YEAR 7

Knowledge Organisers

The Bishops' Blue Coat
Church of England
High School

My Year 7 Knowledge Organisers

Students achieve academically whilst growing personally and spiritually… enabled to… flourish and have, "life in all its fullness" (John 10:10)

Name:

Form:

Year 7 Knowledge Organisers

Knowledge organisers contain the **core** knowledge you need, for a specific **topic**.

This suite of knowledge organisers exists so that you can know more and remember more, over time.

Typically they will include: Keywords and definitions and key facts and concepts. They may include tables, diagrams or examples. Some might signpost other resources for you to check out.

Knowledge organisers will look different across your subjects as your subjects are all different in:

- ✓ The facts to be known
- ✓ How these facts are known
- ✓ Knowing how to do a particular skill or task

You will use these in class, for your homework, and to revise for assessments and end-of-year examinations. You will need to look after them and make sure you have them ready for every lesson.

Your teachers will plan lessons that include these knowledge organisers and train you to use them well. They may set homework linked to these knowledge organisers. Your end of year examinations will assess you on how well you remember, know and apply this knowledge.

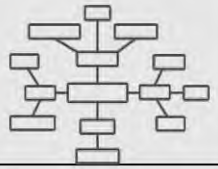
Over to you

Use the check list below to record how many times you have used your knowledge organiser for revision:

Art	O O O	**History**	O O O
Drama	O O O	**ICT**	O O O
Design & Technology	O O O	**Maths**	O O O
English	O O O	**Music**	O O O
Food & Nutrition	O O O	**Religious Education**	O O O
French	O O O	**Science**	O O O
Geography	O O O	**Spanish**	O O O

Name:	**Form:**

How to use a knowledge organiser

	Self-assess	Learn keywords	Learn key facts/concepts	Test
Idea 1	**Learning programme** - use your learning programme in your exercise book to self-assess the knowledge. Use smiley faces or a RAG-rate colour system.  Start revising the knowledge you are least secure with.	**Flash cards** – write the keyword on one side and the definition on the other. You can now test your knowledge of keywords from the definitions or definitions from a keyword.  OR you could create two separate cards to match up keyword and definition.	**Mind map** – write the topic in the centre of a page. For each part of the topic give a different section of the mind map (ideally using different colours for each section). Transform the knowledge into words and pictures and make connections between facts. 	**Self test** – write your own mini quiz based in the knowledge organiser. Answer your own questions and then check and mark! 
Idea 2	**RAG-rate** your knowledge on the knowledge organiser using three different colours (ideally red/amber/green). Start revising the information in red first as this knowledge is least secure. 	**Picture glossary** – write the keyword and definition along with an illustration to help you visually remember the meaning. 	**Labelled diagrams** – bring a key concept to life with labels, applying the knowledge in the knowledge organiser. 	**Friends and family** – ask those close to you to test you on the knowledge. If this is a friend in Year 7 this doubles up as their revision too! 
Idea 3	**Scribble sheet** – on a separate sheet, write down everything you already remember from the topic. Now cross-reference this with the knowledge organiser. - **Correct any mistakes you made.** - **Add new knowledge to your scribble sheet in green pen.** 	**Practice questions** – use the knowledge organiser glossary as you practise writing/answering questions. Use a highlighter each time you use a keyword in a sentence. 	**Get creative:** - Post it notes - Timeline - A comic strip - Rhymes - Use an app on your phone - Words on a paper aeroplane 	**Scribble sheet** – on a separate sheet, write down everything you can now remember from the topic. Again, cross-reference this with the knowledge organiser. - **Correct any mistakes you made.** - **Add new knowledge to your scribble sheet in green pen.** - **Is there less green?** 

Contents

ENGLISH

Knowledge Organiser

Genre: What is Fantasy Literature?

Fantasy literature is literature set in an imaginary universe, often but not always without any locations, events, or people from the real world. Magic, the supernatural and magical creatures are common in many of these imaginary worlds.

Vocabulary: what words will help me write about this topic?

Suggests
Emphasises
Highlights
Connotes
Because
Infer
Implies

Key skills: what skills will I need to use on this topic?

Identify
Find information in a text. This might be about a character or an event.

Quotation
A group of words taken from a text or speech to support your ideas.

Connotations
A connotation is what a word reminds you of or what you associate it with.

Analyse
Zooming on in details in the text, exploring the effects of them on the reader.

Infer
Making a prediction or suggestion about something based on evidence.

Reflect
Think deeply and carefully about the strengths and weaknesses of my own work.

Model Paragraph

Year 7 Knowledge Organiser Fantasy Reading

Pullman uses a lot of adjectives and violent verbs in the text about the attack on Lyra's daemon. This is seen in the quotation "but the fox daemon tore at the cat pan and Lyra felt the pain in her own flesh". This suggests that the attackers are very violent and mean. The verb 'torn' tells me that it was a lot of pain. The reader would feel scared for Lyra's daemon as it would die.

Key texts and authors: who are some of the famous writers and texts I'll be learning about?

Roald Dahl
The Witches
Charlie and the Chocolate Factory

Darren Charlton
Wranglestone

Greek Myth
Hercules
Theseus and the Minotaur

Elizabeth Lim
Six Crimson Cranes

Philip Pullman
Northern Lights

Useful sentence starters: how can I begin my sentences and paragraphs effectively?

P- **Point:**
The writer has used (device) to develop the idea of…

E- **evidence:**
She/he says "…"

A- **analysis:**
This suggests… because… The word (type) has connotations of…

D- **development**: You could also say…
This makes the reader feel…

Writers' devices: what terminology do I need in order to analyse writers' devices?

Noun: person/place/thing
Verb: action/state of being
Adjective: describes a noun
Adverb: describes a verb
Simile: comparison – like/as
Metaphor: comparison – one thing is another thing
Preposition: tells you where something is
Narrative perspective: who is telling the story. Is it a first or third person narrative?
Symbolism: using a symbol to represent an idea

Year 7 Knowledge Organiser Fantasy Writing

Writing conventions: What are the key conventions of writing descriptively?

Zooming in

Show don't tell

Sensory description

Sentence variety

Imagery

Paragraphs for effect

Vocabulary: what words will help me write about this topic?

- Mystical
- Majestic
- Enchanting
- Radiant
- Celestial
- Conjure
- Illusion
- Ancient
- Valiant
- Destructive

Writers' devices: what devices do I need to use to make my writing interesting?

Simile
A comparison between two dissimilar objects that uses the word "like" or "as."

Metaphor
Suggests what something is like by comparing it with something else and saying it "is" that.

Personification
Personification is when you give human qualities to something that isn't human

Onomatopoeia
Onomatopoeia is a word that names a sound, but also sounds like that sound

Adjectives
An adjective is a word that describes an animal, person, thing, or thought.

Verbs
A verb is a word used to describe an action, state or occurrence.

Model Paragraph

The setting sun burst through the cotton-candy clouds and illuminated the crumbling bridge that stood between us and the looming castle. Exhausted, terrified, hungry; we took one cautious step at a time. The crunch of gravel beneath our feet and the whistle of falling stones caused the butterflies in my stomach to twist and turn and somersault. Sweat poured from my brow and my legs trembled like an hour-year-old horse standing for the first time. Not far to go.

A thundering roar echoed in the distance. We froze. Blood pounded in our ears; we gripped each other's hands tightly. Our eyes widened until our pupils swallowed our irises. Each of us silently asked the question; what was that?

Sentence types: how can I vary my sentences?

Present participles
Singing, she cleaned her room.

Tricolons
Exhausted, terrified, hungry; we took one step at a time

Adverbs
Cautiously, I made my away across the bridge.

Sentence length
A mixture of short, medium, and long.

Key punctuation: what punctuation do I need to use in my writing?

Exclamation mark
Used to convey extreme emotion. !

Question mark
Indicates that a question is being asked. ?

Omissive Apostrophes
Shows a contraction of two words and omission of a letter. ’

Possessive Apostrophes
Indicates who something belongs to. ’

Commas
To separate clauses in a sentence.
To separate items in a list. ,

Speech marks
Used in pairs to indicate speech “”

Context: What was going on in Elizabethan society?

The Globe theatre in London was a popular form of entertainment for people from all sections of society. Performances were in the afternoon and different coloured flags were used to advertise the theme of the play. All roles were played by men – women were not allowed to perform on the stage!

Elizabethan society was Patriarchal: a society where women were subservient to men, obeyed their husband and were presumed to be physically and mentally weaker than a man.

Elizabethans believed in witchcraft, ghosts and spirits and often blamed bad luck and unexplainable events on these.

Vocabulary: what words will help me write about this topic?

Shakespeare
Elizabethan
synopsis
tragedy
comedy
history
genre
context
patriarchy
dowry
protagonist
neologism
semantic change

Key areas to explore: what will I need to consider for this topic?

Shakespeare's life and times

1564 -1616
Monarchs:
Elizabeth 1
James 1
37 plays
Over 150 sonnets

The Globe Theatre

London south bank
3000 capacity
Large, round, open air
Built of timber

Genres

Comedy white flag

Tragedy black flag

History red flag

Shakespeare's language

Shakespeare introduced nearly 3000 new words
Freedom to make up new words

Women in society

Expected to be housewives and mothers
Considered inferior to men
Not allowed to have a profession

Year 7 Knowledge Organiser
An Introduction to Shakespeare

Model Paragraph

Shakespeare has shown the relationship between Demetrius and Helena to be unrequited, it is only one way. Helena adores Demetrius but he despises her. Demetrius says " For I am sick when I do look at thee". He cannot bear to look at her anymore as she will not accept his feelings and constantly bothers him. Demetrius treats Helena aggressively because she won't leave him alone even though he has never given her any attention, or led her on to believe he loves her. This is shown in the abstract noun "sick" which means something disgusting or something you need to be rid of. This would make a Shakespearean audience feel sympathy for Demetrius and anger towards Helena because she will not accept the man's decision, which Elizabethan women would be expected to do. However, a modern audience could also feel some sympathy for Helena as he is threatening her with violence and she should be allowed to express her feelings.

Key texts: which Shakespeare plays will I be introduced to?

A Midsummer Night's Dream

Focus: relationships/ presentation of women

Titus Andronicus

Focus: presentation of villains

Othello

Focus: presentation of villains

Macbeth

Focus: presentation of villains

The Taming of The Shrew

Focus: relationships/ presentation of women

Useful sentence starters: how can I begin my sentences and paragraphs effectively?

P- **Point:**
In the extract Shakespeare has presented…

E- **evidence:**
She/he says "…"

A- **analysis:**
This suggests… because… The word (type) has connotations of…

D- **development**: An Elizabethan audience would feel…because… A modern audience would think… because…

Writers' devices: what terminology do I need in order to analyse writers' devices?

Noun: person/place/thing

Verb: action/state of being

Adjective: describes a noun

Adverb: describes a verb

Simile: comparison – like/as

Metaphor: comparison – one thing is another thing

Key themes: What are the key themes of the poems?

Blessings

Freedom

Representation

Segregation

Culture

Diversity

Vocabulary: what words will help me write about this topic?

Culture
Symbolism
Equality
Voice
Diversity
Discrimination
Race
Ethnicity
Segregation

Key skills: how can I explore an unseen poem? **M AT E s**

Message	About	Techniques	Effects
What is the poet trying to tell us? What is the deeper meaning?	Generally, what is the poem about?	How is the message of the poem shown through techniques, word choice or structure?	What effect does the technique have on the reader? What does it make the reader think or feel?

Year 7 Knowledge Organiser Poetry from around the world

Model Paragraph

The poet uses language to make the island seem bright and colourful. For example, she describes the 'blue surf' and the 'emerald island'. This creates the image of a beautiful, vivid and sunny place. The noun 'emerald' suggests that the island is precious to the man, as an emerald is a precious stone. It also suggests that the island is more than just green, but instead full of vibrant colour, life and beauty.

Key poems, their meaning, and message: what are the poems about and what did the poet want us to think, feel, imagine or reflect on?

Island Man
Grace Nichols

Tells of the difference between warm, hopeful island life and the cold, unfeeling world of London. The poem expresses the homesickness immigrants can feel in a new country, while also suggesting that many immigrants keep their home alive within themselves.

Caged Bird
Maya Angelou

Describes the opposing experiences between two birds: one bird is able to live in nature as it pleases, while a different caged bird suffers in captivity. This paints a critical portrait of oppression in which she illuminates the privilege and entitlement of the un-oppressed.

Blessing
Imtiaz Dharkar

Focuses on a slum on the outskirts of Mumbai in India and the reaction of children who come to celebrate and drink when a pipe bursts. Emphasising the poverty of the people and how important and how sacred drinking water is to these people.

Limbo
Edward Kamu Braithwaite

An extended metaphor for the transition from freedom to slavery. It is closely linked to the journey the slaves made onboard the slave-ships. The limbo dance is used as the metaphor, as limbo can also mean in between places.

Dreams
Langston Hughes

The speaker urges the reader to hold on to dreams, comparing the pain of life without dreams to the ordeal of an injured bird that can't fly. The speaker urges the reader to hold on tightly to dreams, comparing the bleakness of life without dreams to the emptiness of a frozen landscape.

Two Scavengers
Lawrence Ferlinghetti

The poem describes four people stuck at traffic lights in downtown San Francisco - two are garbage collectors and two are an elegant couple in a Mercedes. The poem is about the contrast between these people and the gap that is developing between the rich and poor even in the USA which is meant to be a 'democracy'.

Bishops' Culture and Vision: what words and ideas can I use in my own poem?

Dignity
Respect
Wisdom
Knowledge
Skills
Hope
Aspiration
Known
Nurtured
Inspired
Community
Faith
Family
'Life in all its fullness'

Writers' devices: what terminology do I need in order to analyse writers' devices?

Simile
Metaphor
Personification
Onomatopoeia
Symbol
Rhyme
Rhythm
Alliteration
Imagery
Repetition
Structure
Voice
Juxtaposition

Discourse markers: what words will help me write about this topic?

Many people believe...

Furthermore...

Others might argue...

Firstly...

Secondly...

Thirdly...

Above all...

Essentially...

In conclusion...

Key skills: what skills will I need to use on this topic?

Paragraphing

Research

Debating

Reading Comprehension Strategies

Rhetoric: Ethos Logos Pathos

Expressing my point of view persuasively and clearly

Year 7
Knowledge Organiser

Non-Fiction Writing

Model Paragraph

In a civilised society, we should never tolerate the use of guns. Whilst some Americans claim that guns are an essential part of their culture, in reality guns can only ever cause harm to their citizens. In a civilised society, we should aim to seek peaceful solutions to conflict. In a civilised society, we should always hope that human life is viewed as it should be: something sacred.

Sentence types: how can I vary my sentence types?

Simple sentences

Compound sentences

Complex sentences

Minor sentences (one word)

A variety of lengths

A variety of openings

Form: What are the key conventions of different writing forms?

Formal Letter

- Writer's address
- Recipient's address
- Date
- Greeting
- Opening paragraph explaining purpose of letter
- Main body with linked paragraphs
- Closing signature

Article

- Headline
- Sub-headline
- Introductory paragraph
- Linked paragraphs
- Short concluding paragraph

Key punctuation: what punctuation do I need to use in my writing?

Comma

To separate clauses in a sentence.

To separate items in a list.

Semi colon

To separate two statements that are connected in meaning.
To connect the second part of the sentence to the first.

Possessive apostrophe

Indicates who something belongs to.

Omissive apostrophe

Shows a contraction of two words / a letter is missing.

Question mark

Indicates that a question is being asked.

Rhetorical devices: what devices do I need to use to make my writing effective?

Alliteration

Facts

Opinions

Repetition (anaphora, epimone, Epizeuxis)

Rhetorical questions

Emotive language

Statistics/Second person

Triples

Environmental facts: Can you include these in your speech?

The Earth is now about 1.1°C warmer than it was in the 1800s

America produces 25% of global CO_2.

Global sea level rose about 8 inches (20 cm) in the last century.

Space for cattle has caused 40% of deforestation. All this space for burgers!

8 million tons of plastic enters the ocean every year. Plastic was even found in the deepest trench...

Vocabulary: what words will help me write about this topic?

Fundamentally	Global warming
Essential	Deforestation
Crucial	Carbon footprint
Imperative	Sustainability
Subsequently	Biodiversity
Consequently	Fossil fuel
Vitally	Endangered
Plethora	Extinct
Demonstrate	Climate
Unequivocally	Pollution

Key skills: what skills will I need to use on this topic?

Gesturing
Hand movements

Research
What facts can I find?

Organisation
How will we structure our presentation?

Debating
Consider different viewpoints

Audibility
Be clear and audible

Questioning
Asking and answering probing questions

Knowledge Organiser Speaking and Listening

Model Paragraph

Not tomorrow, today!
I want to share a story. This summer, I went fishing. Imagine my delight when I finally caught something big and I reeled it in with all my strength... Only for it to be a collection of Pepsi bottles. We laughed and tried again. Except, hours later and countless plastic cups, bottles and wrappers – we weren't laughing. This is the issue of...

8 million tons of plastic is dumped into the ocean and I was saddened to learn that even the deepest part of the ocean, the Mariana Trench, scientists found plastic bags wrapped around the coral. How can plastic be here before humans had even explored it?

My name is _____ and we will be fighting against plastic polluting our oceans today. Not tomorrow, today!

Structuring the presentation: How can I structure my presentation?

Attention Grabbing opening (Pathos)
Start with an impactful statement to get people excited!

Introduce yourselves.

Introduce your environmental issue.

Explain why your chose your topic (Ethos)
Use **facts/statistics** to show you are the expert.
This part of the topic could be scary, use **emotive language** to show people why they should care!
Try a triple at the end.

Share some solutions (Logos)
Remember who your **audience** is. You need to make it appeal to teenagers!
Make up some '**opinions**' and suggestions on what we could do to improve our planet.

Acknowledge other **opinions**. *'Some may think it is too... but it is clear...*
Exaggerate some consequences if we don't act now. Keep these believable!

Big conclusion!
Make a big memorable statement that you say together.

This should sum up your thoughts on your chosen topic.

Thank your audience!

Useful sentence starters: how can I begin my sentences and paragraphs effectively?

First of all, I would like to introduce...
To begin with, it is clear that...
The focus of today is...
We would like to showcase...
Our presentation will be covering...
Furthermore, we will look at...
Next up, we have our expert on...
We must be ready for...
X is really essential as...
Secondly, you should...
The next point is clear as...
Did you realise that...
Have you heard about...
Similar research shows...
Lastly, we want to cover...
Our main message is...
To summarise, we will...

Writers' devices: what devices can I include to persuade my listener? (AFOREST)

Alliteration
Facts
Opinions
Repetition
Rhetorical Questions
Emotive Language
Exaggeration
Statistics
Triples
Direct address ('you')

MATHS

Knowledge Organiser

Year 7 – Algebraic thinking…

Sequences

What do I need to be able to do?

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

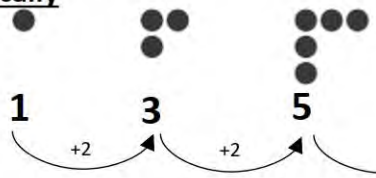
- Describe and continue both linear and non-linear sequences
- Explain term to term rules for linear sequence
- Find missing terms in a linear sequence

Keywords

Sequence: items or numbers put in a pre-decided order
Term: a single number or variable
Position: the place something is located
Rule: instructions that relate two variables
Linear: the difference between terms increases or decreases by the same value each time
Non-linear: the difference between terms increases or decreases in different amounts
Difference: the gap between two terms
Arithmetic: a sequence where the difference between the terms is constant
Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

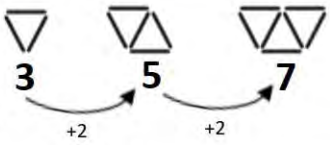
Describe and continue a sequence diagrammatically

Count the number of circles or lines in each image



What will the next number be? Can you draw this?

Predict and check terms



CHECK – draw the next terms

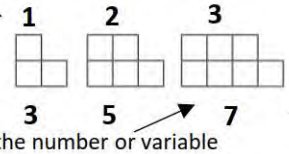
9 11 13

Predictions:
Look at your pattern and consider how it will increase.

e.g. How many lines in pattern 6?
Prediction - 13
If it is increasing by 2 each time - in 3 more patterns there will be 6 more lines

Sequence in a table and graphically

Position: the place in the sequence



"The **term** in **position** 3 has 7 squares"

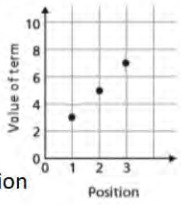
Term: the number or variable **(the number of squares in each image)**

In a table

Position	1	2	3
Term	3	5	7

+2 +2

Graphically



Because the terms increase by the same addition each time this is **linear** – as seen in the graph

Linear and Non Linear Sequences

Linear Sequences – increase by addition or subtraction and the same amount each time

Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci.

- Do not plot as straight lines when modelled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division.

Fibonacci Sequence – look out for this type of sequence

0 1 1 2 3 5 8 …

Each term is the sum of the previous two terms.

Continue Linear Sequences

7, 11, 15, 19…

How do I know this is a linear sequence?
It increases by adding 4 to each term.
How many terms do I need to make this conclusion?
At least 4 terms – two terms only shows one difference not if this difference is constant. (a common difference).
How do I continue the sequence?
You continue to repeat the same difference through the next positions in the sequence.

Continue non-linear Sequences

1, 2, 4, 8, 16 …

How do I know this is a non-linear sequence?
It increases by multiplying the previous term by 2. – this is a geometric sequence because the constant is multiply by 2
How many terms do I need to make this conclusion?
At least 4 terms – two terms only shows one difference not if this difference is constant. (a common difference).
How do I continue the sequence?
You continue to repeat the same difference through the next positions in the sequence.

Explain term-to-term rule How you get from term to term

Try to explain this in full sentences not just with mathematical notation.
Use key maths language – doubles, halves, multiply by two, add four to the previous term etc.

