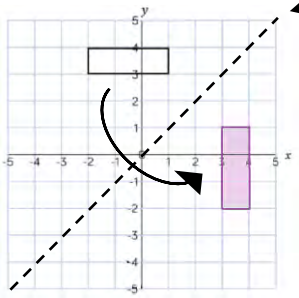


Drawing perpendicular lines

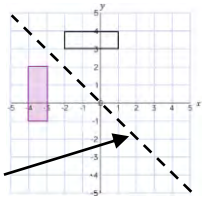
Perpendicular lines to and from the mirror line can help you to plot diagonal reflections

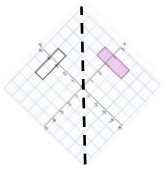
Reflect Diagonally (2)

This is the line **y = x** (every y coordinate is the same as the x coordinate along this line)



This is the line **y = - x**
The x and y coordinate have the same value but opposite sign





Turn your image

If you turn your image it becomes a vertical/ horizontal reflection (also good to check your answer this way)

YEAR 8 - REASONING WITH DATA...

The data handling cycle

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Set up a statistical enquiry
- Design and criticise questionnaires
- Draw and interpret multiple bar charts
- Draw and interpret line graphs
- Represent and interpret grouped quantitative data
- Find and interpret the range
- Compare distributions

Keywords

Hypothesis: an idea or question you want to test
Sampling: the group of things you want to use to check your hypothesis
Primary Data: data you collect yourself
Secondary Data: data you source from elsewhere e.g. the internet/ newspapers/ local statistics
Discrete Data: numerical data that can only take set values
Continuous Data: numerical data that has an infinite number of values (often seen with height, distance, time)
Spread: the distance/ how spread out/ variation of data
Average: a measure of central tendency – or the typical value of all the data together
Proportion: numerical relationship that compares two things

Set up a statistical enquiry

Write a suitable hypothesis → Design a data collection sheet → Pros/ Cons of sampling → Pros/ Cons primary or secondary data → Discrete or continuous data?

Features of a data collection sheet

Grouped or ungrouped categories

Data Title	Tally	Frequency
	𝍸	

Total number of that group observed

Design and criticise a questionnaire

The Question - be clear with the question - don't be too leading/ judgemental

e.g. How much pocket money do you get a week?

Responses – do you want closed or open responses? – do any options overlap? – Have you an option for all responses?

Zero option → ☐ £0 ☐ £0.01 - £2 ☐ £2.01 - £4 ☐ more than £4 ← More option

NOTE: For responses about continuous data include inequalities $< x \leq$

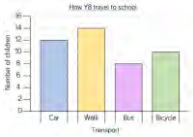
Pictograms, bar and line charts (R)

Represents quantitative data

Pictogram

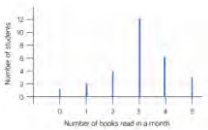
- Need to remember a key
- Visually able to identify mode

Bar Chart



- Gaps between the bars
- Clearly labelled axes
- Scale for the axes
- Title for the bar chart
- Discrete Data

Line Chart

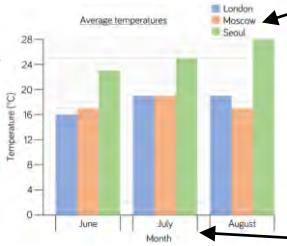


- Gaps between the lines
- Clearly labelled axes
- Scale for the axes
- Discrete Data

Multiple Bar chart

Compares multiple groups of data

- Clearly labelled axes
- Scale for axes
- Comparable data bars drawn next to each other



Key/ Colour code for separate groups of information

Gap between different categories of data

Draw and interpret Pie Charts (R)

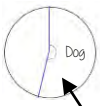
Remember a circle has 360°

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

There were 60 people asked in this survey (Total frequency)

32/60 "32 out of 60 people had a dog"

This fraction of the 360 degrees represents dogs



$\frac{32}{60} \times 360 = 192°$

Use a protractor to draw This is 192°

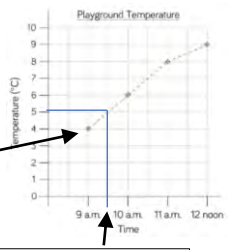
Multiple method
Os 60 goes into 360 – 6 times
Each frequency can be multiplied by 6 to find the degrees (proportion of 360)

Represents quantitative, discrete data

Draw and interpret line graphs

- Commonly used to show changing over time
- The points are the recorded information and the lines join the points

Line graphs do not need to start from 0



More than one piece of data can be plotted on the same graph to compare data

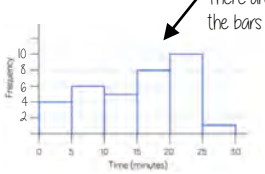
It is possible to make estimates from the line e.g. temperature at 9.30am is 5°C

Grouped quantitative data

Time (minutes)	Frequency
$0 \leq t < 5$	4
$5 \leq t < 10$	6
$10 \leq t < 15$	5
$15 \leq t < 20$	8
$20 \leq t < 25$	10
$25 \leq t < 30$	1

"More than or equal to 25 and less than 30 minutes"

This is a frequency diagram There are no gaps between the bars



The use of inequalities shows that this will be a frequency diagram

Grouping the data is useful if there is a large spread of data to begin with

Find and interpret the range

The range is a measure of **spread**

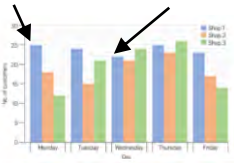
Difference between the biggest and smallest values

A smaller range means there is less variation in the results – it is more consistent data

A range of 0 means all the data is the same value

Shop 1 highest value

Shop 1 lowest value



Shop 1 has the smallest range – this indicates it has a more consistent flow of customers each week

Range of customers = 25 – 22 = 3 (Shop 1)

YEAR 8 - REASONING WITH DATA...

Measures of location

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Understand and use mean, median and mode
- Choose the most appropriate average
- Identify outliers
- Compare distributions using averages and range

Keywords

Spread: the distance/ how spread out/ variation of data
Average: a measure of central tendency – or the typical value of all the data together
Total: all the data added together
Frequency: the number of times the data values occur
Represent: something that show's the value of another
Outlier: a value that stands apart from the data set
Consistent: a set of data that is similar and doesn't change very much

Mean, Median, Mode

The Mean

A measure of average to find the central tendency... a typical value that represents the data

24, 8, 4, 11, 8,

Find the sum of the data (add the values) 55

Divide the overall total by how many pieces of data you have 55 ÷ 5

Mean = 11

The Median

The value in the center (in the middle) of the data

24, 8, 4, 11, 8,

Put the data in order 4, 8, 8, 11, 24

Find the value in the middle 4, 8, 8, 11, 24

Median = 8

NOTE: If there is no single middle value find the mean of the two numbers left

The Mode (The modal value)

This is the number OR the item that occurs the most (it does not have to be numerical)

24, 8, 4, 11, 8,

This can still be easier if it the data is ordered first 4, 8, 8, 11, 24

Mode = 8

Choosing the appropriate average

The average should be a representative of the data set – so it should be compared to the set as a whole - to check if it is an appropriate average

Here are the weekly wages of a small firm

£240	£240	£240	£240	£240
£260	£260	£300	£350	£700

Which average best represents the weekly wage?

The Mean = £307
The Median = £250
The Mode = £240

Put the data back into context

Mean/Median – too high (most of this company earn £240)
Mode is the best average that represents this wage

It is likely that the salaries above £240 are more senior staff members – their salary doesn't represent the average weekly wage of the majority of employers

Identify outliers

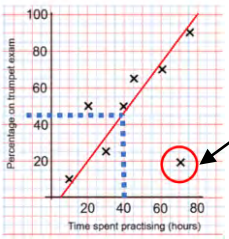
Outliers are values that stand well apart from the rest of the data

Outliers can have a big impact on range and mean
They have less impact on the median and the mode

Sometimes it is best to not use an outlier in calculations

Height in cm
152 150 142 158 182 151 153 149 156 160 151 144

Where an outlier is identified try to give it some context
This is likely to be a taller member of the group
Could the be an older student or a teacher?