To explain a whole sequence you need to include a term to begin at…

The next term is found by tripling the previous term. The sequence begins at 4.

4, 12, 36., 108..

x3 x3 x3

First term

Year 7 – Algebraic thinking…

Algebraic notation

What do I need to be able to do?

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

- Be able to use inverse operations and "operation families".
- Be able to substitute into single and two step function machines.
- Find functions from expressions.
- Form sequences from expressions
- Represent functions graphically.

Keywords

Function: a relationship that instructs how to get from an input to an output.
Input: the number/ symbol put into a function.
Output: the number/ expression that comes out of a function.
Operation: a mathematical process
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Commutative: the order of the operations do not matter.
Substitute: replace one variable with a number or new variable.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)
Evaluate: work out
Linear: the difference between terms increases or decreases by the same value each time
Sequence: items or numbers put in a pre-decided order

Single function machines

INPUT → [ ] → OUTPUT

The number that goes IN — The number that comes out

This box gives the calculation instruction

To find the input from the output
Use the **INVERSE** operation

Using letters to represent numbers

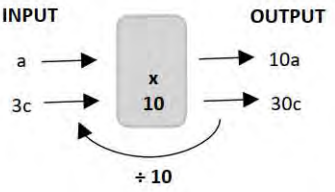
5 + 5 + 5	y + y + y + y	20 ÷ h
3 x 5	y x 4	$\frac{20}{h}$
5 x 3	4 x y	
	4y	

Addition and multiplication can be done in any order **Commutative calculations**

4y ← 4 lots of 'y'

20 shared into 'h' number of groups

Single function machines (algebra)



To find the input from the output
Use the **INVERSE** operation

Find functions from expressions

INPUT 7x → ? → OUTPUT 14x

Find the relationship between the input and the output
Sometimes there can be a number of possible functions.
e.g. **+7x** or **x 2** could both be solutions to the above function machine

Substitution into expressions

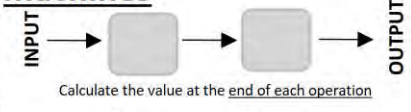
4y ← 4 lots of 'y'

If y = 7 this means the expression is asking for 4 'lots of' 7

4 x 7 **OR** 7 + 7 + 7 +7 **OR** 7 x 4 **= 28**

e.g. : y – 2
= 7 – 2 = **5**

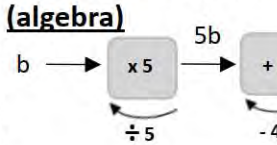
Two step function machines



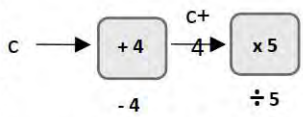
Calculate the value at the end of each operation

For the input use the **INVERSE** operations

Two step function machines (algebra)

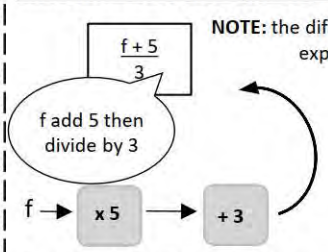


IMPORTANT Calculate the value at the end of each operation

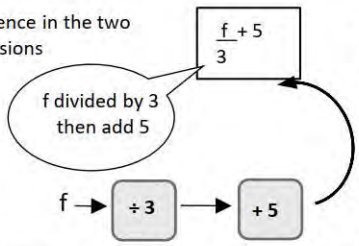


NOTE: The whole first output is multiplied by 5

Find functions from expressions



NOTE: the difference in the two expressions

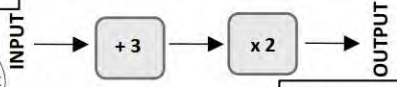


Sometimes it helps to try to explain the expression in word – and consider what has happened to the input

Substitution into an expression

2(x + 3)

Add 3 to the input then times 2



Put the expression into a function machine

If x = 10
10 + 3 = 13….. 13 x 2 = 26

2(x + 3)

Representing functions graphically

Take the function and generate a sequence

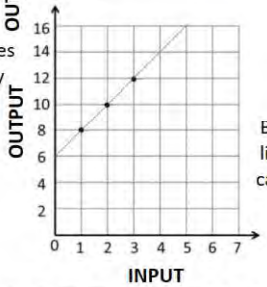
2(x + 3)

To represent graphically the input becomes x co-ordinates and the output becomes y co-ordinates

y=2(x + 3)

INPUT (x)	1	2	3
OUTPUT (y)	8	10	12

This becomes a co-ordinate pair (2, 10) to plot on a graph



Not all graphs will be linear only those with an integer value for x. Powers and fractions generate differently shaped graphs.

NOTE: Because this is a linear graph you can predict other values

Forming a sequence

INPUT	1	2	3
OUTPUT	8	10	12

The substitution is the 'input' value
The OUTPUT becomes the sequence

Year 7 – Algebraic thinking…

Equality and Equivalence

What do I need to be able to do?

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

- .Form and solve linear equations
- Understand like and unlike terms
- Simplify algebraic expressions

Keywords

Equality: two expressions that have the same value
Equation: a mathematical statement that two things are equal
Equals: represented by '=' symbol – means the same
Solution: the set or value that satisfies the equation
Solve: to find the solution.
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Term: a single number or variable
Like: variables that are the same are 'like'
Coefficient: a multiplicative factor in front of a variable e.g. 5x (5 is the coefficient, x is the variable)
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

Equality

$2 + 14 = 5 + 5 + 6$

16 16

"Is equal to"

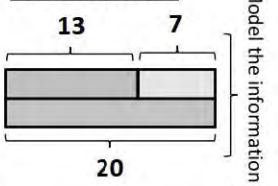
The sum on the left has the same result as the sum on the right

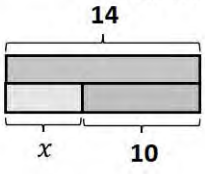
Saying it out loud sometimes helps you to understand equality

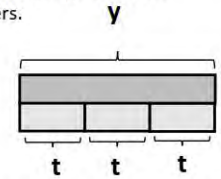
Fact Families

Use a bar model to display the relationships between terms and numbers.

Model the information







Fact Family

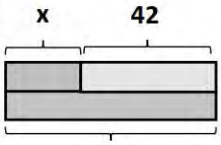
$13 + 7 = 20$ $20 - 7 = 13$
$7 + 13 = 20$ $20 - 13 = 7$

$x + 10 = 14$ $14 - 10 = x$
$10 + x = 14$ $14 - x = 10$

$t + t + t = y$ $y - t - t = t$
$3 \times t = y$ $y \div 3 = t$
$3t = y$ $y \div t = 3$

Solve one step equations (+/-)

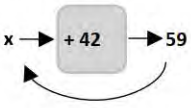
$x + 42 = 59$



$x + 42 = 59$
$42 + x = 59$

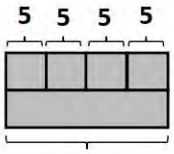
$59 - x = 42$
$59 - 42 = x$

Don't forget you know how to use function machines



Solve one step equations (x/÷)

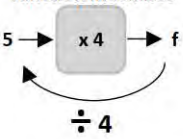
$\frac{f}{4} = 5$



$f \div 4 = 5$
$f \div 5 = 4$

$5 \times 4 = f$
$4 \times 5 = f$

Don't forget you know how to use function machines



Like and unlike terms

Like terms are those whose variables are he same

♡ and 3♡ are **like** terms — the variable is the same

★ 3♡ are **unlike** terms — the variables are NOT the same

Examples and non-examples

Like terms	Un-like terms
y, 7y	y, 7x
$2x^2$, x^2	$2x^2$, $2c^2$
ab, 10ba	ab, 10a
5, -2	5, -2t

Note here ab and ba are commutative operations, so are still like terms

Equivalence

Check equivalence by substitution
e.g. m=10

5m	2 x 2m	7m – 3m
5 x 10 = 50	2 x (2x10) = 2 x 20 = 40	(7x10) – (3x10) = 70 – 30 = 40

Equivalent expressions

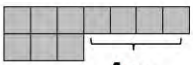
Repeat this with various values for m to check

5m

2 x 2m

4m

7m – 3m



4m

Collecting like terms ≡ symbol

The ≡ symbol means equivalent to.

It is used to identify equivalent expressions

Collecting like terms

Only **like terms** can be combined

$4x + 5b - 2x + 10b$

$4x + 5b - 2x + 10b$

$2x + 15b$

Common misconceptions

$2x + 3x^2 + 4x \equiv 6x + 3x^2$

Although they both have the x variable x^2 and x terms are un-like terms so can not be collected

Year 7 – Place Value and proportion

Ordering integers and decimals

What do I need to be able to do?

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

- Understand place value and the number system including decimals
- Understand and use place value for decimals, integers and measures of any size
- Order number and use a number line for positive and negative integers, fractions and decimals;
- use the symbols $=, \neq, \leq, \geq$
- Work with terminating decimals and their corresponding fractions
- Round numbers to an appropriate accuracy
- Describe, interpret and compare data distributions using the median and range

Keywords

Approximate: To estimate a number, amount or total often using rounding of numbers to make them easier to calculate with
Integer: a whole number that is positive or negative
Interval: between two points or values
Median: A measure of central tendency (middle, average) found by putting all the data values in order and finding the middle value of the list.
Negative: Any number less than zero; written with a minus sign.
Place holder: We use 0 as a place holder to show that there are none of a particular place in a number
Place value: The value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right
Range: The difference between the largest and smallest numbers in a set
Significant figure: A digit that gives meaning to a number. The most significant digit (figure) in an integer is the number on the left. The most significant digit in a decimal fraction is the first non-zero number after the decimal point.

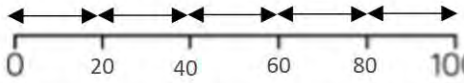
Integer Place Value

Billions			Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O	H	T	O
		3	1	4	8	0	3	3	0	2	9

Placeholder

Three billion, one hundred and forty eight million, thirty three thousand and twenty nine
1 billion 1, 000, 000, 000
1 million 1. 000, 000

Intervals on a number line

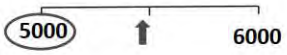


Divide the difference by the number of intervals (gaps).
E..g. 100 ÷ 5 = 20

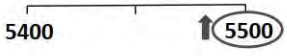
Rounding to the nearest power of ten

If the number is halfway between we "round up"

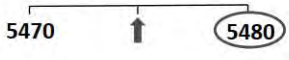
5495 to the nearest 1000



5475 to the nearest 100



5475 to the nearest 10



Compare integers using $<, >, =, \neq$

$<$ *less than*
$>$ greater than
$=$ equal to
$\neq$ not equal to

Range *Spread of the values*

Difference between the biggest and smallest
3 9 8 12
Range: Biggest value – Smallest value
12 – 3 = 9
Range = 9

Median *The middle value*

Example 1
4 3 9 8 12

Median: put the in order 3 4 8 9 12
find the middle number 3 4 **8** 9 12

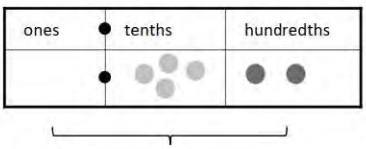
Example 2
150 154
148
137 160
158

Median: put the in order
137 148 150 154 158 160
There are 2 middle numbers
Find the midpoint
152

Decimals

We say
"nought point four two"

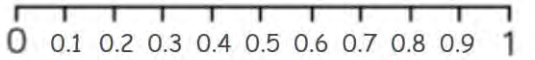
Four tenths and two hundredths

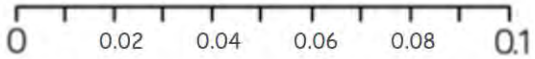


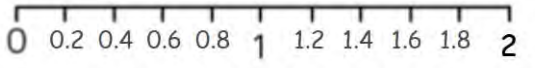
0 ones, 4 tenths and 2 hundredths
0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01
= 0 + 0.4 + 0.02
= **0.42**

Decimal intervals on a number line

One whole spit into 10 parts makes tenths = 0.1
One tenth split into 10 parts makes hundredths = 0.01





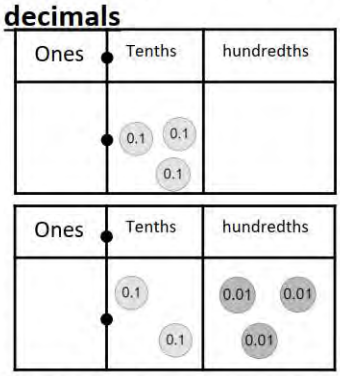


Comparing decimals

Which the largest of 0.3 and 0.23?

$0.3 > 0.23$

"There are more counters in the furthest column to the left"



0.30
0.23

Comparing the values both with the same number of decimal places is another way to compare the number of tenths and hundredths

Round to 1 significant figure

370 to 1 significant figure is 400
37 to 1 significant figure is 40
3.7 to 1 significant figure is 4
0.37 to 1 significant figure is 0.4
0.00000037 to 1 significant figure is 0.0000004

Round to the first non-zero number

Year 7 – Place Value and proportion.

FDP equivalence

What do I need to be able to do?

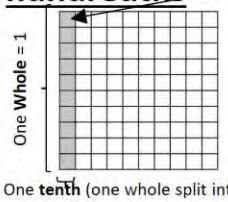
By the end of this unit, you should be able to:

- Convert fluently between fractions, decimals & percentages

Keywords

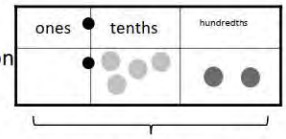
Fraction: how many parts of a whole we have
Decimal: a number with a decimal point used to separate ones, tenths, hundredths etc.
Percentage: a proportion of a whole represented as a number between 0 and 100
Place value: the numerical value that a digit has decided by its position in the number
Placeholder: a number that occupies a position to give value
Interval: a range between two numbers
Tenth: one whole split into 10 equal parts
Hundredth: one whole split into 100 equal parts
Sector: a part of a circle between two radii (often looks like a piece of pie)
Recurring: a decimal that repeats in a given pattern

Tenths and hundredths



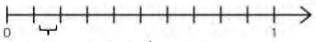
One **hundredth** (one whole split into 100 equal parts) = $\frac{1}{100}$ = 0.01

One **tenth** (one whole split into 10 equal parts) = $\frac{1}{10}$ = 0.1



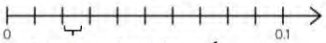
0 ones, 4 tenths and 2 hundredths
0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01
= 0 + 0.4 + 0.02
= **0.42**

On a number line



One tenth = $\frac{1}{10}$ = 0.1

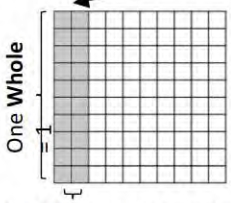
One whole – split into 10 equal parts



One hundredth = $\frac{1}{100}$ = 0.01

One tenth – split into 10 equal parts

Fifths



Twenty hundredths

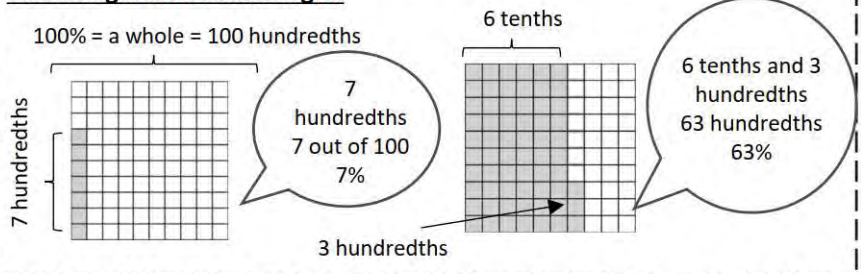
One **Whole** = 1

One tenth

Two tenths = one fifth

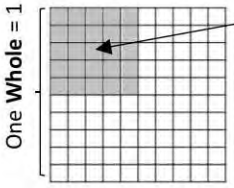
One **fifth** (one whole split into 5 equal parts) = $\frac{1}{5}$ = 0.2

Percentages on a hundred grid



Quarters

One **quarter** (one whole split into 4 equal parts) = $\frac{1}{4}$ = 0.25



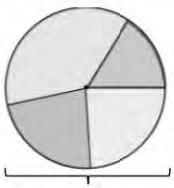
Twenty five hundredths

One half = 0.5

One whole

One quarter = 0.25

Simple pie charts



A pie chart has 360° so all FDP calculations are out of 360

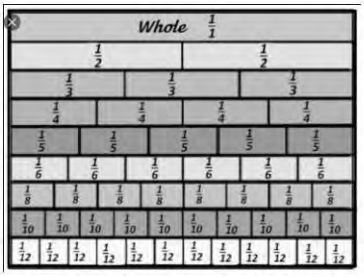
Split into 10 parts = 10% = 36°

Split into 2 parts = 50% = 180°

Split into 5 parts = 20% = 72°

Equivalent fractions

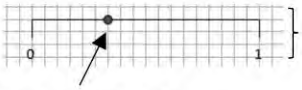
Represent equivalence with fraction walls



Fractions – on a diagram

The denominator is represented by EQUALLY sized parts – this is split into quarters

Fractions – on a number line

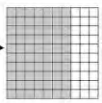


This point is at the 6th part
6 is the **numerator**

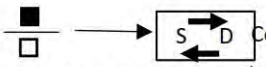
One whole split into 18 equal parts
18 is the **denominator**

$\frac{6}{18} \leftarrow \frac{3}{9} \leftarrow \frac{1}{3}$

Convert FDP

$\frac{70}{100}$ → This also means 70 ÷ 100 → 70 out of 100 squares → **70 "hundredths" = 7 "tenths" 0.7** →  → 70 hundredths = **70%**

Using a **calculator**



Convert to a decimal

This will give you the answer in the simplest form

× 100 converts to a percentage

Be careful of recurring decimals
e.g $\frac{1}{3}$ = **0.3333333**
= $0.\dot{3}$
The dot above the 3

Year 7 – application of number

Solving problems with addition and subtraction

What do I need to be able to do?

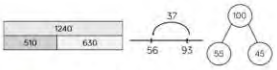
By the end of this unit you should be able to:

- Understand properties of addition/ subtraction
- Use mental strategies for addition/subtraction
- Use formal methods of addition/Subtraction for integers
- Use formal methods of addition/Subtraction for decimals
- Solve problems in context of perimeter
- Solve problems with finance, tables and timetables
- Solve problems with frequency trees
- Solve problems with bar charts and line charts

Keywords

Commutative: changing the order of the operations does not change the result
Associative: when you add or multiply you can do so regardless of how the numbers are grouped
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Placeholder: a number that occupies a position to give value
Perimeter: the distance/ length around a 2D object
Polygon: a 2D shape made with straight lines
Balance: in financial questions – the amount of money in a bank account
Credit: money that goes into a bank account
Debit: money that leaves a bank account

Addition/ Subtraction with integers



Modelling methods for addition/ subtraction

- Bar models
- Number lines
- Part/ Whole diagrams

Addition is commutative

6 + 3 = 3 + 6

The order of addition does not change the result

Subtraction the order has to stay the same

360 – 147 = 360 – 100 – 40 – 7

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction
- Show your relationships by writing fact families

Formal written methods

	H	T	O
	1	8	7
+	5	4	2

	H	T	O
	4	2	7
–	2	4	9

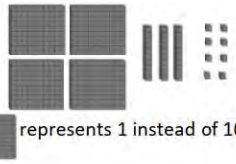
Remember the place value of each column.
You may need to move 10 ones to the ones column to be able to subtract

Addition/ Subtraction with decimals

4	.	3	8	
7	.	9	0	+

0 can be used to fill empty places with value

The decimal place acts as the placeholder and aligns the other values



If ■ represents 1 instead of 100

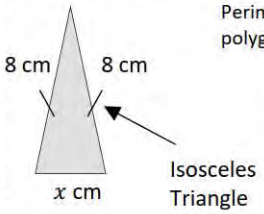
$5.43 + \frac{8}{10}$

Revisit Fraction – Decimal equivalence

5.43 + 0.8

Solve problems with perimeter

Perimeter is the length around the outside of a polygon



Isosceles Triangle notation

The triangle has a perimeter of 25cm. Find the length of x

8cm + 8cm + $x$cm = 25cm

16cm + $x$cm = 25cm

$x$cm = 9cm

Solve problems with

Profit = Income - Costs

Credit – Money coming into an account

Debit – Money leaving an account

Money uses a two decimal place system.
14.2 on a calculator represents £14.20

Check the units of currency – work in the same unit

Tables and timetables

Distance tables

London

211	Cardiff	
556	493	Glasgow
518	392	177

Belfast

This shows the distance between Glasgow and London.
It is where their row and column intersects

Bus/ Train timetables

Harton	1005	1045	1130
Bridge	1024	1106	1147
Aville	1051	1133	1205
Ware	1117	1202	1233

Each column represents a journey, each row represents the time the 'bus' arrives at that location

TIME CALCUALTIONS – use a number line

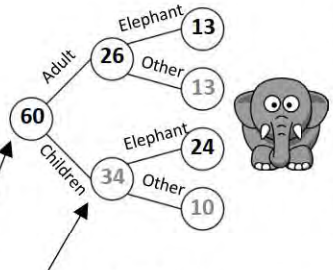
Two-way tables

	H	T
H	HH	HT
T	TH	TT

Where rows and columns intersect is the outcome of that action.

Frequency trees

60 people visited the zoo one Saturday morning.
26 of them were adults. 13 of the adult's favourite animal was an elephant. 24 of the children's favourite animal was an elephant.

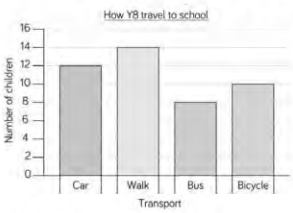


The overall total "60 people'

A frequency tree is made up from part-whole models. One piece of information leads to another

Probabilities or statements can be taken from the completed trees e.g. 34 children visited the zoo

Bar and line charts



Use addition/ subtraction methods to extract information from bar charts.

e.g. Difference between the number of students who walked and took the bus.
Walk frequency – bus frequency

When describing changes or making predictions.

- Extract information from your data source
- Make comparisons of difference or sum of values.
- Put into the context of the scenario

Year 7 – application of number

Solving problems with multiplication and division

What do I need to be able to do?

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

- Understand and use factors
- Understand and use multiples
- Multiply/ Divide integers and decimals by powers of 10
- Use formal methods to multiply
- Use formal methods to divide
- Understand and use order of operations
- Solve area problems
- Solve problems using the mean

Keywords

Array: an arrangement of items to represent concepts in rows or columns
Multiples: found by multiplying any number by positive integers
Factor: integers that multiply together to get another number.
Mili: prefix meaning one thousandth
Centi: prefix meaning one hundredth.
Kilo: prefix meaning multiply by 1000
Quotient: the result of a division
Dividend: the number being divided
Divisor: the number we divide by.

Factors

Arrays can help represent factors

10 x 1 or 1 x 10

5 x 2 or 2 x 5

Factors of 10
1, 2, 5, 10

The number itself is always a factor

Square numbers have an **ODD number** of factors

Factors of 4
1, 2, 4

Factors of 36
1, 2, 3, 4, 6, 9, 12, 18, 36

Be strategic - Laying factors out in pairs can help you not to miss any

Multiples

Bar models can represent by something is a multiple. E.g. 20 is a multiple of 4

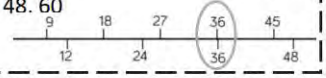
:Lowest Common Multiples

LCM of 9 and 12

9: 9, 18, 27, 36, 45, 54

12: 12, 24, 36, 48. 60

The first time their multiples match **LCM = 36**



Multiply/ Divide by powers of 10

3 x 100 = 300

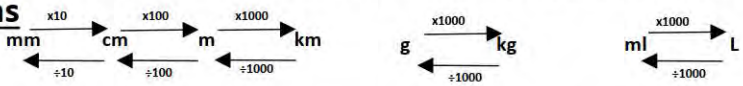
0.03 x 100 = 3

Repeated multiplication and division by powers of 10 is commutative

÷ 10 then ÷ 10 → ÷ 100

Metric conversions

Useful Conversions



Multiplication methods

Less effective method especially for bigger multiplication

Long multiplication (column)

Grid method

Repeated addition

Multiplication with decimals

Perform multiplications as integers

e.g. 0.2 x 0.3 → 2 x 3

Make **adjustments** to your answer to match the question:

0.2 x 10 = 2

0.3 x 10 = 3

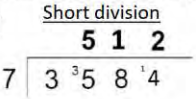
Therefore 6 ÷ 100 = **0.6**

Estimations: Using estimations allows a 'check' if your answer is reasonable

Division methods

3584 ÷ 7 = **512**

Short division



Complex division

÷ 24 = ÷ **6** ÷ **4**

Break up the divisor using factors

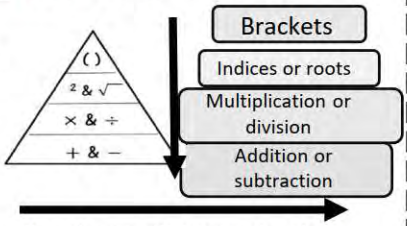
Division with decimals

The placeholder in division methods is essential – the decimal lines up on the dividend and the quotient

2.4 ÷ 0.02 → 24 ÷ 0.2 → 240 ÷2

All give the same solution as represent the same proportion.
Multiply the values in proportion until the divisor becomes an integer

Order of operations



If you have multiple operations from the same tier work from left to right

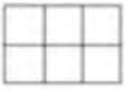
e.g. 10 – 3 + 5 → 10 - 3 → 7 + 5

6 x 4 + 8 x 2

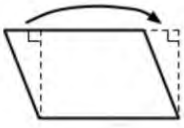
24 + 16 = 40

Area problems

Rectangle
Base x Perpendicular height

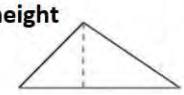


Parallelogram/ Rhombus
Base x Perpendicular height



Triangle
½ x Base x Perpendicular height

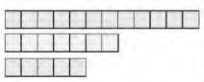
A triangle is half the size of the rectangle it would fit in



Mean problems

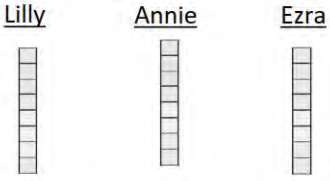
Mean – a measure of average
It gives an idea of the central value

Lilly, Annie and Ezra have the following cubes



24 in total

Finding the mean amount is the average amount each person would have if shared out equally



The mean number of blocks would be 8 each

Year 7 – application of number

Fractions and percentages of amounts

What do I need to be able to do?

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

- Find a fraction of a given amount
- Use a given fraction to find the whole or other fractions
- Find the percentage of an amount using mental methods
- Find the percentage of a given amount using a calculator

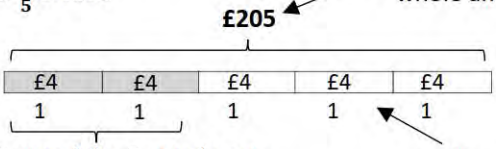
Keywords

Fraction: how many parts of a whole we have
Equivalent: of equal value
Whole: a number with no fractional or decimal part.
Percentage: parts per 100 (uses the % symbol)
Place Value: the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right
Convert: change into an equivalent representation, often fraction to decimal to a percentage cycle.

Fraction of a given amount

Find $\frac{2}{5}$ of £205

The bar represents the whole amount

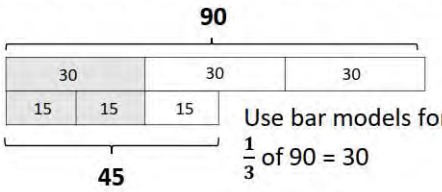


2 out of the 5 equal parts

£205 ÷ 5 = £41

Each part of the bar model represents £41.

2 x £41 = **£82**



Use bar models for comparisons

$\frac{1}{3}$ of 90 = 30

$\frac{2}{3}$ of 45 = 30

$\therefore \frac{1}{3}$ of 90 = $\frac{2}{3}$ of 45

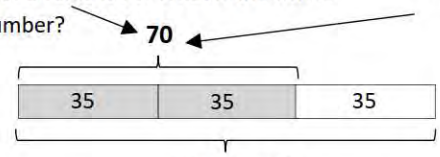
Use a fraction of amount

The wording of the question is important to setting up the bar model

$\frac{2}{3}$ of a value is 70. What is the whole number?

70 ÷ 2 = 35

Each part of the bar model represents 35.



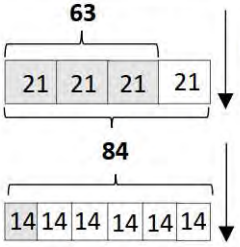
35 x 3 = **105**

The whole number is 105

$\frac{3}{4}$ of a number is 63.

What is $\frac{1}{6}$ of the number?

=14



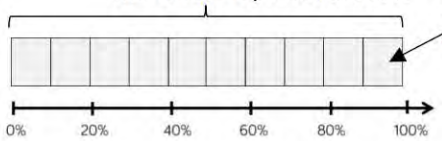
Find the whole

Use the whole to find a given part

Find the percentage of an amount (Mental methods)

The **whole** represents 100%

10% = $\frac{1}{10}$ of the whole



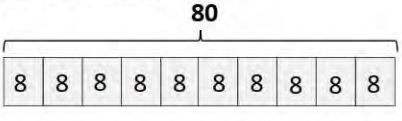
10% = $\frac{1}{10}$ of the whole

50% = $\frac{5}{10}$ = $\frac{1}{2}$ of the whole

20% = $\frac{2}{10}$ = $\frac{1}{5}$ of the whole

5% = $\frac{1}{20}$ of the whole

Find 65% of 80



For bigger percentages it is sometimes easier to take away from 100%

Method 1:
65% = 10% x 6 + 5%
= (8 x 6) + 4
= 52

Method 2:
65% = 50% + 10% + 5%
= 40 + 8 + 4
= 52

Find the percentage of an amount (Calculator methods)

Using a multiplier

Find 65% of 80

Fraction, decimal, percentage conversion

65% = $\frac{65}{100}$ = 0.65

The multiplier

0 • 65 x 80 = **52**

Using the percent button

Find 65% of 80

This brings up the % button on screen
You will see 65%

Type **65**

Press SHIFT ((%)

Press × **80** and then press =

You can also use the calculator to support non calculator methods and find 1% or 10% then add percentages together

"of" can represent 'x' in calculator methods

Year 7 – directed number

Operations with equations and directed numbers

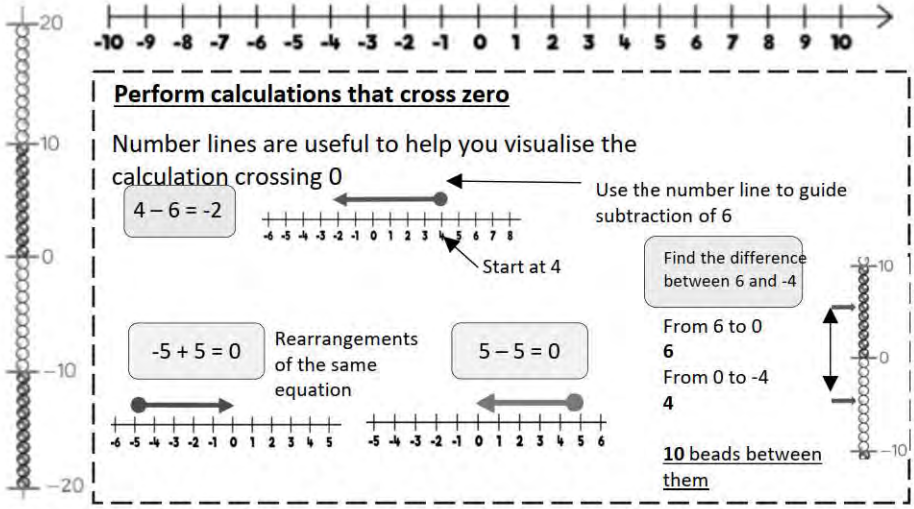
What do I need to be able to do?

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

- Perform calculations that cross zero
- Add/ Subtract directed numbers
- Multiply/ Divide directed numbers
- Evaluate algebraic expressions
- Solve two-step equations
- Use order of operations with directed number

Keywords

Subtract: taking away one number from another.
Negative: a value less than zero.
Commutative: changing the order of the operations does not change the result
Product: multiply terms
Inverse: the opposite function
Square root: a square root of a number is a number when multiplied by itself gives the value (symbol $\sqrt{}$)
Square: a term multiplied by itself.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)



Perform calculations that cross zero

Number lines are useful to help you visualise the calculation crossing 0

4 – 6 = -2

Use the number line to guide subtraction of 6

Start at 4

-5 + 5 = 0

Rearrangements of the same equation

5 – 5 = 0

Find the difference between 6 and -4

From 6 to 0
6
From 0 to -4
4

10 beads between them

Add directed number

= −1
= 1
Representations

2 + - 4 = -2

Zero pair
(-1 + 1 = 0)

Two " – 1 " left
= =2

8 + -3 = 5

Partitioning

8 + -3 = 5

5 + 3 + - 3 = 5

Partition the value to create a zero pair calculation

Generalisation
+ - = -

Subtract directed numbers

= −1
= 1
Representations

2

"Subtract" – means take away or remove

Representation for calculation

2 - - 1 = 3

Take away

Start with the representation of 2

= 3

2 - - 3 = 5

= 5

Generalisation
- - = +

Multiply/ Divide directed numbers

-3 -3

Two representations of the same calculation

2 x -3 = -6

Negative, Negative calculation

-2 x -3

This is the negative of 2 x -3

The act of making counters into their negative is turning them over

-2 x -3 = 6

Divisions are the inverse operations

Evaluate algebraic expressions

a = 5

b = -4

$a^2 = 5^2$
$a^2 = 25$

$b^2 = (-4)^2$
$b^2 = 16$

With negative numbers the brackets are important so that it performs -4 x -4.

Brackets around negative substitutions helps remove calculation errors

2a – b = 2 x 5 – (-4) = 10 + 4 = 14

3b – 2a = 3(-4) – 2(5) = -12 – 10 = -22

Two-step equations

Bar Model

10

x x x x 2

10

4x + 2 = 10

10 – 4x = 2

Representing the same question (use fact families)

Function machine

x x x x

8

x

2

x → x4 → + 2 → 10

Inverse operations to find x

Use order of operations

Brackets
Indices or roots
Multiplication or division
Addition or subtraction

Brackets around negative substitutions helps remove calculation errors

Remember square roots have a positive and negative value

×	-3	-2	-1	0	1	2	3
-3	9	6	3	0	-3	-6	-9
-2	6	4	2	0	-2	-4	-6
-1	3	2	1	0	-1	-2	-3
0	0	0	0	0	0	0	0
1	-3	-2	-1	0	1	2	3
2	-6	-4	-2	0	2	4	6
3	-9	-6	-3	0	3	6	9

Year 7 – Fractional Thinking

Addition and subtraction of fractions

What do I need to be able to do?

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

- Convert between mixed numbers and fractions
- Add/Subtract unit fractions (same denominator)
- Add/Subtract fractions (same denominator)
- Add/Subtract fractions from integers
- Use equivalent fractions
- Add/Subtract any fractions
- Add/Subtract improper fractions and mixed numbers
- Use fractions in algebraic contextS

Keywords

Numerator : the number above the line on a fraction. The top number. Represents how many parts are taken

Denominator: the number below the line on a fraction. The number represent the total number of parts

Equivalent: of equal value

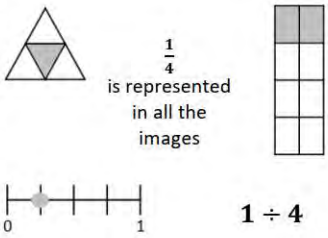
Mixed numbers: a number with an integer and a proper fraction

Improper fractions: a fraction with a bigger numerator than denominator

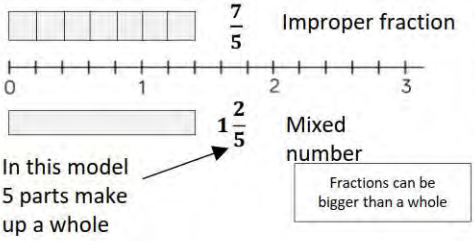
Substitute: replace a variable with a numerical value

Place value: the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

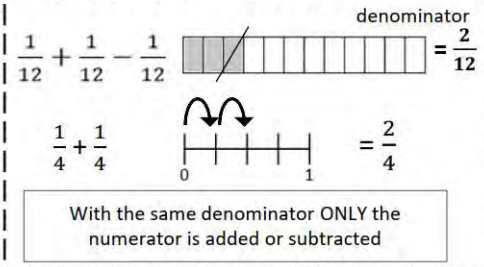
Representing Fractions



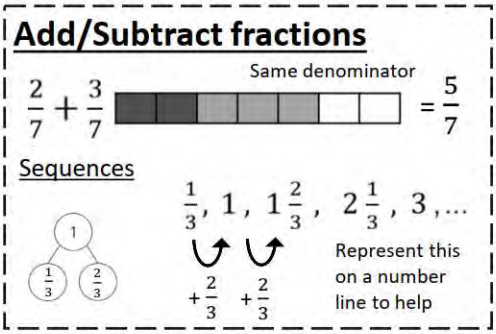
Mixed numbers and fractions



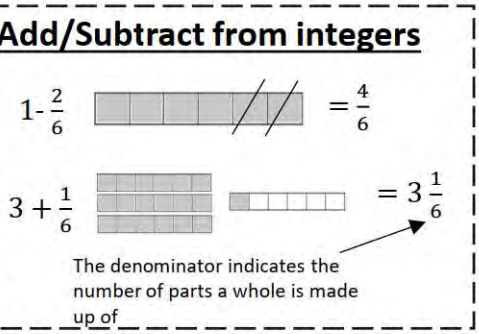
Add/Subtract unit fractions



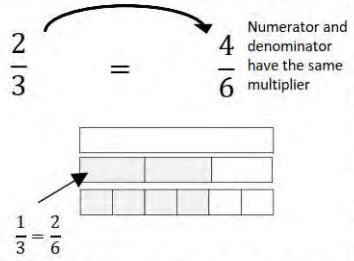
Add/Subtract fractions



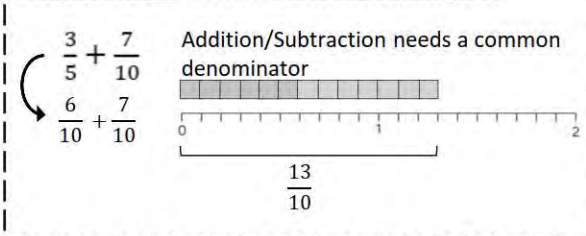
Add/Subtract from integers



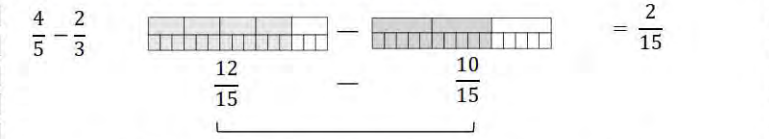
Equivalent fractions



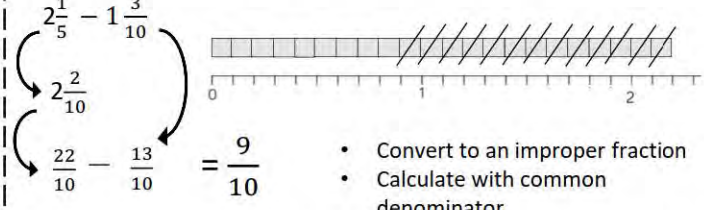
Add/Subtract fractions (common multiples)



Add/Subtract any fractions



Add/Subtract fractions (improper and mixed)



Partitioning method

$2\frac{1}{5} - 1\frac{3}{10} = 2\frac{2}{10} - 1\frac{3}{10} = 2\frac{2}{10} - 1 - \frac{3}{10} = 1\frac{2}{10} - \frac{3}{10} = \frac{9}{10}$

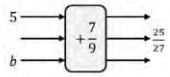
Fractions in algebraic contexts

$p = 5 \quad m = 2$

$k - \frac{5}{8} = 2$

Apply inverse operations

$k = 2 + \frac{5}{8}$



Form expressions with fractions

$b + \frac{7}{9} \rightarrow b + \frac{7}{9}$

$\frac{p}{8} + \frac{1}{m}$

Substitution

$\frac{5}{8} + \frac{1}{2}$

Fractions and decimals

$\frac{1}{10} = 0.1$

$\frac{1}{100} = 0.01$

Example $\frac{6}{10} + 0.3 \rightarrow 0.6 + 0.3$

$\frac{6}{10} + \frac{3}{10}$

Remember to use equivalent fractions and common denominators

Year 7 – lines and angles

Geometric reasoning

What do I need to be able to do?

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

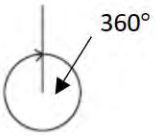
- Understand/use the sum of angles at a point
- Understand/use the sum of angles on a straight line
- Understand/use equality of vertically opposite angles
- Know and apply the sum of angles in a triangle
- Know and apply the sum of angles in a quadrilateral

Keywords

Vertically Opposite: angles formed when two or more straight lines cross at a point.
Interior Angles: angles inside the shape
Sum: total, add all the interior angles together
Convex Quadrilateral: a four-sided polygon where every interior angle is less than 180°
Concave Quadrilateral: a four-sided polygon where one interior angle exceeds 180°
Polygon: A 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle

Sum of angles at a point

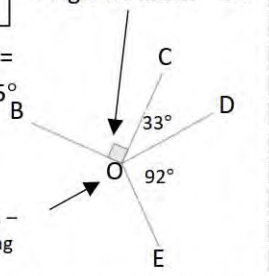
The sum of angles around a point is 360°

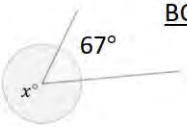


Find angle BOE

90° + 33° + 92° =
205° 360° - 205°
BOE =**155**°

Angle notation – 90°



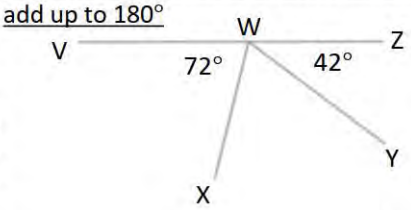


360° - 67°
= 293 °

Angle notation – find this missing angle

Sum of angles on a straight line

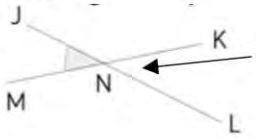
Adjacent angles that share a common point on a line add up to 180°



Find angle XWY

72° + 42° = 114°
180° - 114° = **66**°

Vertically opposite angles

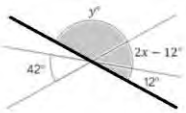


Angle JNM is vertically opposite to angle KNL

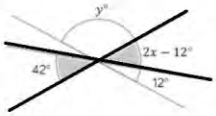
JNM = KNL

Vertically opposite angles are the same

Other angle rules still apply. Look for straight line sums and angles around a point.