Outliers can also be identified graphically e.g on scatter graphs

Comparing distributions

Comparisons should include a statement of average and central tendency, as well as a statement about spread and consistency

Here are the number of runs scored last month by Lucy and James in cricket matches

Lucy: 45, 32, 37, 41, 48, 35
James: 60, 90, 41, 23, 14, 23

Lucy
Mean: 396 (1dp), **Median**: 38 **Mode**: no mode, **Range**: 16

James
Mean: 418 (1dp), **Median**: 32, **Mode**: 23, **Range**: 76

James has two extreme values that have a big impact on the range

"James is less consistent that Lucy because his scores have a greater range
Lucy performed better on average because her scores have a similar mean and a higher median"

Numeracy

Educake

Sparx Maths

Make sure you are regularly testing your knowledge using the resources provided by the school on platforms such as Sparx, Educake and Linguascope. You will have been issued with user names and passwords to access your accounts.

Numeracy Knowledge Organiser

Multiplication and Division Facts:

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Prime Numbers up to 100:

2	3	7	11	13	17	19	23	29	31	37	41
43	47	53	59	61	67	71	73	79	83	89	97

Finding Percentages by hand:

Find **50%**	Divide by **2**
Find **10%**	Divide by **10**
Find **1%**	Divide by **100**

Fraction, Percentages and Equivalents:

Fraction	Decimals	Percentage
1/2	0.5	50%
1/4	0.25	25%
3/4	0.75	75%
1/3	0.3	33.3%
2/3	0.6	66.6%
1/5	0.2	20%
1/10	0.1	10%

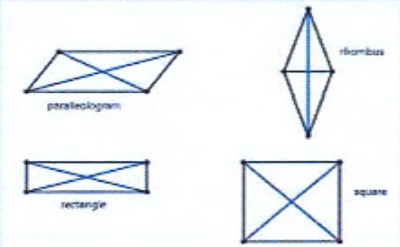
Place Value Table

Million	H Th	T Th	Th	H	T	U	•	Tenths	Hundreths	Thousandeths
1,000,000	100,000	10,000	1000	100	10	1		1/10	1/100	1/1000

2D Shapes

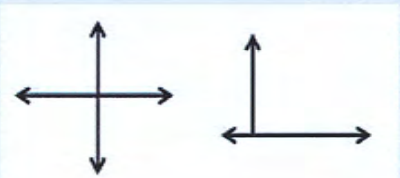
Properties of shapes

Diagonal: A diagonal is a straight line that joins any two corners which are not adjacent. Diagonals do not always cut a shape in half or go through the middle.



Parallel lines: Parallel lines are the same distance apart no matter how long they are. Parallel lines can never cross each other.

Perpendicular lines: Lines are perpendicular if they meet at right angles.

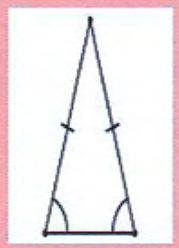


Triangles

Equilateral:

- Three sides are the same length
- Three equal angles

Isosceles:

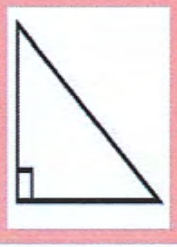


- Two sides are the same length
- Two angles are equal

Scalene:

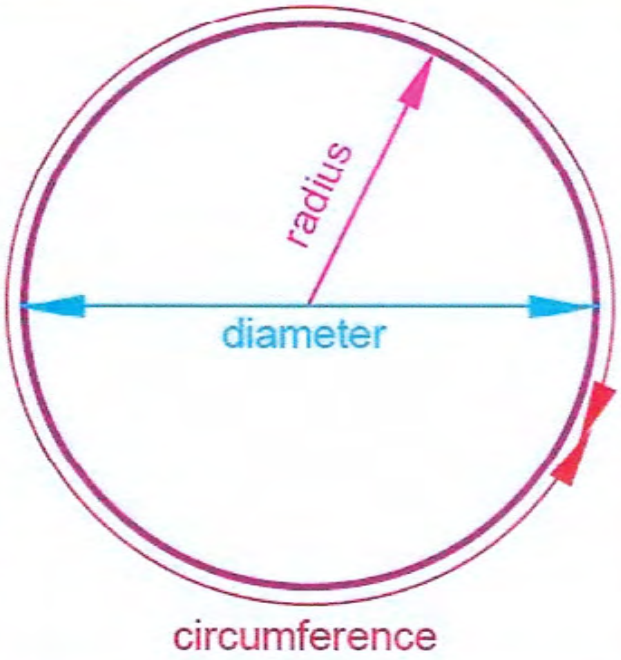
- No sides are the same length
- All angles are different sizes

Right-angled:



- Contains one right angle
- Can be isosceles or scalene

Parts of a circle

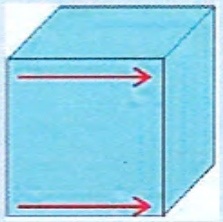


Radius:	A straight line from the centre of a circle to the circumference.
Diameter:	A straight line from one side of a circle to the other. It must go through the centre.
Circumference	The distance all the way round a circle. It is the perimeter of a circle.

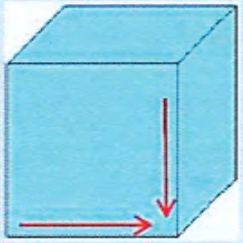
3D Shapes

Edges

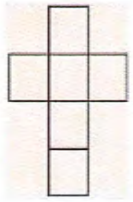
Parallel edges: Parallel edges are the same distance apart no matter how long they are.



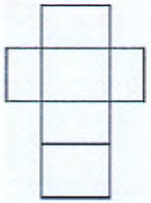
Perpendicular edges: Edges are perpendicular if they meet at right angles.



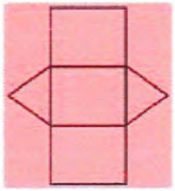
Nets of 3D shapes



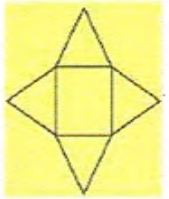
Cube
Faces: 6
Edges: 12
Vertices: 8



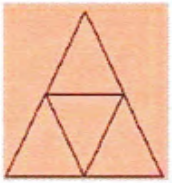
Cuboid
Faces: 6
Edges: 12
Vertices: 8



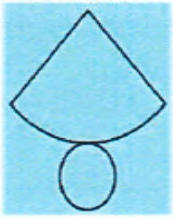
Triangular Prism
Faces: 5
Edges: 9
Vertices: 6



Square-based Pyramid
Faces: 5
Edges: 8
Vertices: 5



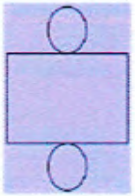
Tetrahedron
(Triangular-based Pyramid)
Faces: 4
Edges: 6
Vertices: 4



Cone
Faces: 2
Edges: 1
Vertices: 0 or 1

Hexagonal Prism
Faces: 8
Edges: 18
Vertices: 12

Hexagonal Pyramid
Faces: 7
Edges: 12
Vertices: 7

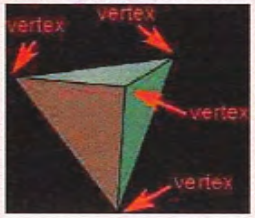


Cylinder
Faces: 3
Edges: 2
Vertices: 0

Vocabulary

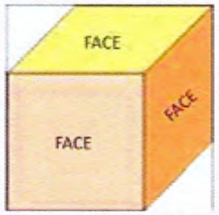
Vertex:

A vertex is a point at which two or more lines meet in an object or shape.



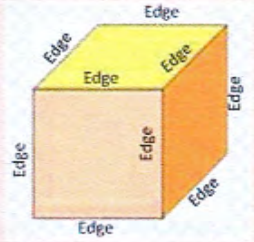
Face:

A face is the side of a solid shape. It usually means flat faces. The base of a shape is also a face.



Edge:

The edge of a shape is where two faces meet. An edge can be curved or straight.