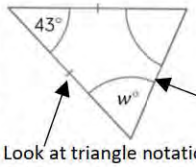


Form equations with information from diagrams:
$2x$-12 = 42
$2x$ = 54
x = 27°



Sum of angles in triangles

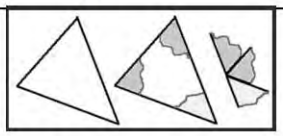
Sum of interior angles in a triangle = 180°



The two base angles will be the same size

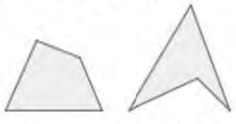
Look at triangle notation. This indicates an isosceles triangle
∴ 180 - 43 = 137
137 ÷ 2 = 68.5°

A triangle can only have ONE right angle



Have a go!
Tearing the corners from triangles forms a straight line which is therefore 180°

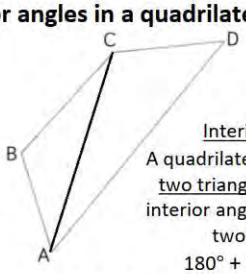
Sum of angles in quadrilaterals



Convex Quadrilateral

Concave Quadrilateral

Sum of interior angles in a quadrilateral = 360°



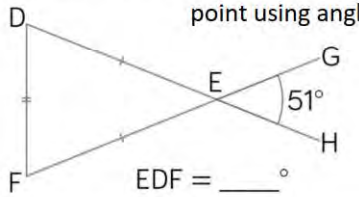
Interior Angles
A quadrilateral is made up of two triangles = the sum of interior angles is the same as two triangles:
180° + 180° = 360°

Interior angles are those that make up the perimeter (outline) of the shape

Angle Problems

Split up the problem into chunks and explain your reasoning at each point using angle notation

Keep working out clear and notes together



1. Angle DEF = 51° because it is a vertically opposite angle DEF = GEH
2. Triangle DEF is isosceles (triangle notation) ∴ EDF = EFD and the sum of interior angles is 180°
   180° - 51° = 129° 129° ÷ 2 = 64.5°
3. Angle EDF = 64.5°

Year 7 – lines and angles

Constructing, measuring and using geometric notation

What do I need to be able to do?

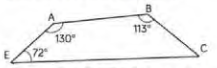
By the end of this unit you should be able to:

- Use letter and labelling conventions
- Draw and measure line segments and angles
- Identify parallel and perpendicular lines
- Recognise types of triangle
- Recognise types of quadrilateral
- Identify polygons
- Construct triangles (SAS, SSS, ASA)
- Draw Pie charts

Keywords

Polygon: A 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle
Frequency: the number of times a data value occurs
Sector: part of a circle made by two radii touching the centre
Rotation: turn in a given direction
Protractor: equipment used to measure angles
Compass: equipment used to draw arcs and circles.

Letter and labelling convention

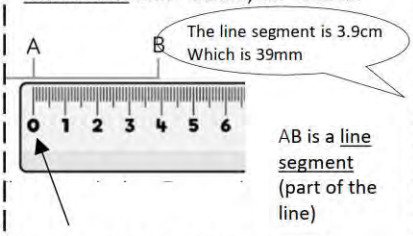


Angle Notation: three letters **ABC**
This is the angle at B = 113 °

Line Notation: two letters **EC**
The line that joins E to C.

Draw and measure line segments

Conversions 1cm = 10mm, 1m = 100cm



AB is a line segment (part of the line)

Make sure the start of the line is at 0;

Angles as measures of turn

Clockwise

Anti-Clockwise

East to South is a quarter turn clockwise

Quarter Turn 90° Clockwise

Half Turn 180°

Three-quarter Turn 270° Anti-Clockwise

Full Turn 360°

Classify angles

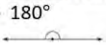
Acute Angles 0°< angle <90°

Right Angles 90°

Right angle notation

Obtuse 90°< angle <180°

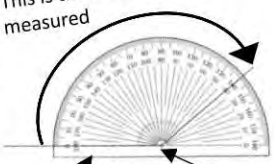
Reflex 180°< angle <360°



Straight Line 180°

Measure angles to 180°

This is the angle being measured



Read from 0° on the base line. Remember to use estimation. This is an obtuse angle so between 90 ° and 180 °

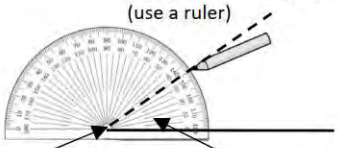
The base line follows the line segment

Make sure the cross is at the point the two lines meet

Draw angles up to 180°

Draw a 35° angle

Make a mark at 35° with a pencil
And join to the angle point (use a ruler)



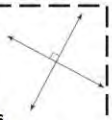
Make sure the cross is at the end of the line (where you want the angle)

The angle

Parallel and Perpendicular lines

Parallel lines
Straight lines that never meet
(Have the same gradient)

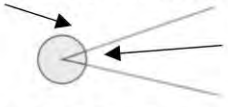
Perpendicular lines
Straight lines that meet at 90°



Angles over 180°

360 ° - smaller angle = reflex angle

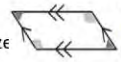
Use your knowledge of straight lines 180 ° and angles around a point 360 °



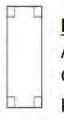
Measure the smaller angle first (less than 180 °

Properties of Quadrilaterals

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



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



Rectangle
All angles 90°
Opposite sides are parallel

Trapezium
One pair of parallel lines

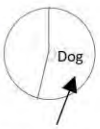
Rhombus
All sides equal size
Opposite angles are equal

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

Draw Pie Charts

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

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



This fraction of the 360 degrees represents dogs

32/60 X 360 = 192°

Use a protractor to draw
This is 192°

SAS, SSS, ASA constructions

Side, Angle, Angle

Side, Angle, Side

Side, Side, Side

Polygons

3	- Triangle	5	- Pentagon	8	- Octagon
4	- Quadrilateral	6	- Hexagon	9	- Nonagon
		7	- Heptagon	10	- Decagon

If all the sides and angles are the same, it is a **regular** polygon

Year 7 – reasoning with number

Sets and probability

What do I need to be able to do?

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

- Identify and represent sets
- Interpret and create Venn diagrams
- Understand and use the intersection of sets
- Understand and use the union of sets
- Generate sample spaces for single events
- Calculate the probability of a single event
- Understand and use the probability scale

Keywords

Set: collection of things
Element: each item in a set is called an element
Intersection: the overlapping part of a Venn diagram **(AND ∩)**
Union: two ellipses that join **(OR ∪)**
Mutually Exclusive: events that do not occur at the same time
Probability: likelihood of an event happening
Bias: a built-in error that makes all values wrong (unequal) by a certain amount, e.g. a weighted dice
Fair: there is zero bias, and all outcomes have an equal likelihood
Random: something happens by chance and is unable to be predicted.

Identify and represent sets

The **universal set** has this symbol ξ – this means EVERYTHING in the Venn diagram is in this set

A set is a collection of things – you write sets inside curly brackets { }

ξ = {the numbers between 1 and 50 inclusive}

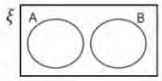
My sets can include every number between 1 and 50 including those numbers

A = {Square numbers}

A = {1, 4, 9, 16 ,25, 36, 49}

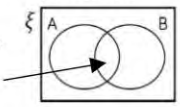
All the numbers in set A are square number and between 1 and 50

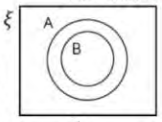
Interpret and create Venn diagrams



Mutually exclusive sets
The two sets have nothing in common
No overlap

Union of sets
The two sets have some elements in common – they are placed in the intersection



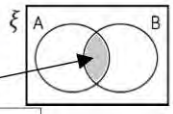


Subset
All of set B is also in Set A so the ellipse fits inside the set.

The box
Around the outside of every Venn diagram will be a box. If an element is not part of any set it is placed outside an ellipse but inside the box

Intersection of sets

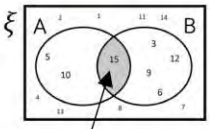
Elements in the intersection are in set A AND set B



The notation for this is $A \cap B$

ξ = {the numbers between 1 and 15 inclusive}

A = {Multiples of 5} B = {Multiples of 3}

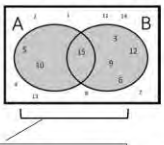


The element in $A \cap B$ is 15

In this example there is only one number that is both a multiple of 3 and a multiple of 5 between 1 and 15

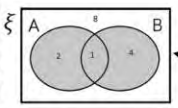
Union of sets

Elements in the union could be in set A OR set B



The notation for this is $A \cup B$

ξ = {the numbers between 1 and 15 inclusive}
A = {Multiples of 5} B = {Multiples of 3}
The elements in $A \cup B$ are
5, 10, 15, 3, 9, 6, 12
There are 7 elements that are either a multiple of 5 OR a multiple of 3 between 1 and 15



This Venn shows the **number of elements** in each set

Sample space – for single events

A sample space for rolling a six-sided dice is
S = {1 , 2, 3, 4, 5, 6}

A sample space for this spinner is
S = {Pink, Blue, Yellow}

You only need to write each element once in a sample space diagram

- A Sample space represents a possible outcome from an event
- They can be interpreted in a variety of ways because they do not tell you the probability

Probability of a single event

Probability = number of times event happens / total number of possible outcomes

P(Blue) = $\frac{4}{10}$ ∴ $= \frac{2}{5}$

There are 4 blue sectors

There are 10 sectors overall

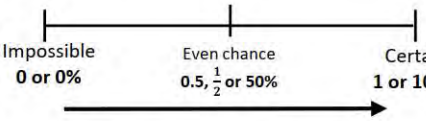
Probability notation
P (event)

Probability can be a fraction, decimal or percentage value

$\frac{4}{10} = \frac{40}{100} = 0.40 = 40\%$

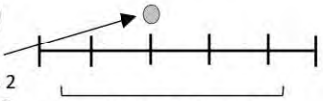
Probability is always a value between 0 and 1

The probability scale



The more likely an event the further up the probability it will be in comparison to another event (It will have a probability closer to 1)

There are 2 pink and 2 yellow balls, so they have the same probability



There are 5 possible outcomes
So 5 intervals on this scale, each interval value is $\frac{1}{5}$

Sum of probabilities

Probability is always a value between 0 and 1

The probability of getting a blue ball is $\frac{1}{5}$
∴The probability of **NOT** getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.35	

P(white chocolate) = 1 – 0.15 – 0.35
= 0.5

Year 7 – reasoning with number

Prime numbers and Proof

What do I need to be able to do?

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

- Find and use multiples
- Identify factors of numbers and expressions
- Recognise and identify prime numbers
- Recognise square and triangular numbers
- Find common factors including HCF
- Find common multiples including LCM

Keywords

Multiples: found by multiplying any number by positive integers
Factor: integers that multiply together to get another number.
Prime: an integer with only 2 factors.
Conjecture: a statement that might be true (based on reasoning) but is not proven.
Counterexample: a special type of example that disproves a statement.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)
HCF: highest common factor (biggest factor two or more numbers share)
LCM: lowest common multiple (the first time the times table of two or more numbers match)

Multiples

The "times table" of a given number

All the numbers in this lists below are multiples of 3.

3, 6, 9, 12, 15... (This list continues and doesn't end)

$3x$, $6x$, $9x$ ... (x could take any value and as the variable is a multiple of 3 the answer will also be a multiple of 3)

Non example of a multiple

4.5 is not a multiple of 3 because it is 3 x 1.5 (Not an integer)

Factors

Arrays can help represent factors

5 x 2 or 2 x 5

Factors of 10
1, 2, 5, 10

10 x 1 or 1 x 10

The number itself is always a factor

Factors and expressions

x x x x x x

$6x \times 1$ OR $6 \times x$

Factors of $6x$
6, x, 1, $6x$, $2x$, 3, $3x$, 2

x x / x x / x x — $2x \times 3$

x x x / x x x — $3x \times 2$

Prime numbers

2

- Integer
- Only has 2 factors, 1 and itself

The first prime number
The only even prime number

Learn or how-to quick recall...

2, 3, 5, 7 , 11, 13, 17, 19, 23, 29...

Square and triangular numbers

Square numbers

odd even odd

Representations are useful to understand a square number n^2

1, 4, 9, 16, 25, 36, 49, 64 ...

Triangular numbers

Representations are useful – an extra counter is added to each new row

Add two consecutive triangular numbers and get a square number

1, 3, 6, 10, 15, 21, 28, 36, 45...

Common factors and HCF

1 is a common factor of all numbers

Common factors are factors two or more numbers share

HCF – Highest common factor

HCF of 18 and 30

18 1, 2, 3, 6, 9, 18

30 1, 2, 3, 5, 6, 10, 15, 30

Common factors (factors of both numbers)
1, 2, 3, 6

HCF = 6

6 is the biggest factor they share

Common multiples and LCM

Common multiples are multiples two or more numbers share

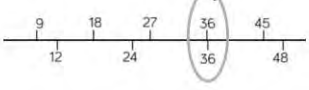
LCM – Lowest common multiple

LCM = 36 (The first time their multiples match)

LCM of 9 and 12

9 9, 18, 27, 36, 45, 54

12 12, 24, 36, 48, 60



Comparing fractions

Compare fractions using a LCM denominator

$\frac{3}{5}$ and $\frac{7}{10}$ → $\frac{6}{10}$ and $\frac{7}{10}$

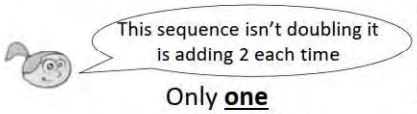
Conjectures and counterexamples

Conjecture

1, 2, 4, ...
The numbers in the sequence are doubling each time.

A pattern that is noticed for many cases

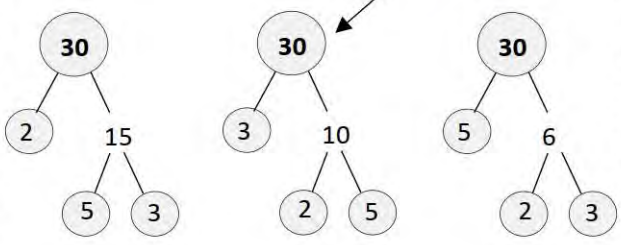
Counterexamples



Only **one** counterexample is needed to disprove a conjecture

Product of prime factors

Multiplication part-whole models



All three prime factor trees represent the same decomposition

Multiplication is commutative

30 = 2 x 3 x 5 ← Multiplication of prime factors

Using prime factors for predictions

e.g. **60** 30 x 2 2 x 3 x 5 **x 2**

150 30 x 5 2 x 3 x 5 **x 5**

Year 7 – reasoning with number

Developing number sense

What do I need to be able to do?

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

- Know and use mental addition/ subtraction
- Know and use mental multiplication/ division
- Know and use mental arithmetic for decimals
- Know and use mental arithmetic for fractions
- Use factors to simplify calculations
- Use estimation to check mental calculations
- Use number facts
- Use algebraic facts

Keywords

Commutative: changing the order of the operations does not change the result
Associative: when you add or multiply you can do so regardless of how the numbers are grouped
Dividend: the number being divided
Divisor: the number we divide by.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign
Equation: a mathematical statement that two things are equal
Quotient: the result of a division

Mental methods for addition/ subtraction

Addition is commutative

6 + 3 = 3 + 6

The order of addition does not change the result

Subtraction the order **has to** stay the same

360 – 147 = 360 – 100 – 40 – 7

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction

Mental methods for multiplication/ division

Multiplication is commutative

2 × 4 = 4 × 2

The order of multiplication does not change the result

Partitioning can help multiplication

24 x 6 = 20 x 6 + 4 x 6
= 120 + 24
= 144

Division is not associative

Chunking the division can help 4000 ÷ 25 "How many 25's in 100" then how many chunks of that in 4000.

Mental methods for decimals

Multiplying by a decimal <1 will make the original value smaller

e.g x 0.1 = ÷ 10

Methods for multiplication 1.2 x 0.03

12 × 3 = 36
1.2 × 3 = 3.6
1.2 × 0.3 = 0.36
1.2 × 0.03 = 0.036

12 × 3 = 36
÷ 10 ÷ 100 ÷ 1000
1.2 × 0.03 = 0.036

Methods for division 1.5 ÷ 0.05

Multiply by powers of 10 until the divisor becomes an integer

1.5 ÷ 0.05
x100 x100
150 ÷ 5 = 30

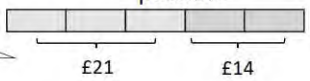
Methods for addition

2 + 2 = 4
0.3 + 0.4 = 0.7
4 + 0.7 = 4.7

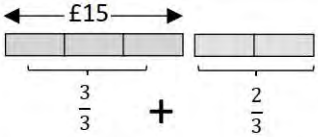
Mental methods for fractions

Use bar models where possible

I've spent $\frac{2}{5}$ of my money. I have £21 left



How much did they have to begin with?



What is $\frac{5}{3}$ of £15?

Using factors to simplify calculations

30 x 16

10 x 3 x 4 x 4
2 x 5 x 3 x 2 x 2 x 2 x 2
10 x 3 x 2 x 8
16 x 10 x 3

Multiplication is commutative
Factors can be multiplied in any order

Estimation

Estimations are useful – especially when using fractions and decimals to check if your solution is possible.

Most estimations round to 1 significant figure

210 + 899 < 1200

This is true because even if both numbers were rounded up, they would reach
300 + 900.
The correct estimation would be 200 + 900 = 1100.

Number facts

Use 124 x 5 = 620

For multiplication, each value that is multiplied or divided by powers of 10 needs to happen to the result

620÷ 12.4 = 50

For division you must consider the impact of the divisor becoming smaller or bigger.
Smaller – the answer will be bigger (It is being shared into less parts)
Bigger – the answer will be smaller (It is being shared into more parts)

Algebraic facts

2a + 2b = 10 — Everything x 2

0.1a + 0.1b = 0.5 — Everything ÷ 10

a + b = 5

Add 2 to the total

a + b + 2 = 7

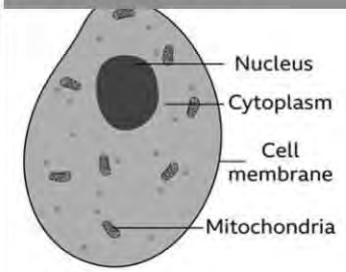
The unknown quantity isn't changing but the variables change what is done to give the result.

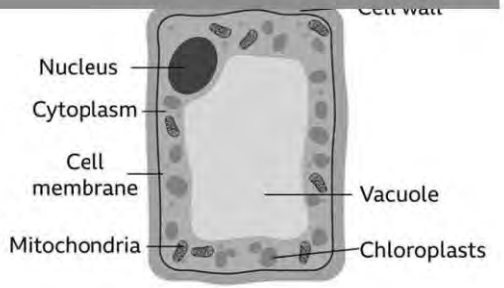
SCIENCE

Knowledge Organiser

Cells

1. Cell structure





Organelle	Function
Nucleus	Controls the cell and contains DNA
Cell membrane	Controls what leaves and enters
Cytoplasm	Jelly like substance where chemical reactions occur
Mitochondria	Site of respiration
Cell wall	Provides support
Vacuole	Contains cell sap
Chloroplasts	Site of photosynthesis

3. Measuring cells

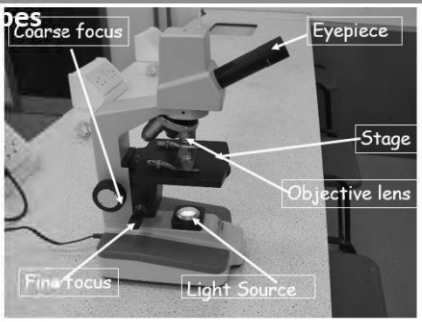
If a blood cell image size is 300mm and the magnification of the image is x30,000 what is the actual size?

$$\text{Actual size} = \frac{\text{Image size}}{\text{Magnification}}$$

Actual size = image / Magnification

Actual size = 300 / 30000

=0.01 mm



4. Specialised cells

Sperm Cell	*Its job is to carry genetic information and fertilise the egg*
Egg Cell	*Its job is to carry genetic information*
Palisade Cell	*Its job is photosynthesis*
Red blood Cell	*Its job is to carry oxygen around the body*
Root hair cell	*Its job is to absorb water and minerals*

5. Stem cells

Two types of stem cells: **Embryonic stem cells** and **Adult stem cells.** Stem cells have the ability to become any type of cells e.g. bone cell, skin cell etc. This is known as differentiation

Benefits:

- Could treat conditions such as diabetes
- Used to test new drugs

Cons

- Do not differentiate in many different cell types
- Unethical - embryonic stem cells involves destruction of an embryo
- limited success

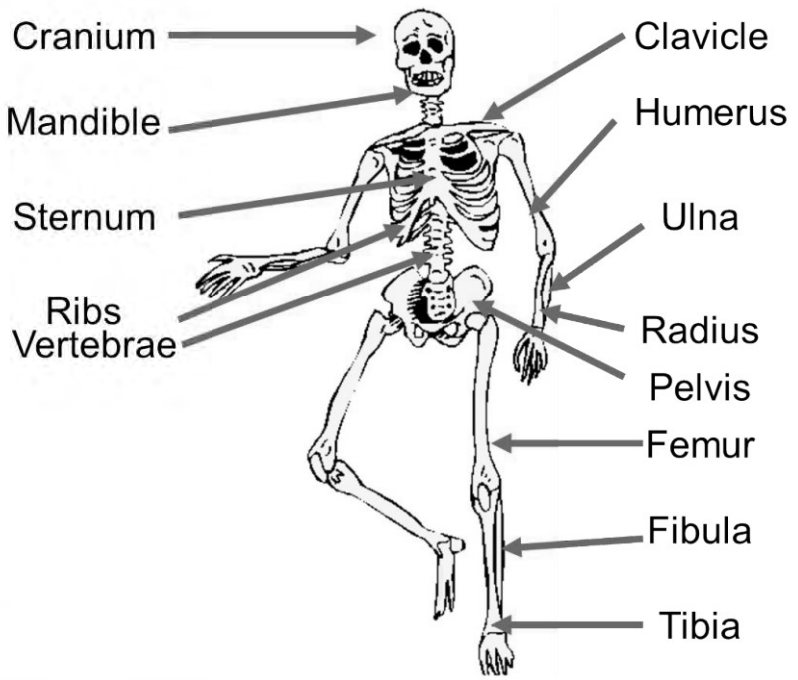
Movemen
t

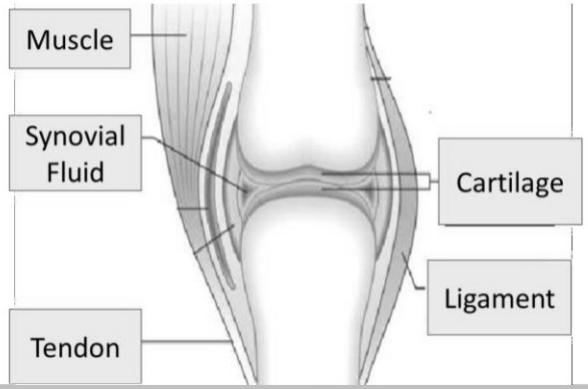
1. A balanced diet

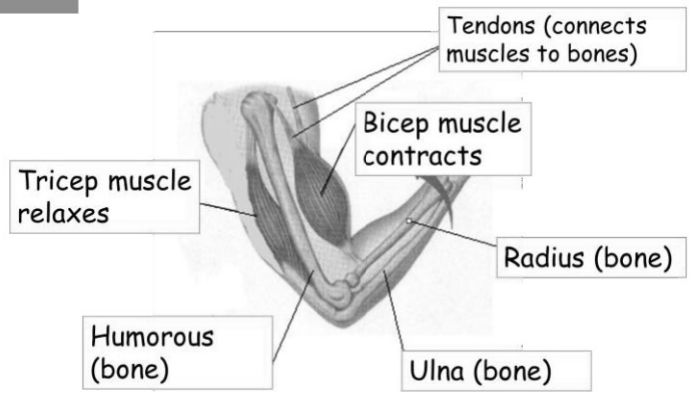
Nutrient	Use	Found in foods
carbohydrate	energy	Bread, pasta
fat	Energy and insulation	Cake, meat
protein	Growth and repair	Meat, fish
water	Keep cells hydrated	Fruit, veg
vitamins	Keep body healthy	Fruit, veg
minerals	Keep body healthy	Fruit, veg
fibre	Aid digestion	Veg, bread

2 and 3. Vitamin C

Vitamin C	Helps treat scurvy, cancer and common cold







Variation

1. What is Variation?

We all have similar features but we are all different. These differences are called **variation**

Variation is the differences within and between **species**

Variation can be caused by:-

- Genetics e.g. Blood group, eye colour

OR

- Environment e.g. scars, accent

OR

- Combination of both e.g. height, weight

2. Inherited variation

We inherit genetic characteristics from our parents

Short sections of DNA are called genes, these code for characteristics e.g. eye colour, hair colour

We get half our genes from our mother (egg cell) and the other half from our father (sperm). The egg and sperm fuse together in fertilisation

3. There are 2 types of variation

Continuous

- Controlled by many genes and affected by environment
- Can be any value

Examples: Weight. Weight has a large range and any weight is possible between these values.

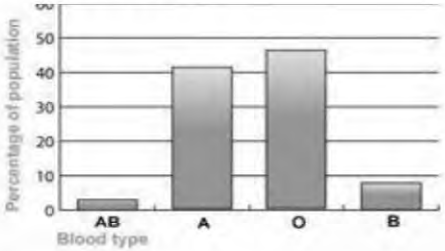
Discontinuous (Grouped)

- Controlled by one gene, not affected by the environment
- Limited number of values, categories/groups

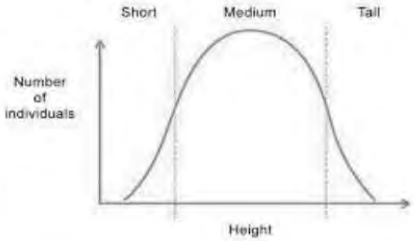
Examples: Human blood group (A, B, AB or O) , Gender (male or female)

4. Variation graphs

Discontinuous – category
Draw bar chart



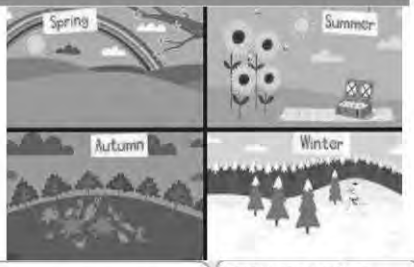
Continuous – numbers
Draw line graph

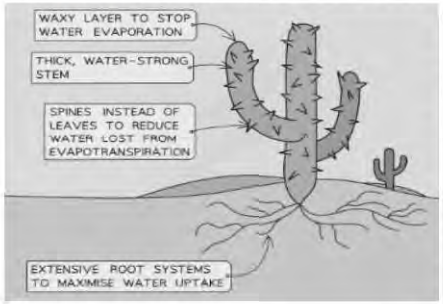


5. Adapting to change

Environments can change a lot during a year

Plants and animal species have to develop different ways to survive. We call these changes adaptations





How is the polar bear adapted to live in the Arctic, preying on seals?

White fur camouflages it as it creeps up on a seal.

Thick fur keeps it warm at temperatures below 0°C.

Skin (under its fur) is black to absorb heat from the Sun.

Furry soles insulate its feet and stop it slipping on ice.

Small ears reduce surface area so less heat is lost.

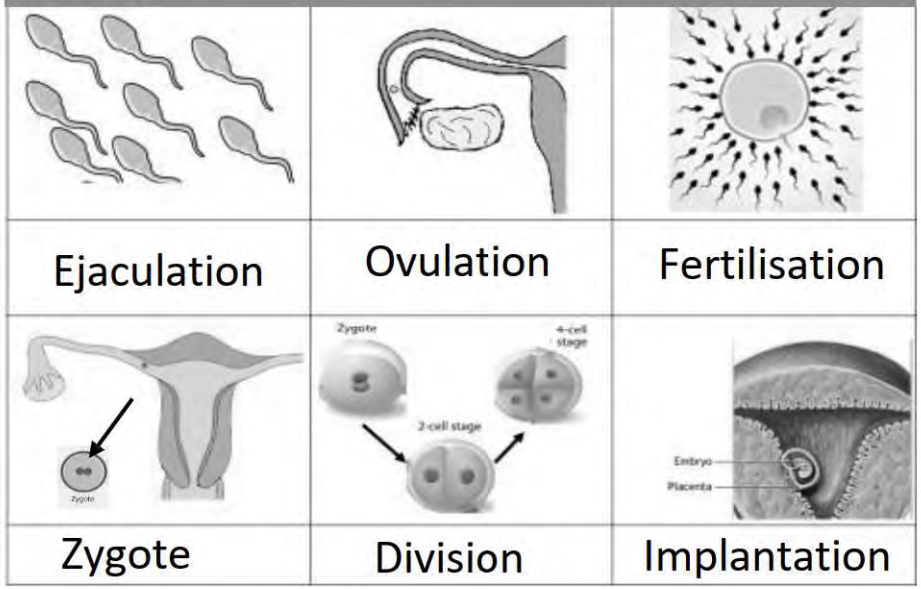
5. What's a species?

A species is a group of similar looking organisms that can breed together to form offspring (children) who can also have offspring of their own (are fertile)

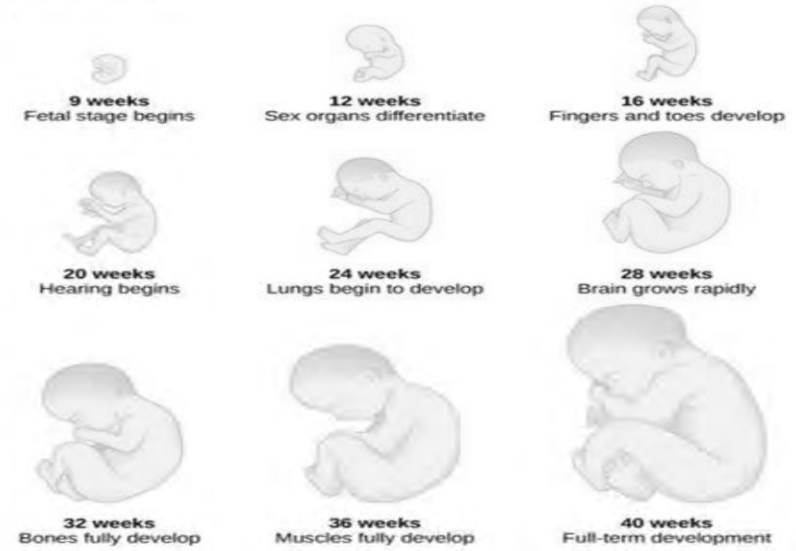
e.g. Lions and tigers can breed together to produce a liger but a liger can't make baby ligers, therefore lions and tigers are different species

Human reproduction

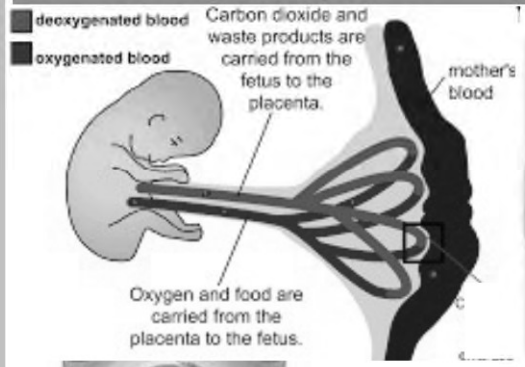
6. Conception

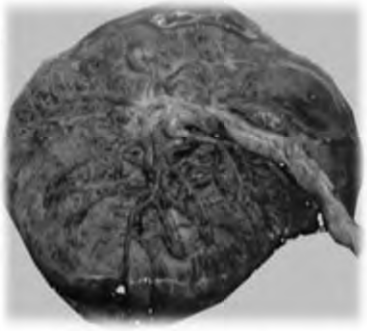


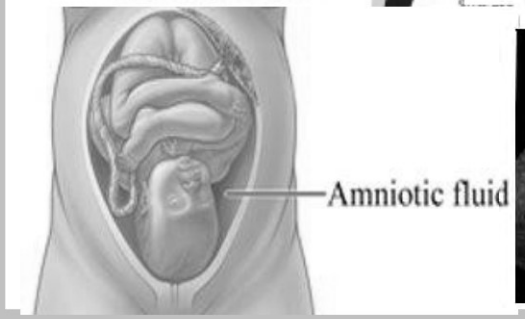
7. Pregnancy

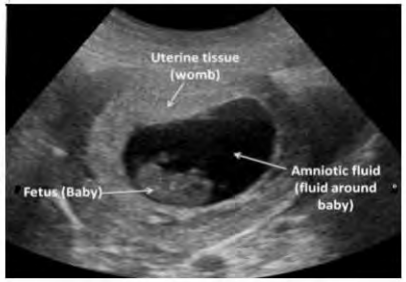


8. Placenta and Amniotic fluid









9. Birth

Baby head lies just above cervix and mother feels small contractions of the uterus

↓

Contractions of uterus wall become stronger widening and dilating the cervix

↓

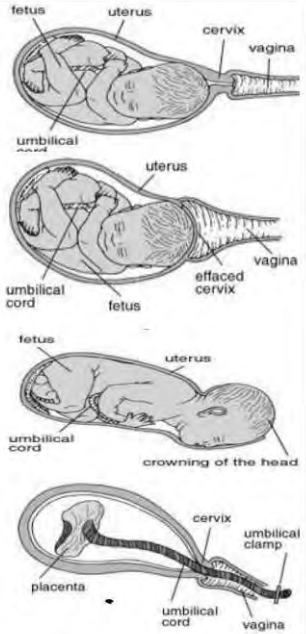
Amniotic fluid breaks and the baby is pushed out of the vagina

↓

Baby is born

↓

Placenta comes away from uterus wall and comes out of vagina

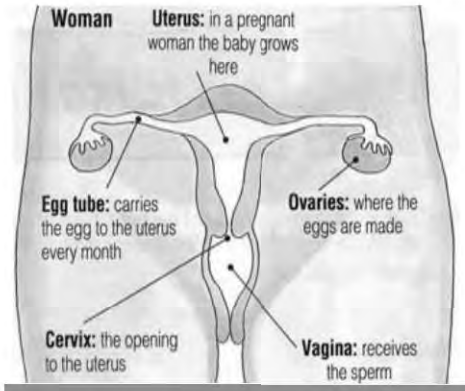


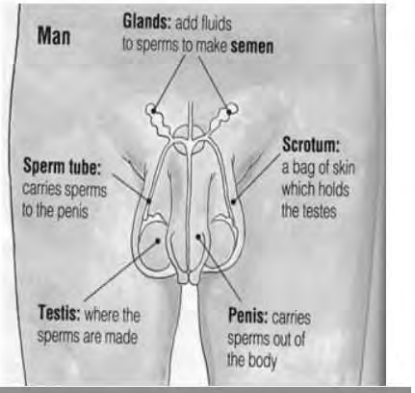
Human reproduction

1. Reproduction keywords

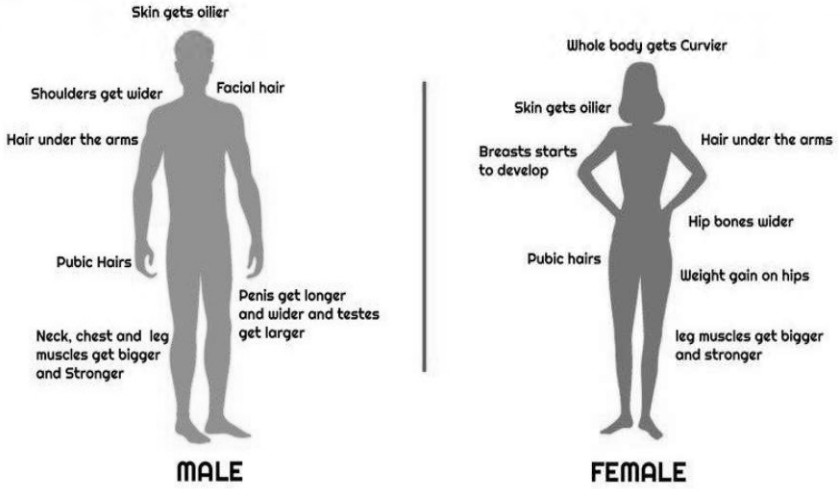
Gamete: The male gamete (sex cell) in animals is a sperm, the female an egg.
Fertilisation: Joining of a nucleus from a male and female sex cell.
Ejaculation: ejection of sperm through the penis
Implantation: Embryo sinks into uterus lining after fertilisation
Egg tube or fallopian tube: Carries an egg from the ovary to the uterus and is where fertilisation occurs.
Uterus or womb: Where a baby develops in a pregnant woman.
Ovulation: Release of an egg cell during the menstrual cycle, which may be met by a sperm.
Menstruation: Loss of the lining of the uterus during the menstrual cycle.
Foetus: The developing baby during pregnancy.
Gestation: Process where the baby develops during pregnancy.
Placenta: Organ that provides the foetus with oxygen and nutrients and removes waste substances.
Amniotic fluid: Liquid that surrounds and protects the foetus.
Umbilical cord: Connects the foetus to the placenta.

2. Male and Female reproductive organs

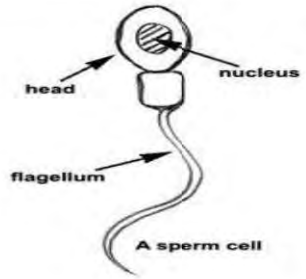


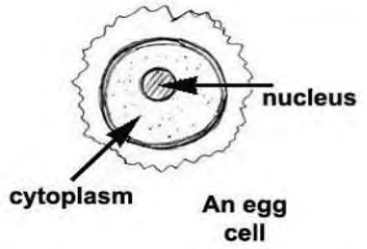


3. Changes during puberty

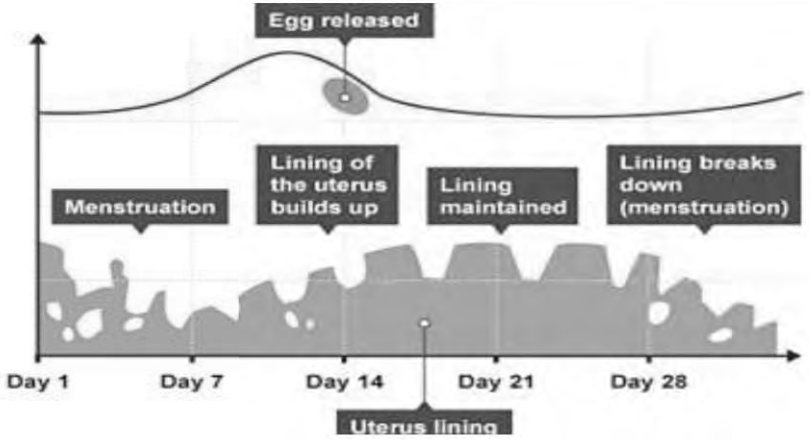


4. Male and Female sex cells (gametes)





5. Menstrual cycle (periods)

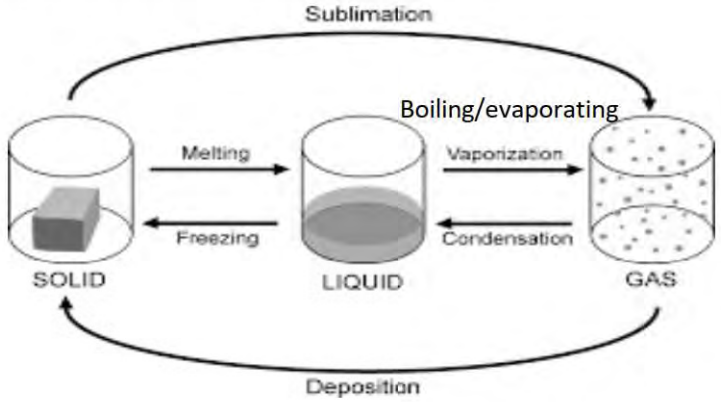


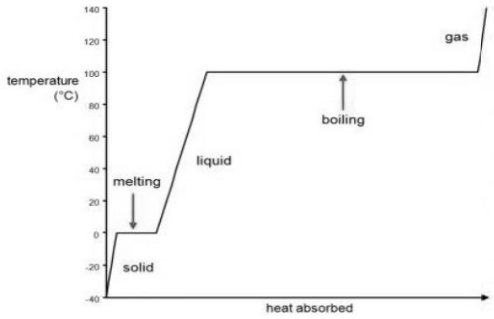
Particle model

1. States of Matter

	Solid	Liquid	Gas
Shape	Fixed shape	Takes the shape of the bottom of the container	Takes the shape of the whole container
Volume	Fixed volume	Fixed volume	No fixed volume
Flow	Cannot flow	Can flow and be poured	Can flow and be poured

2. Change of State



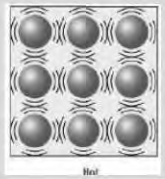


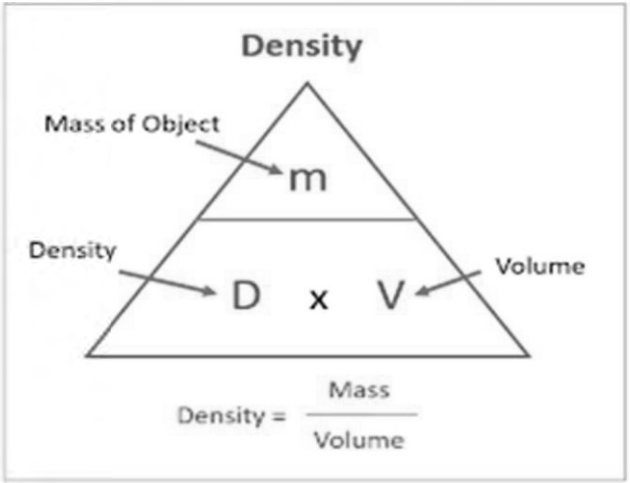
At the melting/freezing and boiling/condensing points of a substance temperature does not change

3. Density

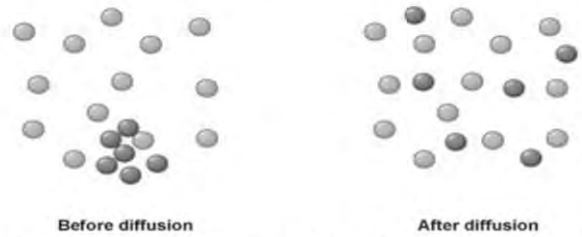
State of matter	Density	Compression	Explanation
Solid	High	Cannot be compressed	Particles are close together
Liquid	High	Cannot be compressed	Particles are close together
Gas	Low	Can be compressed	Particles are far apart

Expansion	Contraction
Particles spread further apart from one another when heated	Particles get closer together when they cool back down





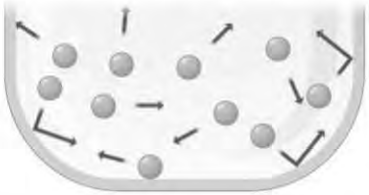
4. Diffusion & gas pressure



Diffusion is the movement of particles from an area where there are many particles to one where there are fewer (high concentration to low concentration).

Diffusion happens in gases and liquids because the particles can **move freely**

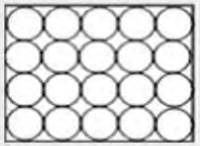
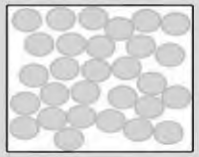
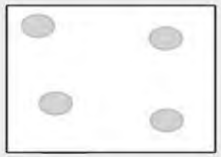
When gas particles hit the walls of their container they cause pressure. The more particles that hit the walls, the higher the pressure.