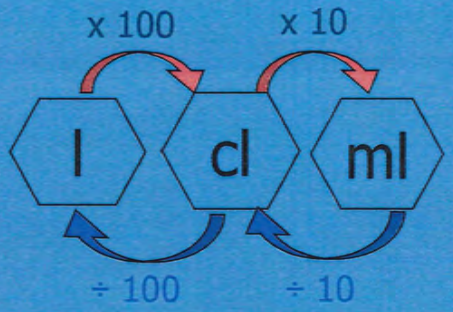


Measurement: Capacity

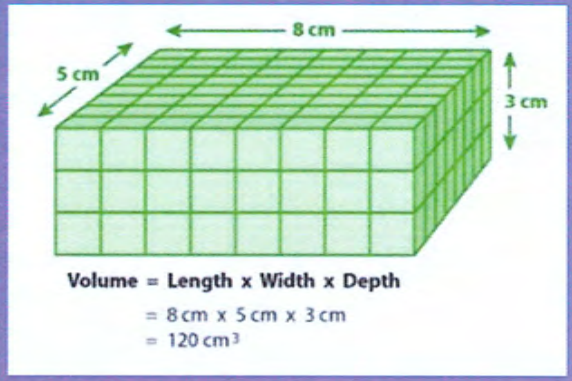
Conversion facts: Capacity
1 litre = 1000 ml
1 cl = 10 ml

Some key vocabulary- word origins			
Milli	one thousand	Mass	How heavy something is
Centi	one hundredth	Capacity	How much something can hold
Kilo	one thousand	Length	How long or wide something is

Key Vocabulary	
Convert	Change from one metric to another. For example: changing from seconds to minutes.
Conversion fact	A fact used to help you convert between metrics. For example: there are 60 minutes in an hour.
millilitre	A unit of measure used to measure a small capacity or volume
litre	A unit of measure used to measure a large capacity or volume
centilitre	A unit of measure used to measure a small capacity or volume



Volume



- To calculate volume: length x width x depth
- What is it?: the amount of space that a substance or object occupies

Example question

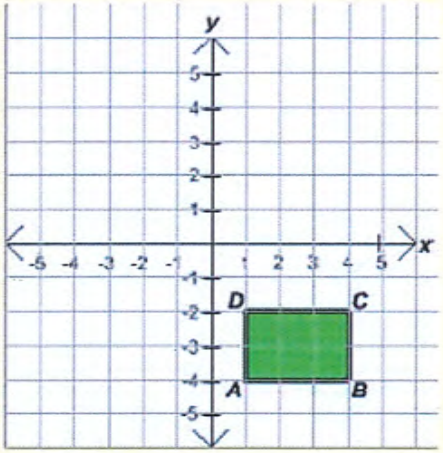
There are two containers. One of them holds 750 millilitres and other 0.5 litres.
Which container holds the greater amount? How much more does it hold? Give your answer in millilitres.

- **Step 1:** Ensure all units are the same. Convert all to millilitres.
- **Step 2:** Use the conversion fact that will help you. In this case it would be that there are 1000ml in 1 litre.
- **Step 3:** Now you are ready to select the correct operation required

What is appropriate to measure with...	
Litres	bottles of water, a bath
Millilitres	a jug of milk, medicine on a spoon, toothpaste
Centilitre	a small glass of liquid

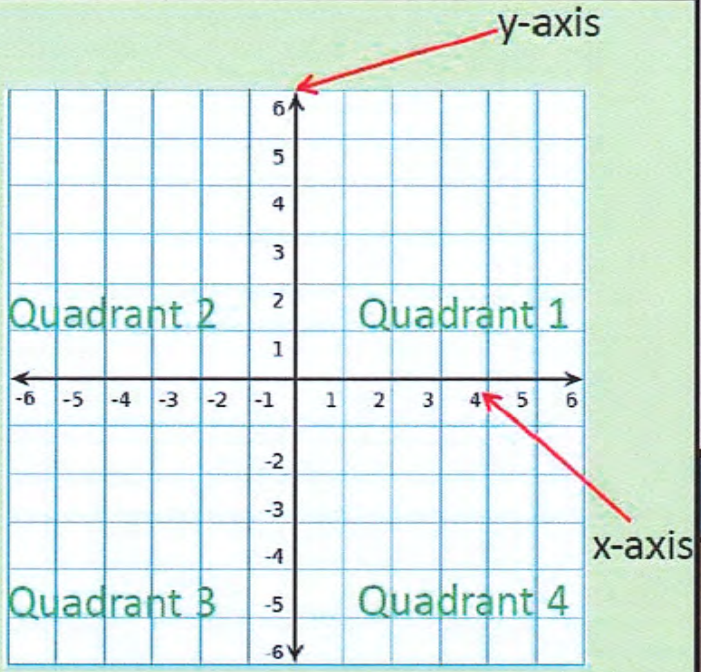
Describing positions

When identifying or plotting points on a coordinate grid, the first number will always represent the **x axis** and the second number will always represent the **y axis.**



E.g. The location of point A is (1, -4)
The location of point B is (4, -4)
The location of point C is (4, -2)
The location of point Dis (1, -2)

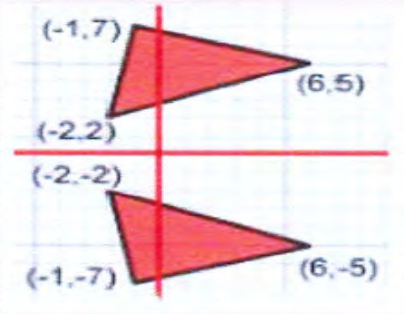
Coordinates



Quadrant	The axes of a graph divide the graph into four quadrants.
x-axis	The horizontal axis of a graph is called the x axis.
y-axis	The vertical axis of a graph is called the y axis.
Coordinates	Coordinates are two numbers or letters that describe a position on maps, graphs and charts.

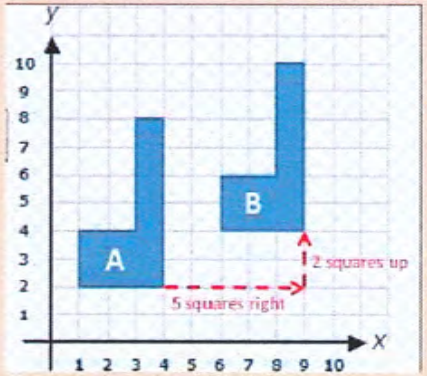
Reflection

When you reflect a shape, you draw its mirror image in a different quadrant/quadrants. The reflected shape will have different coordinates.



Translation

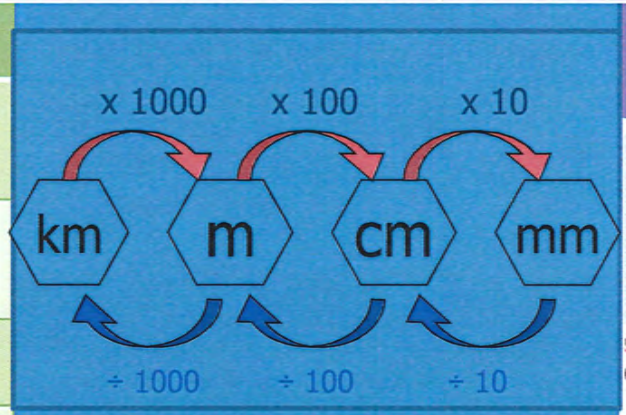
When you translate a shape, you slide it to a different position . You do not turn or rotate the shape. In the example below, shape A has been translated 2 squares up and 5 squares right.