Gas pressure can be increased by:

- Increasing the temperature – makes the particles move faster with more energy
- Decreasing the volume of the container
- Increasing the number of gas particles

5. The Particle Model

State	Particle diagram	Distance between particles	Arrangement (random or organised)	Movement & Energy of particles	Forces of attraction between particles
Solid		Close together	Organised rows	Vibrate around a fixed point – Low energy	Strong
Liquid		Close together	Random	Move around each other – moderate energy	Weaker than in solids
Gas		Far apart	Random	Move quickly in all directions – High energy	None

Mixtures

1. Pure substances & mixtures

Pure substance
One element or compound

- Fixed boiling point e.g. water boils at 100°C
- Pure compounds cannot be separated by physical processes

Mixture
Two or more elements or compounds together that aren't chemically bonded

- Range boiling points
- e.g. a mixture of two liquids could boil between 70 - 100 °C
- Easily separated by physical processes

2. Dissolving & Solubility

Solute
The solid which is being dissolved

Solvent
The liquid used to dissolve a solute

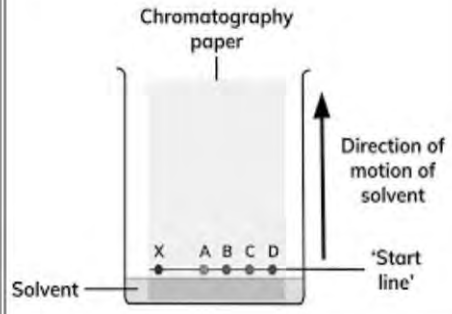
Solution
Mixture formed after solute has been dissolved

Solubility
A measure of how much solute will dissolve at a specific temperature

3. Separating Mixtures

Chromatography

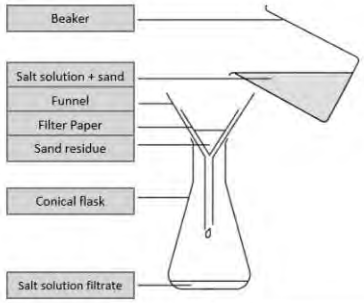
Chromatography is used to separate coloured dyes in ink. They travel through paper at different rates



Filtration

Separates **insoluble** solids from liquids

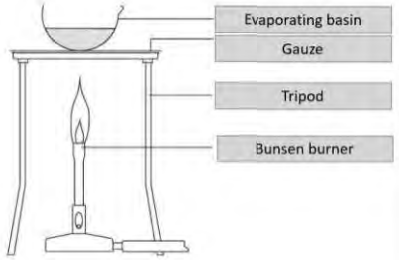
e.g. sand and water



Evaporation

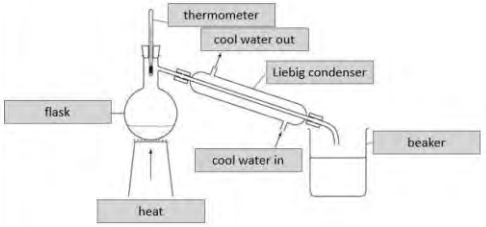
Separates **soluble** solids from liquids

e.g. salt and water solution



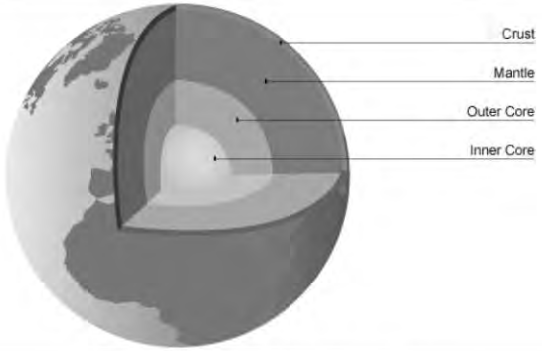
Distillation

Distillation is used to separate either a solid and a liquid or two liquids with different boiling points.



Earth's structure

1. The structure of the earth



Part	Description
Crust	A solid layer of rock on the surface of the planet. The thickness varies between 3 and 30 miles.
Mantle	The mantle is a semi-liquid layer of magma, or molten rock, that moves due to convection currents.
Outer Core	The outer core is the liquid part of the core which has a similar composition to the inner core.
Inner Core	The inner core is the solid part at the centre of the Earth. It is made of iron and nickel and has temperatures reaching 5,500°C.

2. Types of rock

Sedimentary rocks form when layers of sediment build up over time.

Metamorphic rocks form when existing igneous & sedimentary rocks change by heating & or pressure

Igneous

- Granite
- Pumice
- Basalt

sedimentary

- Shale
- Sandstone
- Limestone

metamorphic

- Gneiss
- Slate
- Marble

3. Rock cycle and weathering

Three types of weathering

Biological

Rocks broken up by the roots of plants, or animals burrowing into them.

Chemical

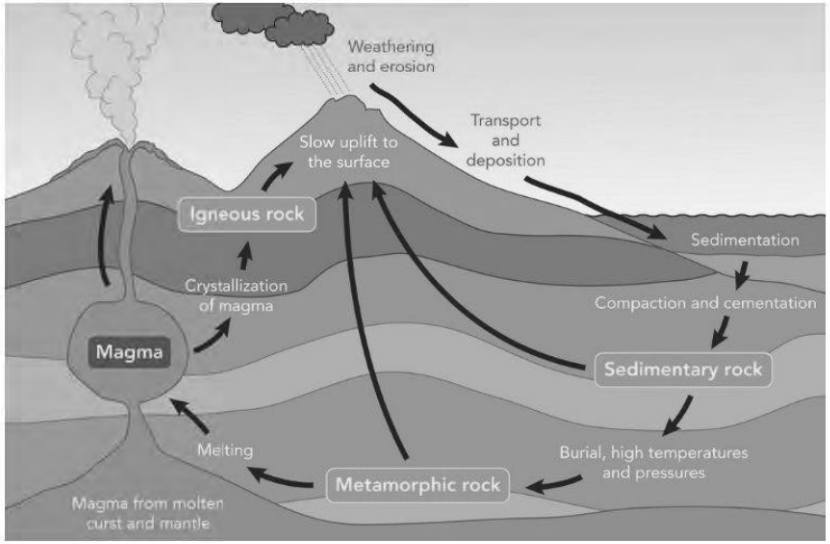
Rocks broken up because substances in rainwater, rivers and seawater or the air, react with the rocks.

Physical

Rocks broken up by changes in temp, freezing and thawing of trapped water or the action of waves.

Weathering is a chemical or physical process in which rocks exposed to weather are worn down

Erosion is the carrying away of weathered rock, soil or other materials on the Earth's surface

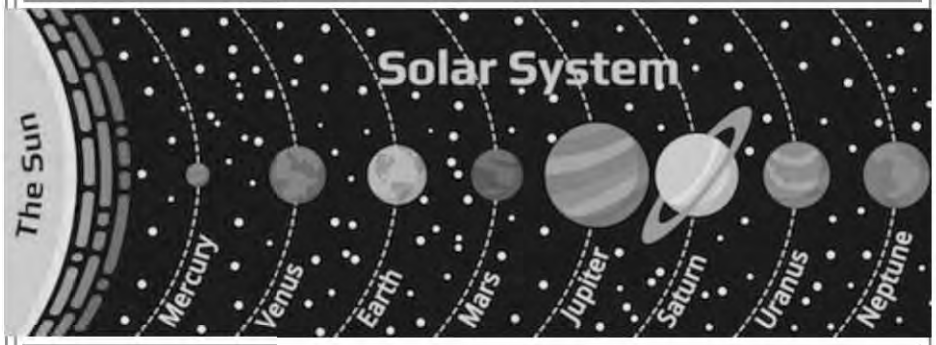


The Universe

1. Keywords

Keyword	Definition
Attraction	When two or more things come together, eg the north pole of a magnet is attracted to the south pole of a magnet.
Gravity	The force of attraction between all objects. The more mass an object has, the larger the force of gravity it exerts.
Magnetic Field	Area surrounding a magnet that can exert a force on magnetic materials.
Mass	Amount of matter there is in something. Measured in kilograms, kg.
Orbit	An orbit is the path that an object takes in space when it goes around a star, a planet, or a moon.
Repulsion	When two or more things are forced apart, eg the north pole of a magnet is repelled by the north pole of another magnet.
Season	One of four times of the year (winter, spring, summer or autumn).
Solar System	The solar system consists of the Sun, with planets and smaller objects such as asteroids and comets in orbit around it.
Star	A large mass at the centre of a Solar System (if there are other bodies present) that produces heat and light, eg the star at the centre of our Solar System is called the Sun.
Weight	The force of gravity on an object. Measured in newtons, N.

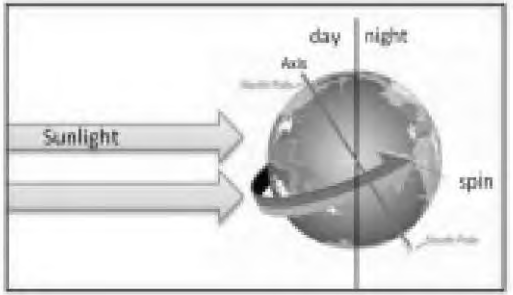
2. Our Solar System



3. Day/Night/ Year

Day and Night

The Earth rotates (spins) round on its axis once in 24hours. We spin into the light – **day** - and then back out again – **night**



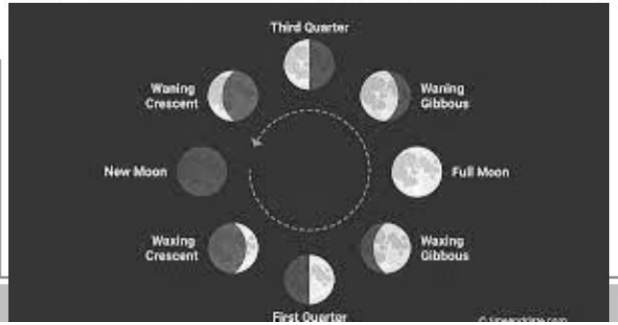
4. Weight and Mass and Phases of the Moon

Weight and Mass

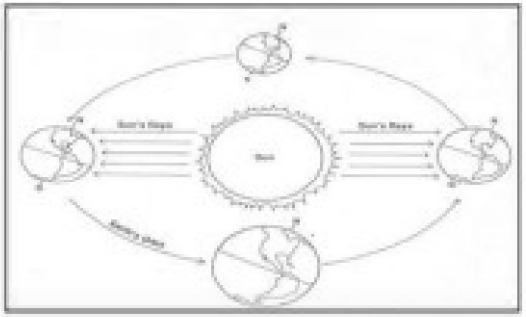
Mass is the amount of matter there is in something. It is measured in kilograms, **kg**. An objects mass the same everywhere in the universe.

Weight is the force of gravity on an object. All forces including weight are measured in Newtons, **N**. Gravity is not the same everywhere. So, an object's weight depends on where in the universe it is.

To work out the weight of an object we do some Maths. **Weight (N) = mass (kg) x gravitational field strength (N/kg)**



$$W = m \times g$$



The Earth orbits the Sun ***once every 365 days***. Planets further out from the Sun travel more slowly and take longer to go round once. The Earth's axis is tipped over in space. In Britain we get different ***seasons*** because sometimes we are tilted towards the Sun and sometimes away.

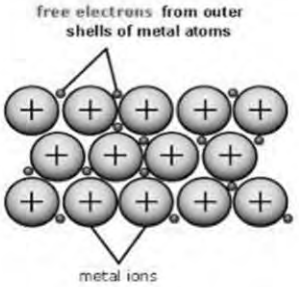
Metals

1. Metals & Non-Metals

Properties

Metals	Non-metals
Good conductors of heat & electricity	Poor conductors of heat & electricity (insulators)
Malleable/Ductile	Brittle
Shiny	Dull
Most have high melting points	Most have low melting points

Properties linked to metal structure



Free electrons so can conduct electricity

Atoms arranged in rows and layers, malleable as layers can slide across one another

2. Metals & Oxygen

When oxygen is added in a chemical reaction this is called oxidation.

metal + oxygen ➔ metal oxide

Eg. Copper + oxygen ➔ copper oxide

Can be represented by a particle diagram

non-metal + oxygen ➔ non-metal oxide

Eg. Sulfur + oxygen ➔ sulfur dioxide

di prefix = 2 oxygen atoms

3. Metals & Acid

When metals and acids react a metal salt is formed, and hydrogen gas produced. The general equation for this is:

Metal + acid ➔ metal salt + hydrogen

Example:

Magnesium + hydrochloric acid ➔ magnesium chloride + hydrogen

Different acids make different salts:

Acid name	Salt ending
Hydrochloric (HCl)	chloride
Sulfuric (H_2SO_4)	sulfate
Nitric (HNO_3)	nitric

5. Reactivity series of metals and displacement reactions

Metal displacement reaction – a reaction in which a more reactive metal will displace a less reactive metal from a solution of its salt

Example:

Magnesium + copper sulfate ➔ magnesium sulfate + copper

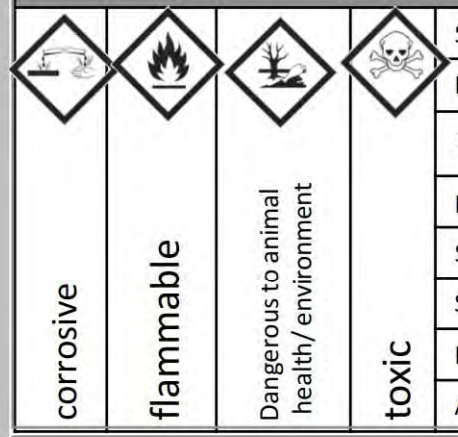
The magnesium is higher up on the reactivity series than the copper so is able to displace it.

Copper + magnesium sulfate ➔ **X**

No reaction occurs here as copper is lower than magnesium on the reactivity series.

Acids and alkalis

1. Identifying hazards

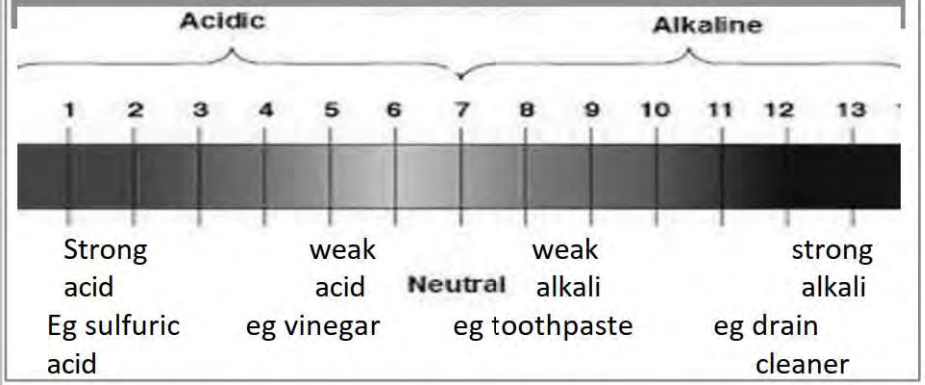


Some Common laboratory acids:	
Hydrochloric Acid	HCl
Sulfuric Acid	H_2SO_4
Nitric Acid	HNO_3
Some common laboratory alkalis	
Sodium hydroxide	NaOH
Potassium hydroxide	KOH
Ammonia	NH_3

2. Identifying acids & Alkalis (soluble base)

Indicator	Colour in acid	Colour in alkali
Red litmus	Stays Red	Changes to Blue
Blue litmus	Changes to red	Stays blue
Methyl orange	Red	Yellow
Phenol pthalein	Colourless	Pink

3. pH & Universal indicator



4. pH & Neutralisation

Acid + Alkali → Salt + water

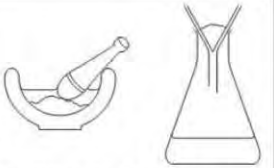
Measuring how much acid is needed to neutralise a fixed amount of alkali	Add $10cm^3$ of sodium hydroxide into a beaker Add a few drops UI & put onto a white tile Add hydrochloric acid from a syringe Measure how much acid causes the solution to turn green
Some every day examples of neutralisation	Acidic bee stings can be neutralised using a weak alkali such as sodium bicarbonate
	Alkaline wasp stings can be neutralised using a weak acid such as vinegar
	Excess stomach acid can be neutralised using an antacid – weak bases such as magnesium carbonate
pH and the environment	Lakes & soil can become acidic because of acid rain. This can cause fish & crops to die

5. Making an Indicator

Part 1: Making the indicator

Apparatus

- mortar and pestle
- boiling tube or conical flask
- filter paper and a filter funnel
- hot water
- red cabbage leaves



Method

A Put some red cabbage leaves into the mortar.

B Add a little hot water.

C Grind up the leaves so that you get as much of the colour out as possible.

D Filter the mixture and collect the liquid in a tube or flask.

Speed

1.Explain what is speed and calculate speed

Average speed: The overall distance travelled divided by overall time for a journey.

Instantaneous speed: The speed of an object at a particular moment in time.

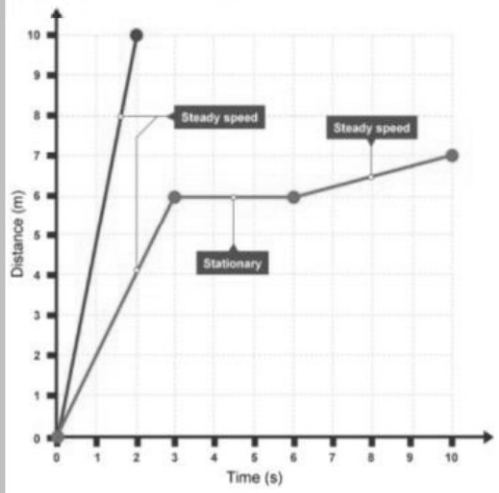
The equation that links speed, distance and time is

Speed = distance ÷ time

2. Explain how to measure speed and identify which factors affect an object's speed

To measure speed in metres per second, we must know the distance travelled in metres and the time taken in seconds. With the distance and time measured, the speed is calculated by dividing the distance by the time taken.

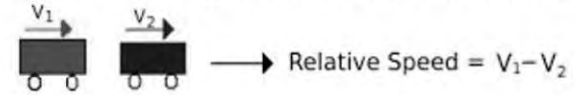
3. Determine what a straight line on a distance-time graph represents and sketch a journey with changing speed on a distance-time graph.



A straight line on a distance-time graph represents constant speed.
The steeper the straight line (gradient), the faster the speed.
If the straight line is horizontal (no gradient) then the speed is zero.

4. Define relative motion and compare how the speed of an object varies when measured by observers who are not moving, or moving relative to the object.

Objects moving in the same direction, towards or away from each other. Fastest speed take away the slowest speed.



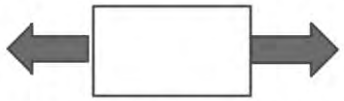
Objects Moving in Same direction

Objects moving in the opposite direction, towards or away from each other, add the two speeds together.

Objects Moving in Opposite Direction

5. Explain how forces affect the motion of an object and define the term, resultant force.

Initially at rest, with balanced forces, stays at constant speed (stays at rest).



Initially at rest, now with unbalanced forces, it accelerates to the direction of the bigger force.

If the forces are **balanced** there is **no** change in speed.

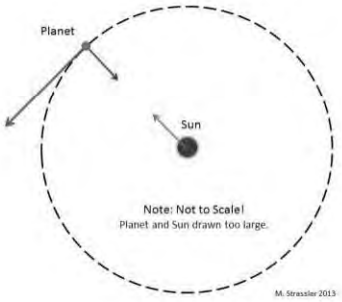
A stationary object stays stationary.
A moving object continues moving.

The sum of all the forces acting on an object is called the resultant force.

Gravity

1. Gravity

Gravity always acts toward the centre of the object producing it:



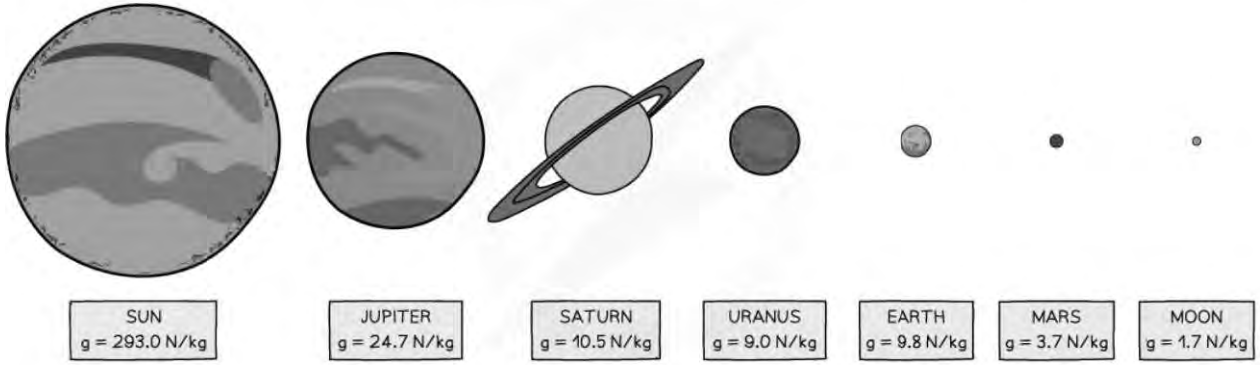
Gravity is a FORCE which we call WEIGHT so it is measure in newtons, N.

2. Weight

Formula	Weight = mass x gravitational field strength W = mg	**Units**	weight – newtons, N mass – kilograms, kg gravitational field strength – newtons per kilogram, N/kg

3. Example weight calculation

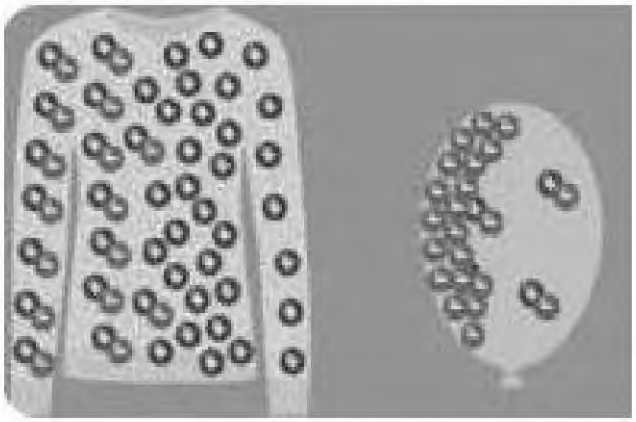
Question	An astronaut is on the moon. Her mass is 65kg on the Earth. Calculate the weight of the astronaut on the earth and on the moon.
Answer	m = 65kg On the earth: g = 9.8 N/kg (on he diagram below) W = mg W = 65 x 9.8 = 637 N On the moon: g = 1.7 N/kg W = mg W = 65 x 1.7 = 111 N



Static charge

1.Explain the generation of static electricity and describe the effects of static charge

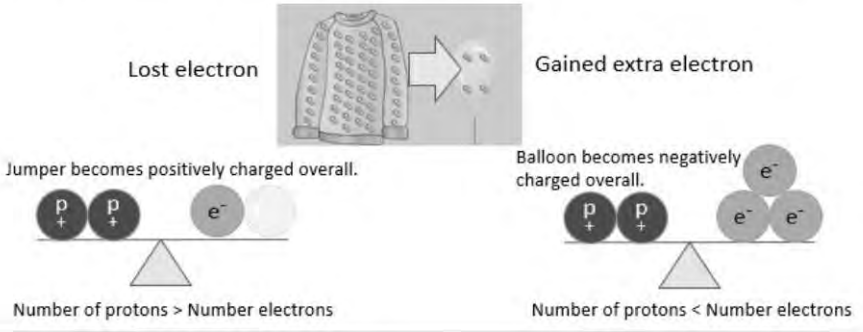
When two different insulators are rubbed together, electrons move from one insulator to the other. The object which gains electrons is now negatively charged . The object which loses electrons is now positively charged.