Conversion facts: Length
100cm = 1 m
10mm = 1cm
1 km = 1000 m

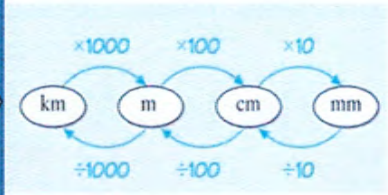
Some key vocabulary- word origins			
Milli	one thousand	Mass	How heavy something is
Centi	one hundredth	Capacity	How much something can hold
Kilo	one thousand	Length	How long or wide something is

Key Vocabulary	
Convert	Change from one metric to another. For example: changing from seconds to minutes.
Conversion fact	A fact used to help you convert between metrics. For example: there are 60 minutes in an hour.
Perimeter	The measurement around the outside of a shape
Area	The amount of space inside the boundary of a flat (2-dimensional) object such as a triangle or circle
Composite shape	A shape that can be divided into more than one of the basic shapes is said to be a composite shape
Metres	the unit of length in the metric system, equal to 100 centimetres
kilometres	a metric unit of measurement equal to 1,000 metres
miles	a unit of linear measure equal to 1,760 yards
metric	A system of measurement using centimetres, metres, kilometres
imperial	Non-metric units: ounce, pound, stone, inch, foot, yard, mile, acre, pint, gallon



Measurement: Length

Example conversion



e.g metres to centimetres:

0.8m = 0.8 x 100
= 80 cm

0.06m= 0.06x100
= 6 cm

What is appropriate to measure with...	
Millimetres	a staple, a pile of papers
Centimetres	a rug, a table, how tall we are
Metres	width of a room, playground
Kilometres	the distance from one city to another, the distance a plane flies

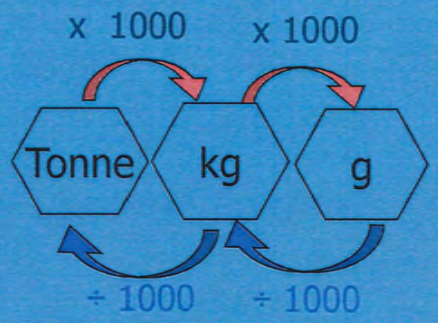
Measurement: Mass

Conversion facts: Mass
1 kg = 1000 grams
1 tonne = 1000 kilograms

Some key vocabulary- word origins			
Milli	one thousand	Mass	How heavy something is
Centi	one hundredth	Capacity	How much something can hold
Kilo	one thousand	Length	How long or wide something is

Key Vocabulary

Convert	Change from one metric to another. For example: changing from seconds to minutes.
Conversion fact	A fact used to help you convert between metrics. For example: there are 60 minutes in an hour.
gram	A metric unit of mass equal to one thousandth of a kilogram.
kilogram	A metric unit of mass equal to one thousand grams
tonne	A tonne is a metric unit used to measure mass or weight. A tonne equals 1000 kilograms



Example conversion

A pineapple has a mass of 2.12 kg.
Find the mass in grams.

1 kg = 1000 g

2.12 →

- Make sure you know your appropriate conversion fact
- Multiply or divide as needed
- Ensure you are using the correct metric units (grams, kilograms)

Example question

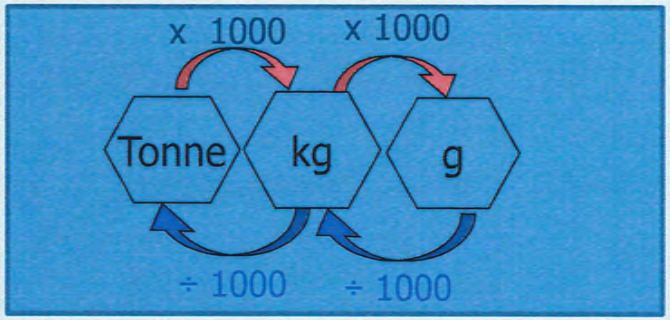
A box contains bags of crisps. Each bag of crisps contains 25 grams. Altogether, the bags of crisps inside the box weight 1 kilogram. How many bags of crisps are inside the box?

- **Step 1:** Ensure all units are the same. Convert all to grams.
- **Step 2:** Use the conversion fact that will help you. In this case it would be that there are 1000g in 1kg.
- **Step 3:** Now you are ready to select the correct operation required

What is appropriate to measure with...	
Milligrams	Medicine, vitamins and other small objects
Grams	paperclips, a loaf of bread
Kilograms	people, a bag of sand
Tonnes	car, truck, a large cargo box

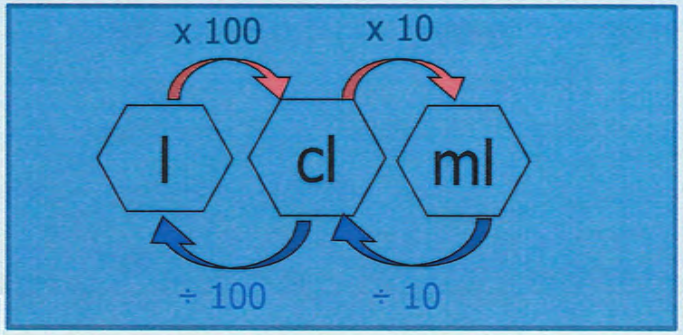
1. Conversion facts: Mass
1 kg = 1000 grams
1 tonne = 1000 kilograms

What is appropriate to measure with...	
Grams	paperclips, a loaf of bread
Kilograms	people, a bag of sand
Tonnes	car, truck, a large cargo box



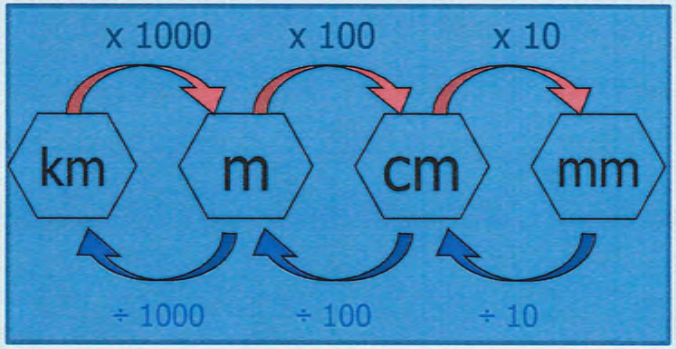
2. Conversion facts: Capacity
1 litre = 1000 ml
1 cl = 10 ml

What is appropriate to measure with...	
Litres	bottles of water, a bath
Millilitres	a jug of milk, medicine on a spoon, toothpaste
Centilitre	a small glass of liquid



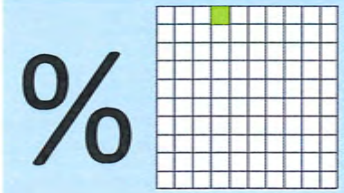
3. Conversion facts: Length
100cm = 1 m
10mm = 1cm
1 km = 1000 m

What is appropriate to measure with...	
Millimetres	a staple, a pile of papers
Centimetres	a rug, a table, how tall we are
Metres	width of a room, playground
Kilometres	the distance from one city to another, the distance a plane flies



4. Some key vocabulary- word origins			
Milli	one thousand	**Mass**	How heavy something is
Centi	one hundredth	**Capacity**	How much something can hold
Kilo	one thousand	**Length**	How long or wide something is

Important ideas

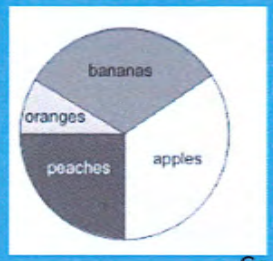


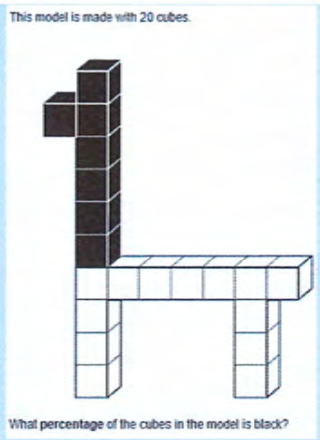
Percent
This is the symbol given to show 'how much' out of 100.

To find 1% divide by 100

To find 10% divide by 10

Pie charts represent 100% of an amount





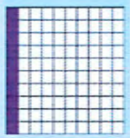
Count the total. 20
Count the black cubes 7.
Represent as a fraction 7/20.
make denomina tor 100
35%

Important equivalences to remember

Percentage	Fraction	Decimal
100%	100 /100	1
75%	75 /100=15/20	0.75
50	50 /100 = 1/2	0.5
25%	25/100 = 1/4	0.25
20%	20/100 =1/5	0.2
10%	10/100 = 1/10	0.1
5%	5/100= 1/20	0.05
1%	1/100	0.01

Percentage to fraction

10%



out of 100

10 /100 simplified to 1/10

Percentage to decimal

Divide the percentage by 100
How many times does the number fit into 100
100 ÷ 10 = 0.1

Key Vocabulary

'of' means multiply	To find 10% divide by 10	Increase rise	Decrease Fall, less

Percentage of an amount question

55% of 640

55% =
10% + 10% + 10% + 10% + 10% + 5%
OR
(10% X 5) + (10%/2)

Find 10%
640 ÷ 10 = 64

Find 5%
(this is half of 10%)
5%=32
55% = (5x64) + (32) =352

Decimal to percentage

0.1 = 10% = 0.10, 0.9=0.90=90%
One decimal place is out of 10

0.01 = 1%, 0.03 = 3%, 0.09=9%
Two decimal places is out of 100

Fraction to percentage

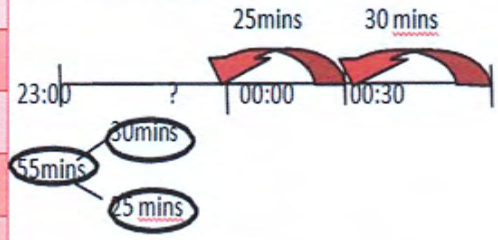
1/5 Multiply whole fraction to make denominator 100

20/100 Take numerator and place % sign
20%

Large Roman Numerals	
50 + 70	L + LXX
100 + 350	C + CCCL
150 + 340	CL + CCCXL
1000 + 3000	M + MMM
500 + 600	D + DC
2018 + 1990	MMXVIII + MCMXC
2550 + 190	MDL + CCXC

Example question

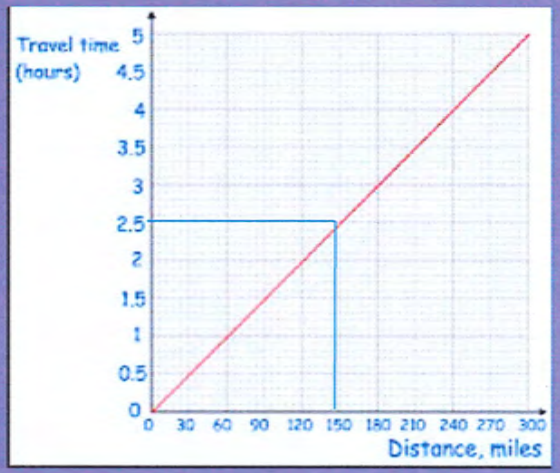
Mr Mowz got off the train at 00:30 on Boxing day. He had travelled for 55 mins. What time did he board the train? What day was it?



00:00—25 mins = 23:35

It was 23:35 on Christmas Day.

Time conversion graph



- This time conversion graph compares time with the distance travelled in miles
- For example, after 2.5 hours the distance travelled is 150 miles
- Always use a ruler to ensure accuracy

Measurement: Time

4. Key Vocabulary

Convert	Change from one metric to another. For example: changing from seconds to minutes.
Conversion fact	A fact used to help you convert between metrics. For example: there are 60 minutes in an hour.
Timetable	A chart showing arrival and departure times
Schedule	A plan for carrying out a process or procedure
Conversion graph	a line graph used to convert one unit to another
Duration	How long something lasts for
Leap year	a year, occurring once every four years, which has 366 days including 29 February
Millenium	a period of a thousand years
Century	a period of one hundred years.

Conversion facts

There are 24 hours in one day

There are 365 days in one year

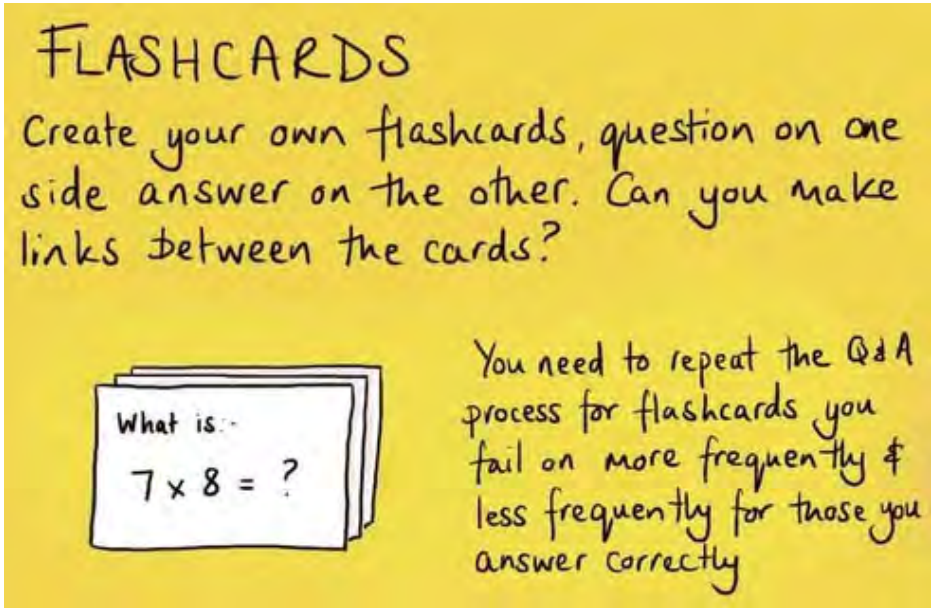
There are 10 years in a decade

There are 100 years in one century

There are 1000 years in a millennium

To convert from seconds to hours: convert to minutes first.

MFL - French



Create a flash card with all the key facts you want to learn (this can be drawn in your book). On the next page try writing down as many facts or as much of the knowledge as you can. If you find you are getting certain facts wrong then these are where you need to focus and relearn.

French Year 8 Summer Term – Paris, je t'adore!

Objective: To have a greater understanding of Parisian culture, and be able to discuss what you do/did on a holiday in Paris.

Threshold Concepts:

- The perfect tense is used to refer to completed past events. To form past participles of regular -er infinitives, the -er is replaced with the suffix -é.
- In French the past participle of regular verbs is formed in three ways, depending on the type of infinitive -er, -ir, or -re
- Certain verbs use "être" as their auxiliary verb to form the perfect tense. These verbs can be memorised using the acronym MRSVANDERTRAMP. The past participle of these verbs must agree with the subject of the verb.

Essential Language – saying what you like doing

j'aime… - I like…
J'adore… - I love…
je n'aime pas… - I don't like
je déteste… - I hate…
aller au cinema (avec mes amis) – going to the cinema (with my friends)
aller aux concerts (rock) – going to (rock) concerts
aller voir des matchs(au Parc des Princes) – going to watch matches (at the Parc des Princes)
faire du roller (au Trocadéro) – roller-blading (at the Trocadéro)
faire les magasins – going shopping
prendre des photos – taking photos
retrouver mes copains – meeting up with my mates

Essential Vocabulary – monuments in Paris

La tour Eiffel – the Eiffel Tower
L'Arc de Triomphe – the Arc de Triomphe
Le musée du Louvre – the Louvre museum
Le Sacré-Coeur - Sacré-Coeur
Les égouts – the sewers
Les catacombs – the catacombs
La cathédrale de Notre-Dame – Notre-Dame Cathedral
Le Centre Pompidou – Pompidou Centre

Essential Language – saying what you did

J'ai passé le 14 juillet à Paris – I spent the 14th July in Paris
J'ai acheté des souvenirs – I bought souvenirs
J'ai envoyé des cartes postales – I sent postcards
J'ai mangé au restaurant – I ate in a restaurant
J'ai beaucoup dansé – I danced a lot
J'ai regardé le defile/le feu d'artifice – I watched the parade/fireworks
J'ai rencontré un beau garçon/une jolie fille – I met a good-looking boy/a pretty girl
J'ai gagné un concours – I won a competition
J'ai passé une semaine à Paris – I spent a week in Paris
J'ai admiré la Pyramide du Louvre – I admired the Louvre Pyramid
J'ai pris des photos – I took photos
J'au vu la *Joconde* – I saw the Mona Lisa
J'ai attendu le bus – I waited for the bus
J'ai très bien dormi – I slept very well
On a fait les magasins – we went shopping
On a bu un coca – we drank a cola
On a fait un tour de la ville en segway – we did a tour of the town by segway
On a fait une balade en bateau-mouche – we went on a boat trip

Essential Language – giving opinions/reasons

C'était comment? – how was it?
C'était… - it was…
génial - great
marrant – funny/a laugh
Cool -
intéressant - interesting
bizarre - strange
nul - rubbish
ennuyeux – boring
ce n'était pas mal – it wasn't bad
beau/belle – beautiful
J'ai trouvé ça… - I found it…
bien - good
cher – expensive
effrayant – scary
fabuleux – wonderful/fantastic





Using **j'aime + the infinitive** to say what you like doing

J'aime aller au cinéma – I like going to the cinema
J'aime prendre des photos – I like taking photos

To say what you don't like doing, use ***je n'aime pas _ the infinitive.***

Je n'aime pas faire les magasins – I don't like going shopping.