Objects with like charges (both positive or both negative) will repel. Objects with unlike charges (one is positive and the other is negative) will attract.

2. Explain static charge in terms of electron transfer

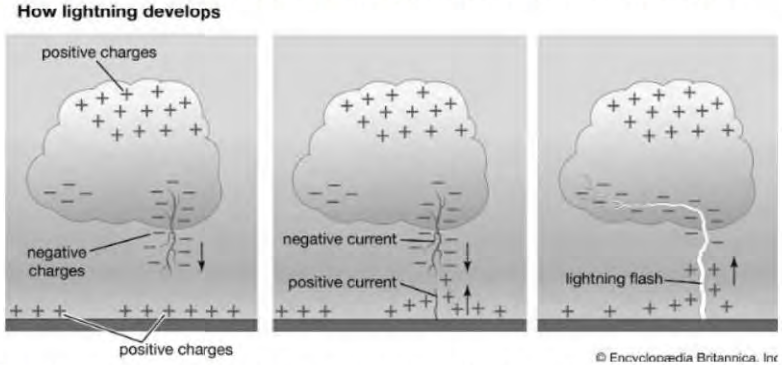
An atom is neutral. Number of protons = Number of electrons.
Materials/objects have no charge/neutral
Rubbing materials causes electrons to be pulled off the jumper onto the balloon. Notice the balance of protons and electrons.



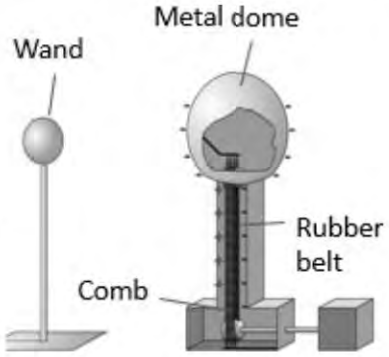
3. Describe static electricity in terms of fields

Electric charge can either flow or be gathered in one place. Charge that is flowing is called current and when it is not flowing it is called static electricity.

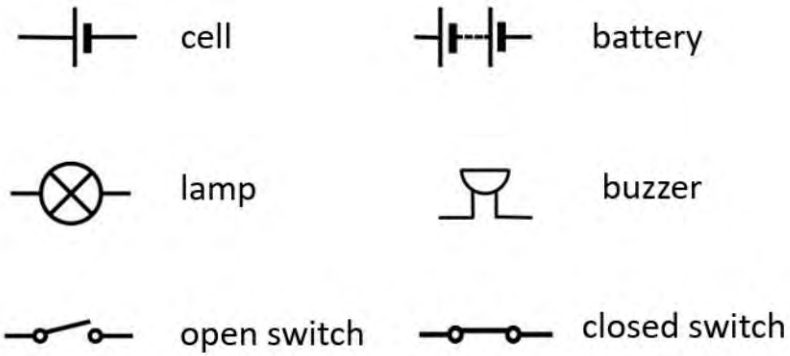
Lightning - A bright light in the sky. It is caused by so much static electricity building up inside a cloud that giant spark of electricity flows between the cloud and the ground or between clouds.



A charged object creates an electric field . You cannot see an electric field, but it surrounds the charged object. If another charged object is moved into the electric field, a force acts on it. The force is a non-contact force because the charged objects do not have to touch for the force to be exerted.



1. Common circuit symbols



2. Key definitions

Current: Rate of flow of electric charge. It is measured in amps (A)

Voltage: Potential difference is a measure of the difference in energy per unit charge across a component. It is measured in volts (V)

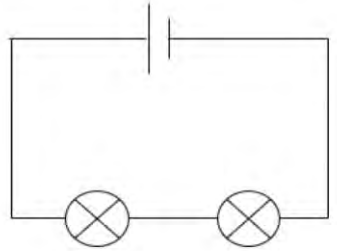
Resistance: a measure of how much a material tries to stop electricity passing through it. It is measured in ohms (Ω)

3. Calculating resistance

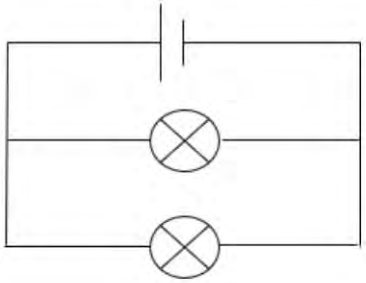
$$\text{Resistance (in } \Omega) = \frac{\text{Voltage (in V)}}{\text{Current (in A)}}$$

4. Types of circuit

Series: One loop for current from battery/cell back to the battery/cell.



Parallel: Multiple loops for current from battery/cell back to the battery/cell.

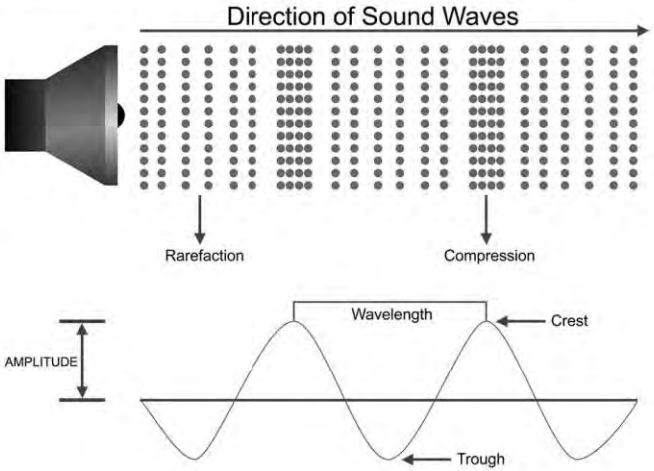


Sound

1. Exploring sound

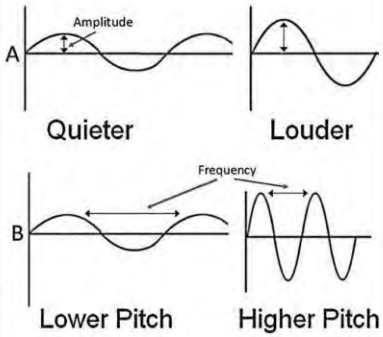
Sounds waves are longitudinal

The direction of energy transfer of the wave is **parallel** to the vibration of the source.

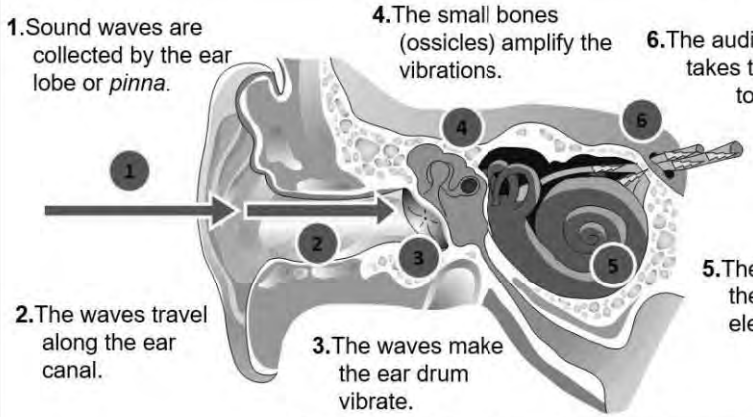


2. Describing sound

Amplitude	the maximum displacement that any particle has, measured in Decibels (Db)
Frequency	the number of waves passing per second, measured in Hertz (Hz)
Wavelength	the distance from one point on a wave to the equivalent point on the next wave (m)



3. Hearing sound



The audible range is the range of frequencies that can be heard.

Humans can typically hear from 20 Hz to 20 000 Hz.

Animal	Hearing range (Hz)
human	20-20,000
dog	67-45,000
cat	45-64,000
cow	23-35,000
sheep	100-30,000
rabbit	360-42,000

4. Speed of sound

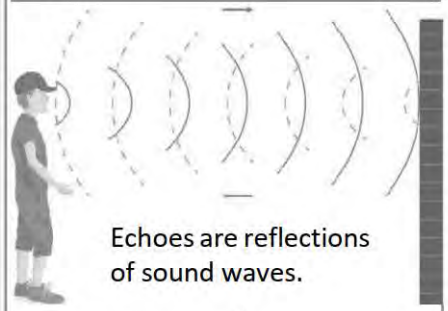
Sound travels fastest in solids because the particles are closer together.

Sound travels slowest in gases because the particles are spread far apart.

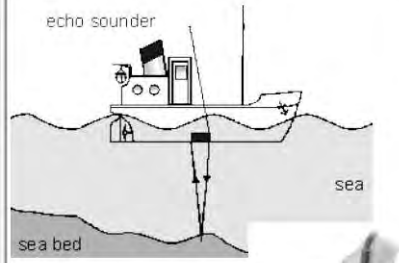
Speed of sound in air is 330m/s

Speed of sound in water is 1500m/s

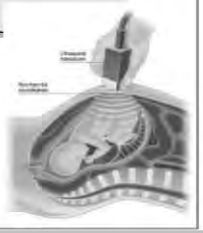
5. Reflection & absorption of sound



Echoes are reflections of sound waves.



Sonar and ultrasound scans utilise sound waves.

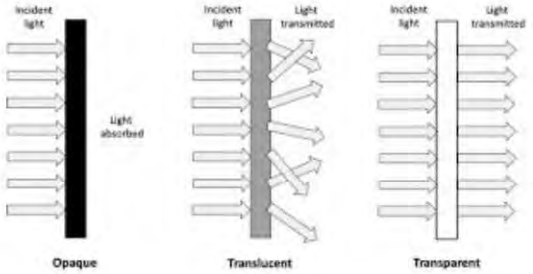


Light

1. Exploring the properties of light

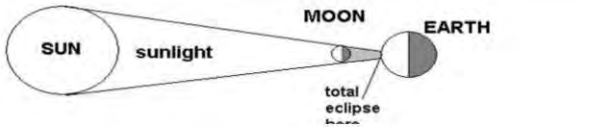
Travels as a wave	Only visible part of the EM spectrum	Travels at the speed of light (300 000 000 m/s)

Light can be **absorbed** by **opaque** objects.
Light can be **transmitted** (allowed through**) by transparent** and **translucent** objects

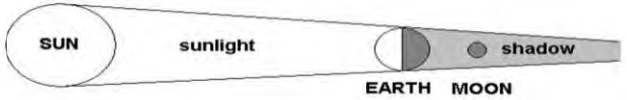


2. Exploring shadows

SOLAR ECLIPSE



LUNAR ECLIPSE

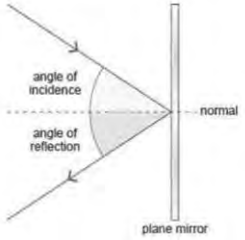


Shadows are formed when **Light is absorbed** by **opaque** objects.
The Light can't be **transmitted** and so there is an absence of light behind the object, **a shadow**.

3. Exploring reflection

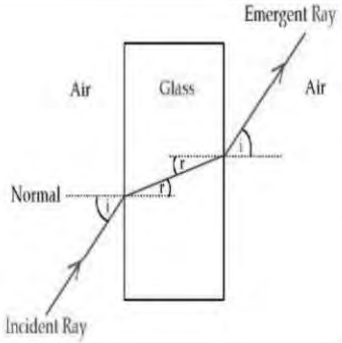
Reflection from a smooth, flat surface is called a **specular reflection**, and from a rough surface it is called **diffuse reflection**

The angle of incidence will always equal the angle of reflection

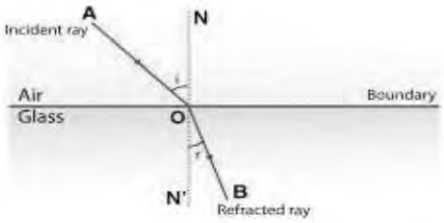


4. Exploring refraction

- Use a pencil and ruler
- Draw a single arrow on each light ray
- Normal lines are drawn dotted and at 90° to where the light ray meets the boundary
- Angles are measured **from the normal** to the light ray
- Label all light rays and all angles



Refraction is due to light **changing speed**, and therefore **direction**, as it crosses a boundary

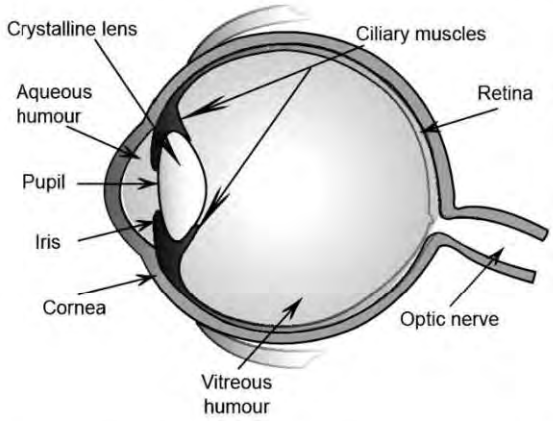


5. The eye

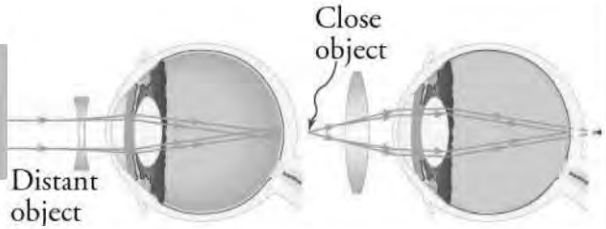
1. Light **reflected** from your friend goes **through the pupil** of your eye.

2. The cornea and the lens **focus the light** onto the **retina**.

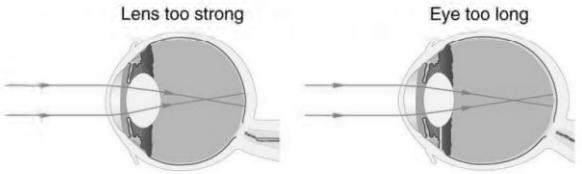
3. This forms an **image.**



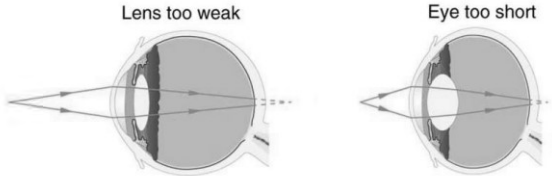
Corrective lenses change the direction that light rays travel to correct vision defects.



Eyesight can be affected by the following issues. They cause vision defects which need to be corrected by wearing glasses or contact lenses. In some cases laser energy can e used to reshape the lens in the eye.



(a) Myopia



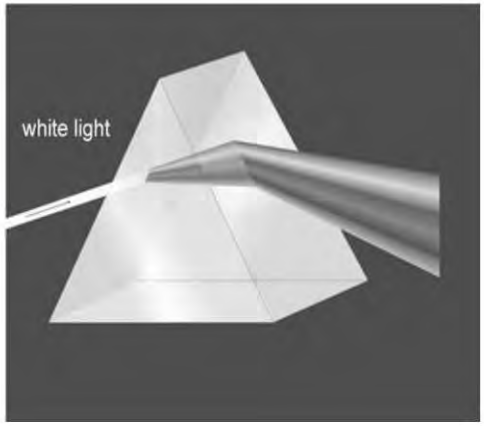
(b) Hyperopia

6. Finding all the colours of visible light

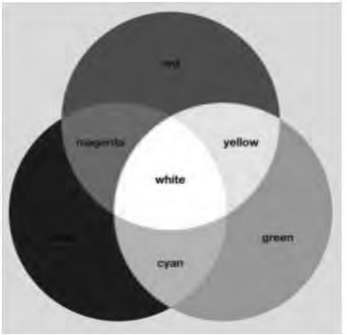
Red light has the longest wavelength

Violet light has the shortest wavelength

White light is a combination of seven different colours, and can be split into these colours by using a prism. This is called **dispersion**



When we mix colours, we can make new colours. There are 3 primary colours; Red, Green and Blue.



ART

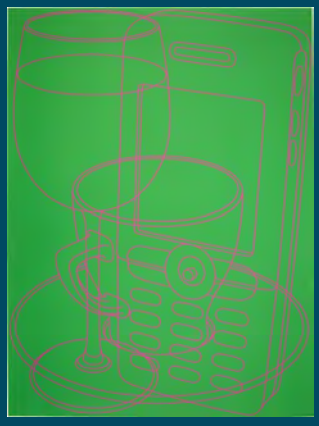
Knowledge Organiser

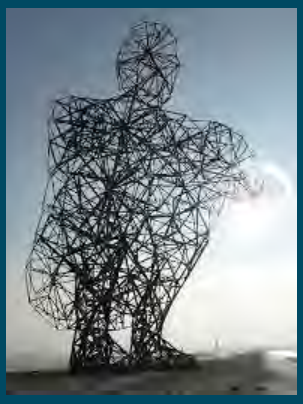
Year 7 Introduction to Art

Formal elements of Art

The formal elements are used by artists when creating their artwork. More than one element will often be used by an artist, and this will determine what the finished artwork will look like. The formal elements will also help you to understand the work of different artists.
There are seven elements' artists will consider these include; Line, Shape and Form, Space, Colour, Pattern, Tone, Texture

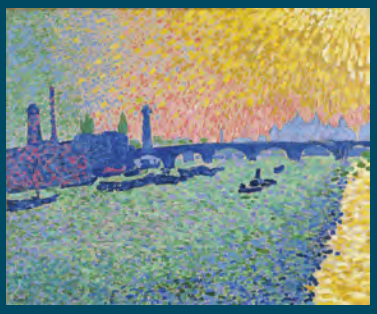
Line:
Line is the path left by a moving point. For example, a pencil or a brush dipped in paint.
A line can be horizontal, diagonal or curved. It can also change, starting off curved and ending up horizontal.

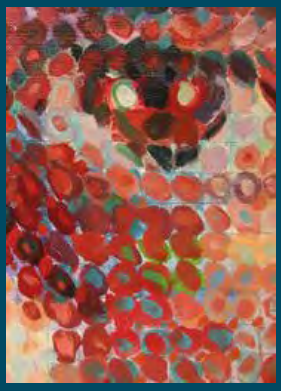




Space:
Space is the area around, between, or within objects or shapes in a piece of artwork. Artists use techniques like perspective and overlapping to create a sense of depth and space in their work. The area around the objects in a work of art is known as negative space, while the space occupied by objects is known as positive space. Some artists like to focus on the negative space.

Colour:
Colour has three main characteristics: **hue** (red, green, blue, etc.), **value** (how light or dark it is), and **intensity** (how bright or dull it is). Colour can evoke emotions and create mood. Artists use colour schemes to make areas or subjects stand out more.





Shape & Form:
A shape is two-dimensional. At their most basic shapes are simple outlines, and artists can fill these in with different colours or patterns. Shapes can be geometric, like squares or triangles, or they can be irregular or natural, such as leaves. Form is a three-dimensional shape like a cube or a pyramid. Sometimes, artists will use tone to create form in two-dimensional artwork.

Tone:

Tone is how light or dark something is. Artists use shading and highlighting to create a range of tones, adding dimension and depth to their work. Tone can also create mood. Tones could refer to black, white and the grey tones between. It could refer to how light or dark a colour appears.

Pattern

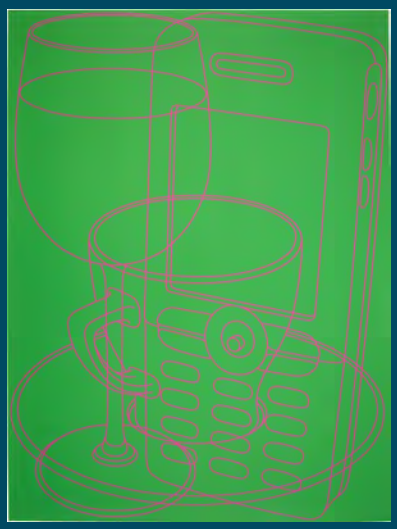
Pattern is a design created by repeating lines, shapes, tones or colours. Patterns can be simple or complicated and can be man-made, like a design on fabric, or natural, such as the markings on a leaf.

TEXTURE

Texture refers to how the surface of an object looks or feels. Artist create texture using a variety of techniques and materials to create texture for example they may use mark-making or collage.

Keyword	Definition
Depth	Depth in art refers to making objects appear closer or farther away and making a two-dimensional image seem three-dimensional.
Composition	The arrangement of elements within a work of art
Technique	Art techniques refer to various methods used by artists to create their artworks. These can include painting techniques (such as perspective) or sculpting techniques (such as carving).
Perspective	Perspective is an art technique for creating an illusion of three-dimensions (depth and space) on a two-dimensional (flat) surface
Materials	The tools you use to make or do something
Medium	Medium can refer to both to the type of art (e.g. painting, sculpture, printmaking), as well as the materials an artwork is made from.

Michael Craig Martin



Michael Craig-Martin was born in Dublin but grew up in America. He studied Fine Art and Architecture at Yale University. Michael Craig-Martin moved to Britain in 1966 to work as a teacher and an artist. As an artist Michael has used sculpture, installation painting drawing and digital art. He uses everyday objects and brings together popular culture, minimalism, and conceptual art in his work.

Michael Craig-Martin uses scale and context and colour to transform his everyday objects he believes ‘colours at their most intense become exciting.’