* You use the **perfect tense** to say what you did or what you have done.

*To form the perfect tense of **–er** verbs, you use: part of the verb **avoir** (to have) + **a past participle.**

To form the past participle, take off **–er** and replace with **–é.**

visit**er** = visit**é**

J'ai visité – I visited/I have visited
Tu as visité – You visited/you have visited
Il/elle a visité – he/she visited/he/she has visited
On a visité – we visited/we have visited

Some verbs form their perfect tense with **être** (not with **avoir**).

You add an extra **–e** to the past participle in the feminine and an extra **–s** in the plural.

aller(to go)
Je suis all**é(e)**
Tu es all**é(e)**
Il/elle est all**é(e)**/on est all**é(e)s**
Nous sommes all**é(e)s**
Vous êtes all**é(e)(s)**
Ils sont all**és**/ells sont all**ées**

Music

Educake

Sparx Maths

Make sure you are regularly testing your knowledge using the resources provided by the school on platforms such as Sparx, Educake and Linguascope. You will have been issued with user names and passwords to access your accounts.

Music for Ensembles

A. Texture

MONOPHONIC	A single melodic line.
HOMOPHONIC	A chordal style or melody and accompaniment: moving together.
POLYPHONIC	A more complex (contrapuntal) texture with a number of different lines.
Melody and accompaniment	A tune with accompaniment (e.g. chords).
Unison	All parts play/sing the same music at the same time.
Chordal	The music moves in chords (e.g. like a hymn/ chorale).
Descant	A decorative, higher pitched line.
Countermelody	A new melody, combined with the theme.
Round	A short (vocal) canon.
Canon	The melody is repeated exactly in different parts but starting at different times, with parts overlapping.
Drone	Long held notes.
2-3-4 part texture	Textures which have 2/3/4 different lines.

B. Jazz and Blues

Scat: vocal improvisation using wordless /nonsense syllables.

Improvised: music made up on the spot.

Blue notes: flattened 3rd, 5ths and 7ths.

Syncopation: off-beat accents.

Call and Response: a phrase played/sung by a leader and repeated by others.

Walking bass: bass line that 'walks up' and down the notes of a scale/arpeggio.

Swing style: 'jazzy' rhythm with a triplet/dotted feeling.

A jazz ensemble may contain:

Rhythm section

Drums

Bass (guitar or double bass)

Piano/guitar

'Horn section'

- Trumpet
- Trombone
- Saxophone

Some groups use a wider range of instruments e.g. clarinet, violin

12 Bar Blues in C

C	C	C	C
F	F	C	C
G	F	C	C/G

C. Musical Theatre

Musical numbers may include:

Solo: a song for one singer.

Duet: a song for two singers.

Trio: a song for three singers.

Ensemble: a song sung by a small group.

Chorus: a large group (usually the full company/cast).

Recitative: a vocal style that imitates the rhythms and accents of speech.

Overture: an orchestral introduction to the show, which usually uses tunes from the show.

The orchestra /band is used to **accompany** the voices and **underscore.**

D. A piece of music for:

Soprano – high female voice

Alto – low female voice

Tenor – high male voice

Bass – low male voice

A piece of music for:	
DUET	2 performers
TRIO	3 performers
QUARTET	4 performers
QUINTET	5 performers
SEXTET	6 performers
SEPTET	7 performers
OCTET	8 performers

PE

Year 8 PE Summer Knowledge Organiser

Students will start to learn and understand the short term effects of exercise on the body, what it means to have good communication skills and starting to demonstrate components of fitness in physical activity.

Head

Explain & Understand

It is important you are able to explain what happens to our bodies during and after exercise. Here are some questions to think about:

- How do you feel during exercise?
- What is physically happening to your body during exercise?
- How do you feel immediately after exercising?
- What has changed compared to before you exercised?

Heart

Communication

You will need to show good communication skills in PE. To communicate effectively you have to:

- Speak clearly, and loud enough for all to hear.
- Use eye contact when getting a message across.
- Use kind words, that all will understand.

- Can you think of a time where you have had to show good communication skills?

Hands

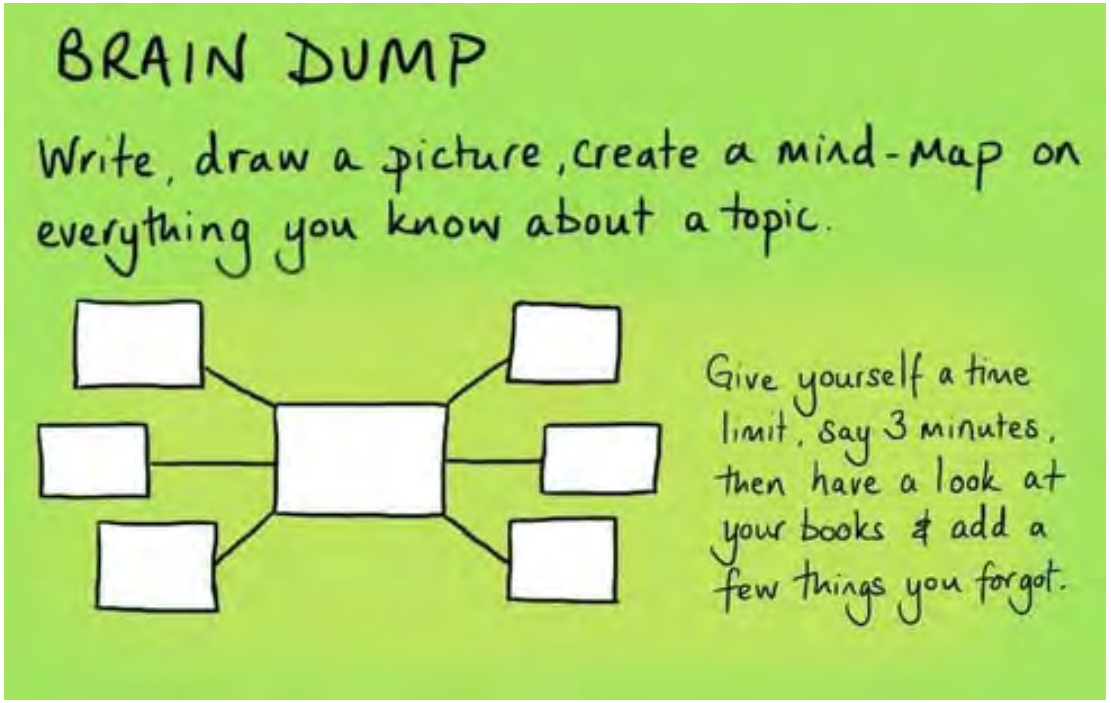
Components of Fitness

To be physical 'fit', there are many different areas you can work on:

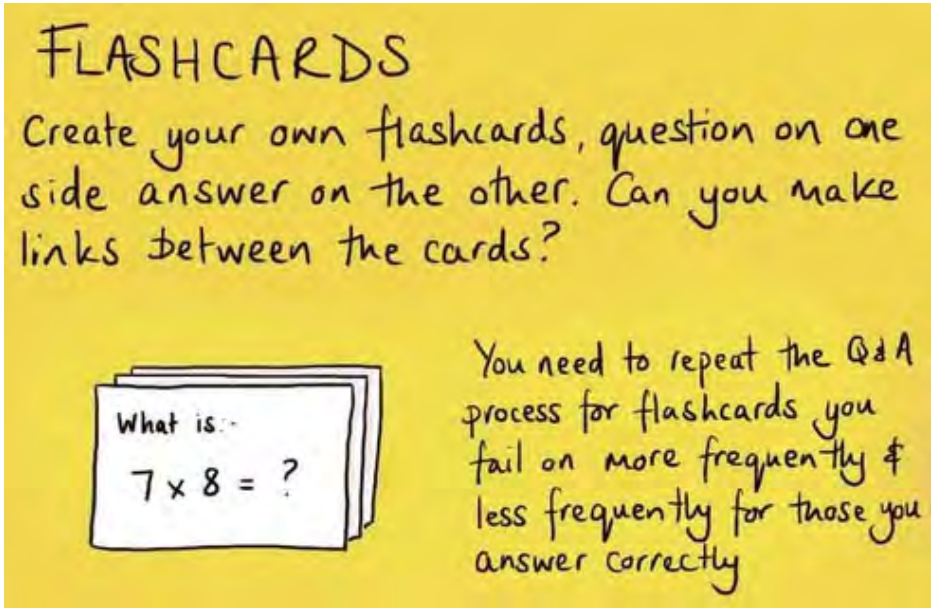
- Balance
- Agility
- Speed

See if you can research the definitions of the above components of fitness, and link them to a sport.

PSHE


BRAIN DUMP
Write, draw a picture, create a mind-map on everything you know about a topic.
Give yourself a time limit, say 3 minutes, then have a look at your books & add a few things you forgot.

RS



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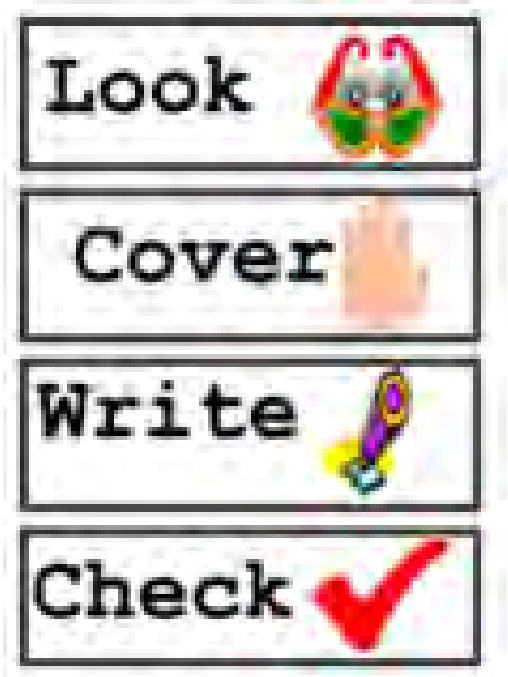
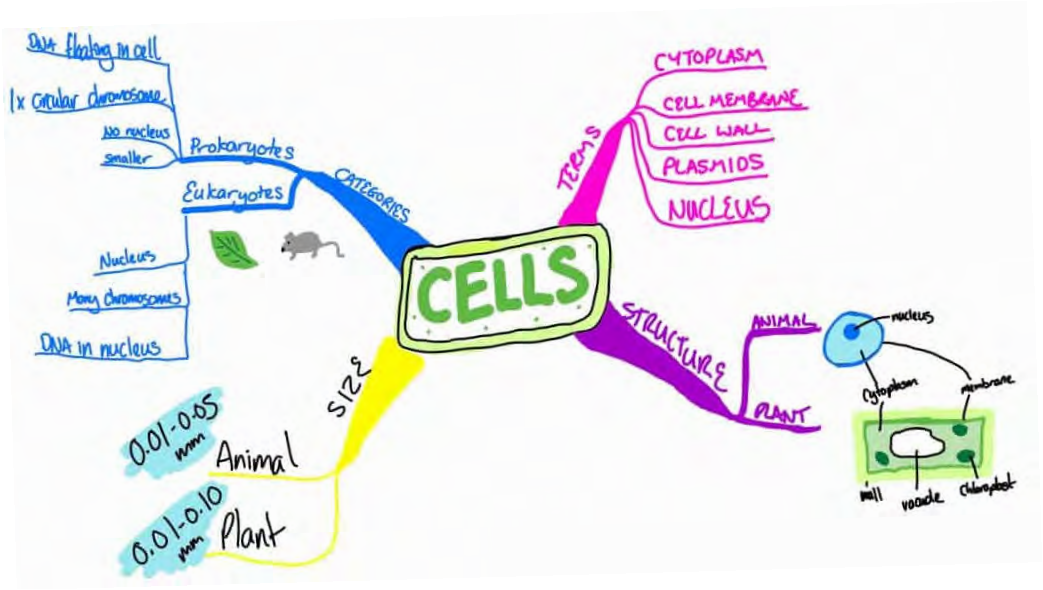
RSE



Read through your knowledge organiser. Next, cover it up or put it away and try tho write down as many of the key facts that you can remember. Use your knowledge organiser to check the fact you have written down. Correct any you may have got wrong.

Science



Organise your ideas into a concept map, like the one below that summarises 'cells'. In a concept map, you take the main ideas and link them together with phrases that explain the relationship between the concepts. But, always try to make the concept map from memory first! Then check it with the knowledge organiser

Bioenergetics

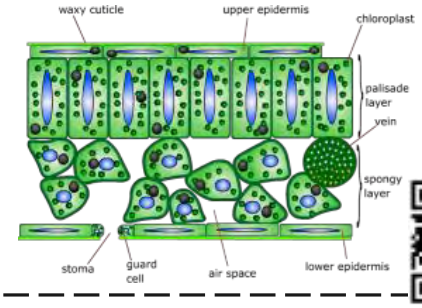
Threshold Concept

Respiration and photosynthesis are chemical processes that provide plants and animals with energy.

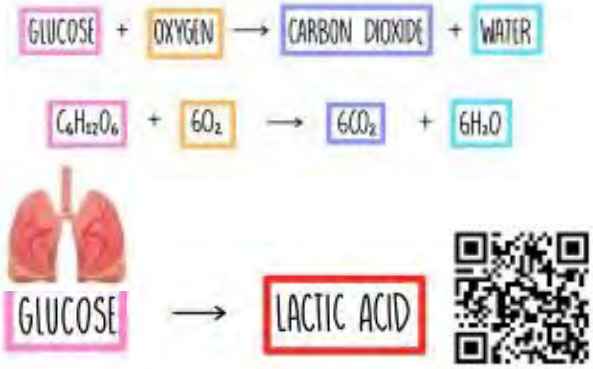
Keywords

- **Respiration:** Respiration is the body's way of producing energy from the food we eat. It involves the breakdown of glucose in the presence of oxygen into carbon dioxide and water with the release of energy-generating molecules called ATP.
- **Photosynthesis:** is a chemical reaction that takes place in the chloroplasts of green plant cells, where light energy is used to convert carbon dioxide and water into glucose and oxygen.
- **Energy:** The ability to do work
- **Limiting factors:** Limiting factors affect the rate of a reaction. A limiting factor is a condition, that when in shortage, slows down the rate of a reaction.
- **Reaction:** A chemical reaction is when one or more substances change and produce one or more new chemical substances.

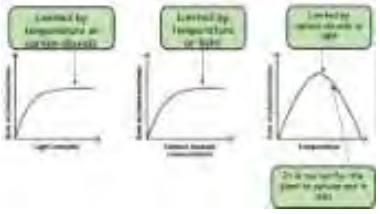
Structure of the leaf



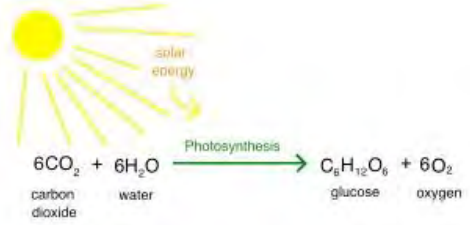
Respiration



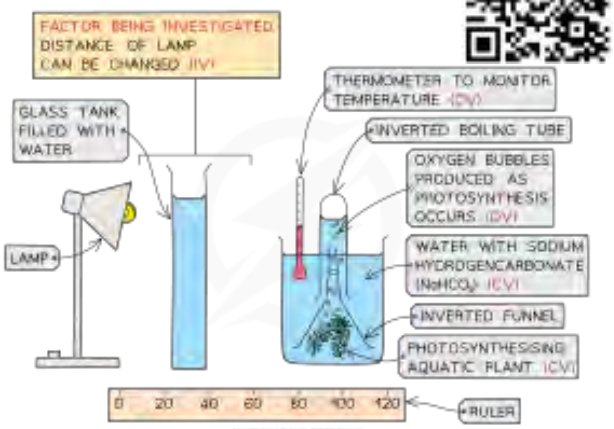
Limiting factors of photosynthesis



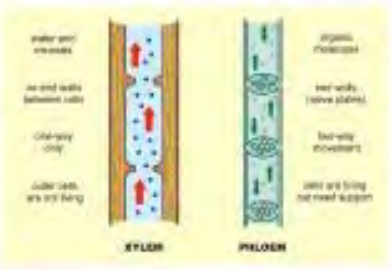
Photosynthesis



Required practical



Xylem and Phloem



Equations for this topic

Bonding Part 2

Threshold Concept

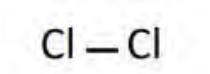
How do 100 elements make up everything in the universe?

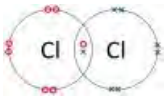
Keywords

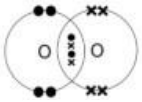
Electron - a subatomic particle with a negative charge
Electrostatic attraction - strong attraction between oppositely charged ions
Weak intermolecular forces - force of attraction between atoms, elements and molecules
Delocalised electron - free moving electron that isn't a part of any atom
Ion – a charged particle

Covalent bonds

Two non-metals will form a covalent bond. The atoms share electrons to make themselves stable.





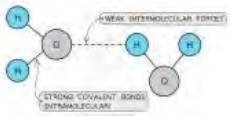


1 shared pair = a single bond
2 shared pairs = a double bond
3 shared pairs = a triple bond

Simple Covalent compounds

Simple covalent compounds have strong covalent bonds between atoms and weak intermolecular forces between molecules

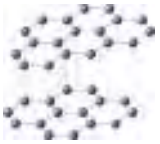
Properties – low m.p and b.p
- cannot conduct electricity



Giant Covalent Structures

Diamond

Graphite



Silicon dioxide

Graphene

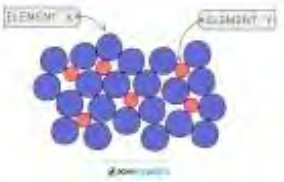
Fullerenes

Metallic bonding

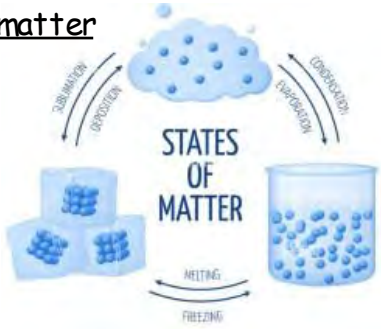
Metals consist of a giant metallic structure They are positive metal ions surrounded by a sea of delocalised electrons

Alloys

Alloys are a mixture of metals and anoth element.
Alloys are stronger than metals as the different sized atoms distort the layers



States of matter



EM Spectrum

Threshold Concept

Electromagnetic waves are waves in different frequencies

Keywords

Frequency: The number of complete waves passing a certain point per second,or the number of waves produced by a source per second. Measured in Hertz, Hz

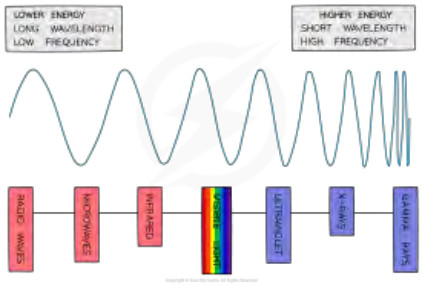
Wave: An oscillation that transfers energy without transferring any matter

Spectrum: Used to classify something in terms of its position on a scale between two extreme points.

Energy: Is a key principle in physics, as it allows work to be done

Speed: The maximum rate at which an individual is able to perform a movement or cover a distance in a period of time

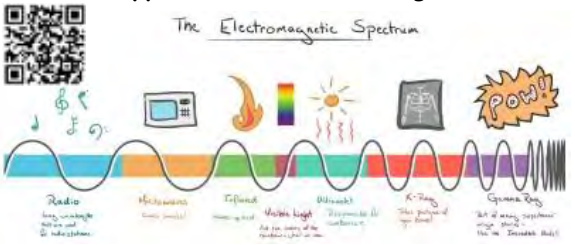
Types of electromagnetic waves:



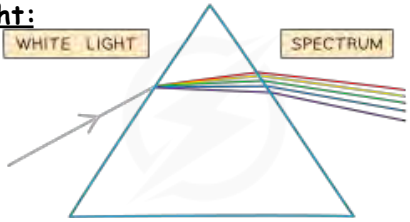
Properties of electromagnetic waves;

GAMMA RAYS	Wavelength: around 1 pm	Source: Nuclei	Detector: Film, Geiger counter Properties/uses: Medical: sterilising food; checking metal castings; checking water flow
X-RAYS	Wavelength: around 1 nm	Source: Atoms	Detector: Film Properties/uses: Medical X-rays; defects in metals; checking paintings
ULTRA VIOLET	Wavelength: 0.001 – 0.4 μm	Source: Atoms	Detector: Skin, film Properties/uses: Sun tan; sun burn; theatre; checking documents; microscopes
VISIBLE	Wavelength: 0.4-0.7 μm	Source: Atoms	Detector: Eye, film Properties/uses: We use it to see the world around us
INFRA RED	Wavelength: 0.7-10 μm	Source: Atoms	Detector: Skin, thermometer, film Properties/uses: Physiotherapy; night sight; locating people trapped in smoke or ruins; Remote controls
MICROWAVES	Wavelength: 1 mm – 50 cm	Source: Electronics	Detector: Aerial Properties/uses: Microwave ovens; radio telescopes; radar
TELEVISION	Wavelength: around 50 cm	Source: Electronics	Detector: Aerial Properties/uses: Television
RADIO	Wavelength: 1 m – 1500 m	Source: Electronics	Detector: Aerial Properties/uses: Radio communication

Uses and applications of electromagnetic waves

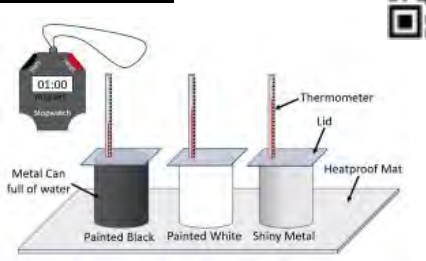


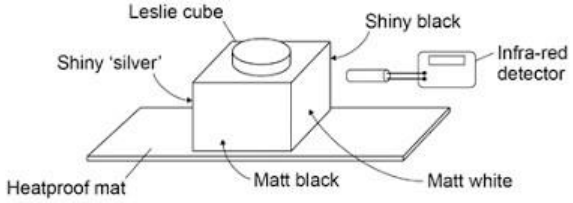
Visible light:



Required practical:

EM infrared RP





Communications:

Electromagnetic radiation is used for communications and transmission of information. The waves that are used in this way are radio waves, microwaves, infrared radiation and light.

Equations for this topic

wave speed = frequency × wavelength	$v = f\lambda$
time period = $\frac{1}{\text{frequency}}$	$T = \frac{1}{f}$