As an artist and teacher Michael believes ‘you must use what you have got. You cannot try to become something you are not.’ He believes people should create art in a way that feels natural to them.

Michael Craig-Martin has taught many famous artists including Damien Hirst and Sarah Lucas.

Michael Craig Martin

Keyword	Definition
Sculpture	A sculpture is a piece of art made in three dimensions; height, width and depth. Sculptures can be made from - carving, modelling, casting, or constructing.
Installation	Installation art is used to describe large-scale, mixed-media constructions, often designed for a specific place or for a temporary period of time.
Popular Culture	Popular culture is simply culture that is widely favoured or well-liked by many people
Minimalism	Minimalism was all about stripping things back to basics, using simple geometric shapes. Sometimes shapes were repeated to create more complex designs.
Conceptual Art	Conceptual art is art for which the idea (or concept) behind the work is more important than the finished art object
Mixed-Media	A term used to describe art made from different media or materials.

Year 7 Pop Art Food

Pop Art

Pop Art started in Britain and America at the same time. Art students started to ask why artists made their work. The art they saw in lessons and museums was different to the art they saw every day on TV. Art students instead started to use film, packaging, music, and comics as inspiration for their artwork.

Pop art made artists trying new ways to make their artwork.

Famous Pop Artists

Roy Lichtenstein

Peter Blake

Robert Rauschenberg

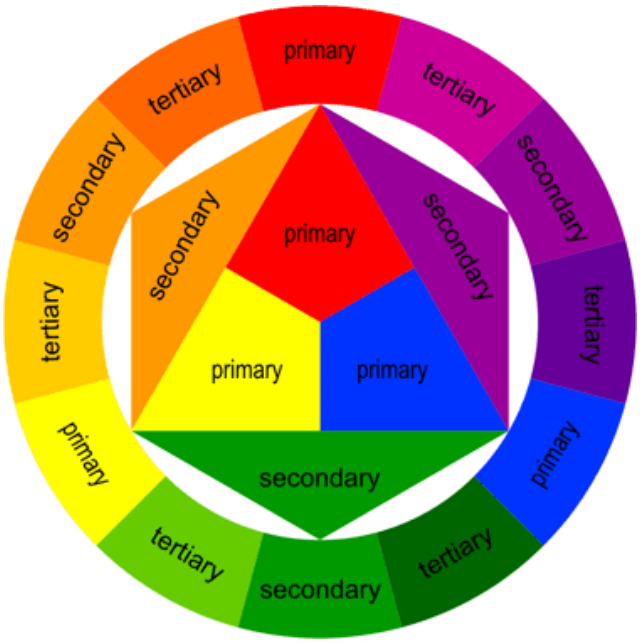
Andy Warhol

Wayne Thiebaud

Wayne Thiebaud was a Pop artist from America. He painted items such as cakes, pies, and ice-creams. Thiebaud painted with thick paint, over the top colour and shadows. He was inspired by stage lighting. Thiebaud painted around objects in complimentary colours, this made a 'halo'.

Year 7 Pop Art Food

Colour Theory



Primary Colours

- Primary colours are red, yellow and blue
- They cannot be made from other colours.
- All other colours are made from mixing primary colours together

Secondary Colours

- Secondary colours are orange, green and purple
- Secondary colours are made by mixing equal amounts of two primary colours

Tertiary Colours

- Tertiary colours are made by mixing a primary and secondary colour together

Complimentary Colours

- Complimentary colours sit opposite each other on the colour wheel
- Complimentary colours appear brighter next to each other and create contrast

Keywords

Mixing	Mixing different paint colours together.
Blending	Is where two different colours are placed next to each and there is smooth transition from one colour to the next.
Shading	Darkening or colouring of a drawing with lines or blocks of colour, it is used to create depth or make an object look three-dimensional.
Depth	Depth is when some things seem far away, and others seem closer.
Tone	In painting, tone refers to how light or dark a colour is. One colour can have an almost infinite number of different tones.
Contrast	the arrangement of opposite elements: light vs dark, rough vs smooth, large vs small
Three-Dimensional	Three-dimensional art objects are physical shapes and can be seen from all angles and sides they will have height, breadth, and depth.
Sculpture	Sculpture, an artistic form in which hard or plastic materials are worked into three-dimensional art objects.

DT

Knowledge Organiser

Year 7 Design and Technology Knowledge Organiser — Mini Figure

Keywords & Definitions

CAD Computer Aided Design. Is using a computer to assist with designing.

CAM Computer Aided Manufacture. Is using a computer to control a CNC machine

CNC Computer Numerical Code. Numerical control is the automated control of machining tools by means of a computer

3D PRINTING is a additive manufacturing is the construction of a three-dimensional object from a CAD model or a digital 3D model.

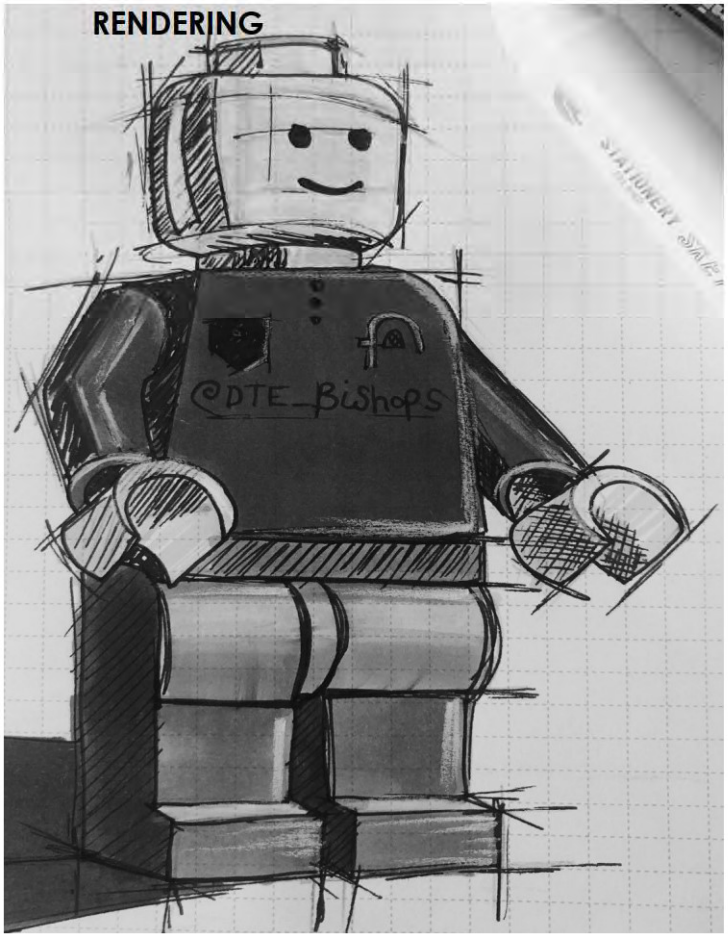
HARDWOODS come from deciduous trees, which have large flat leaves that fall in the autumn. Hardwoods take longer to grow, are not easily sourced and are expensive to buy.

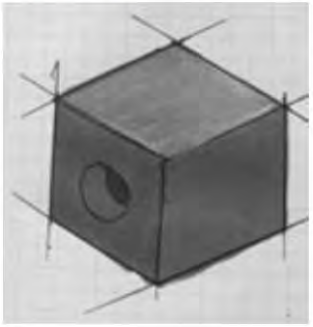
SOFTWOOD come from coniferous trees. These often have pines or needles, and they stay evergreen all year round - they do not lose leaves in the autumn. They are faster growing than hardwoods, making them cheaper to buy, and are considered a sustainable material.

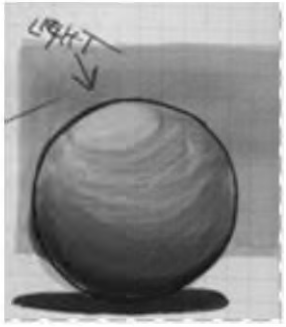
MANUFACTURED BOARDS are timber sheets which are produced by gluing wood layers or wood fibres together. Often made use of waste wood materials. Manufactured boards have been developed mainly for industrial production as they can be made in very large sheets of consistent quality. Boards are available in many thicknesses.

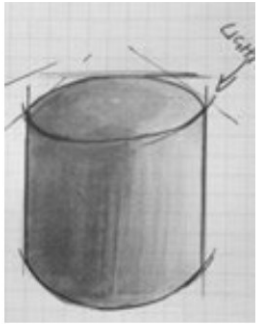
RENDERING Is when colour, tone, texture and shade are applied to a product to make it appear life like. In computer-aided design (CAD), a rendering is a particular view of a 3D model that has been converted into a realistic image.

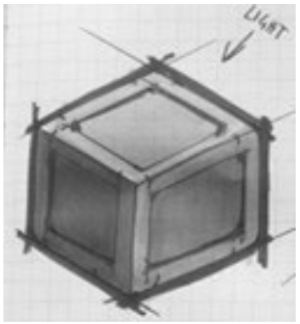
PLA Poly lactic Acid is a type thermoplastic polyester that serves as the raw material in 3-D printing or additive manufacturing processes and applications.





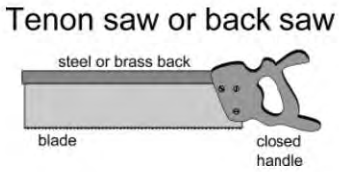






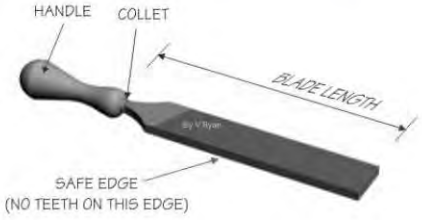
Year 7 Design and Technology Knowledge Organiser — Mini Figure

Tennon Saw

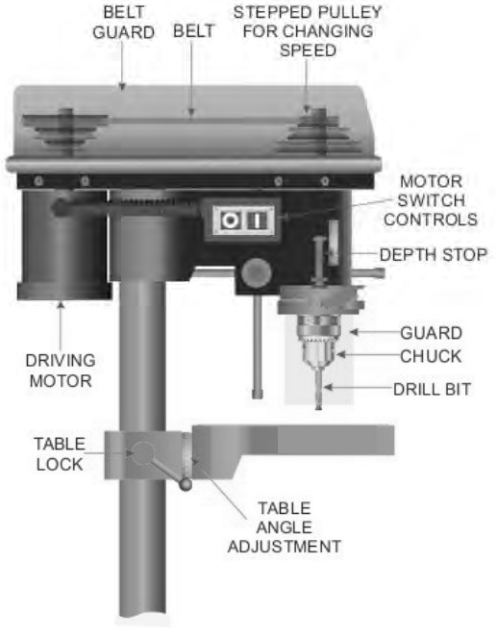


The heavy back gives the saw its weight which is useful when sawing wood.
The weight of the saw along with the forward sawing motion allows the saw to cut through woods relatively easily. The two main types are the tenon saw and the dovetail saw.
TENON SAW : for general sawing and cutting

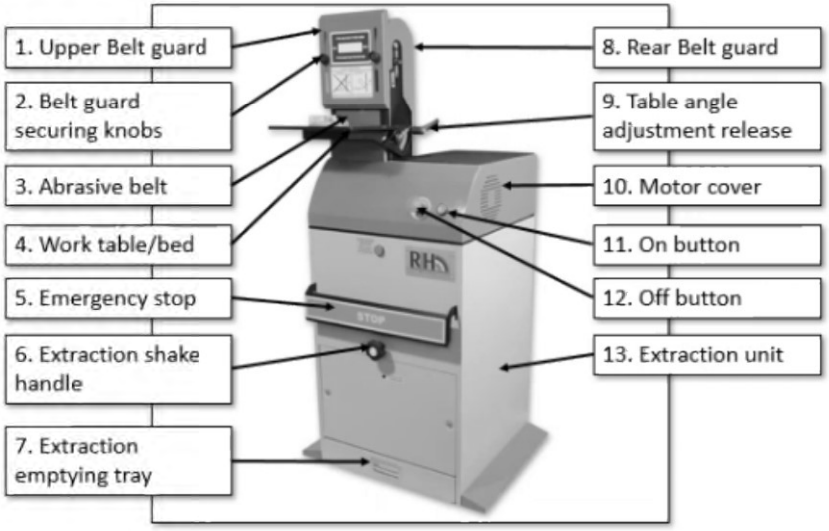
Hand files are used in the workshop to smooth rough edges. They can be used to smooth a range of materials including metals such as brass and steel to wood based materials such as MDF. They are made from high carbon steel and they are heat treated so that they are tougher than the steel or other materials that they are to be applied to.



The pillar drill is used for drilling holes through materials including a range of woods, plastics and metals. The pillar drill has a long column which stands on the floor. Material should never be held directly in the hand, when it is being drilled on a drilling machine. A selection of vices are



3D printing is a process, whereby a 3D CAD design is manufactured on a machine capable of producing a solid form / model. 3D printers construct a 'model' by building up layer upon layer of PLA, Nylon or ABS, fed from spool, usually at the back of the printer. Each layer is a fraction of a millimetre and building even a small model can take sometime.



Year 7 Design and Technology Knowledge Organiser — Packaging

Keywords & Definitions

BRIEF is a short paragraph which explains the task that needs to be solved.

PACKAGING materials used to wrap or protect goods

MIND MAP a diagram in which information is represented visually, usually with a central idea placed in the middle and associated ideas arranged around it.

FUNCTION The job an product is intended to do.

MATERIALS form which a thing is or can be made

MEMORABLE worth remembering or easily remembered, especially because of being special or unusual.

TIMELESS not affected by the passage of time or changes in fashion.

VERSITILE able to adapt or be adapted to many different functions or activities.

APPROPRIATE suitable or proper in the circumstances.

NET is a two-dimensional (2-D) shape, which when scored, folded and glued together, makes a three-dimensional (3-D) package, box or carton.

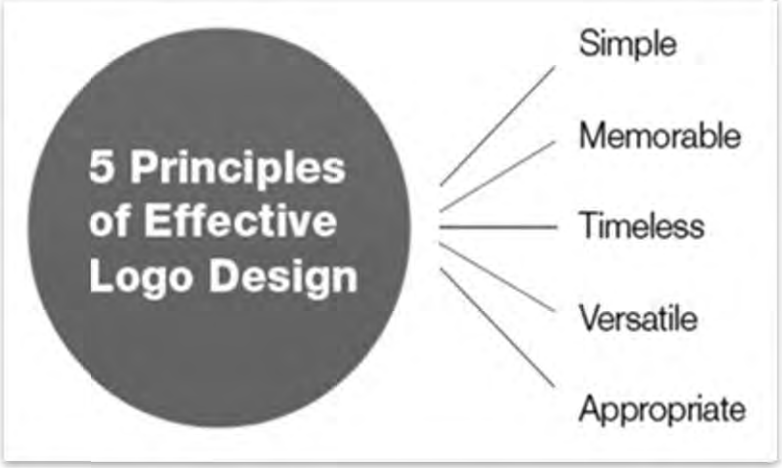
LOGO a symbol or other small design adopted by an organization to identify its products.

FOLD bend (something flexible and relatively flat) over on itself so that one part of it covers another.

DOTTED LINE a line made up of dots or dashes to represent a fold line

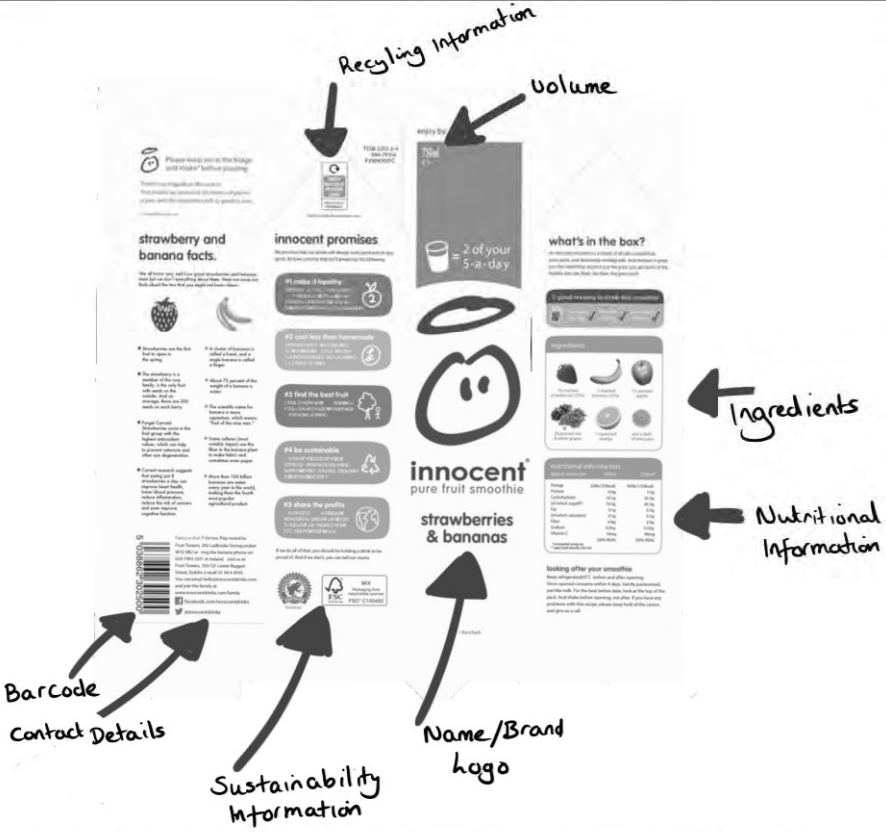
SPECIFICATION a detailed description of the design and materials used to make something.

EVALUATION the making of a judgement about the amount, number, or value of something; assessment.

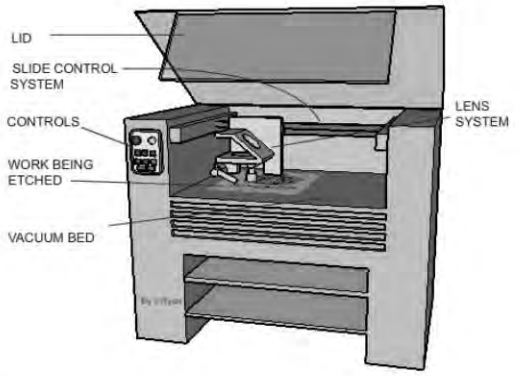


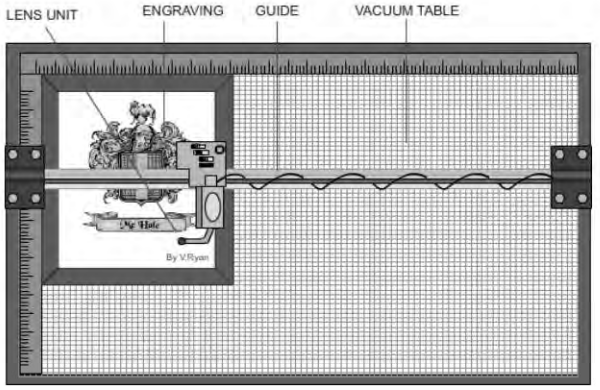
Trade vs Copy right The main difference is that a trademark protects the unique identification of a brand or product (e.g. the logo of a brand) and must be applied for, whereas copyright prevents copying, reproduction, or distribution of specific work (such as music, written words, performances, and films)

Year 7 Design and Technology Knowledge Organiser — Packaging

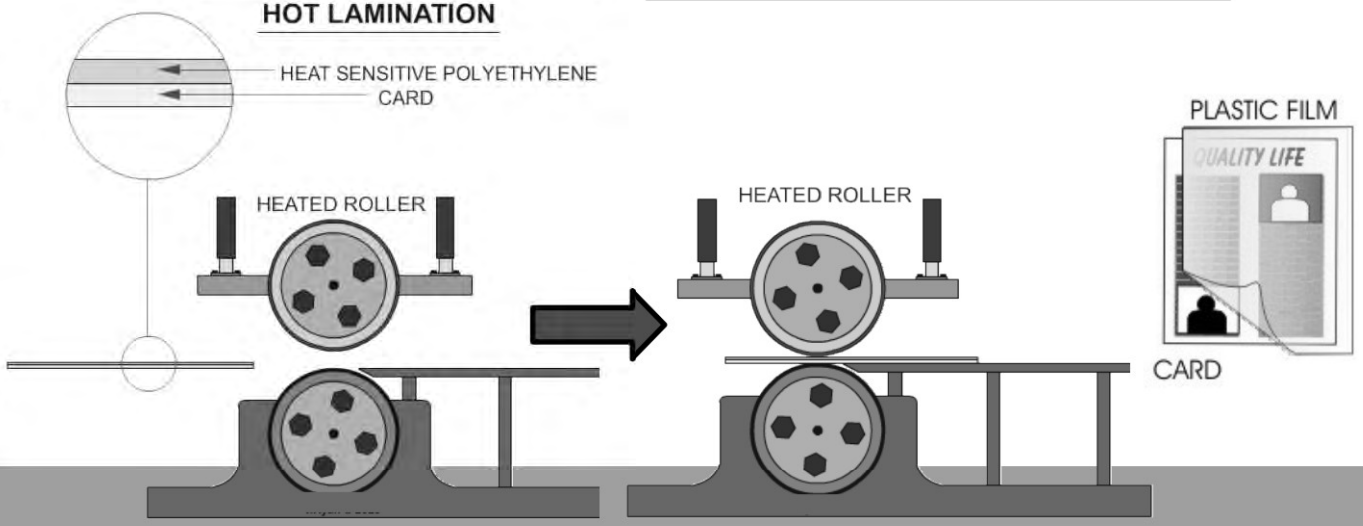


Laser cutting Laser cutters/etching machines are capable of very accurate work as a laser is used to etch or cut material precisely. They can be used in the cutting/ shaping of precise parts for prototype architectural models and etching a range of materials such as glass, marble, woods, plastic and even stainless steel. The diagram shows the LID open - however, the laser will not operate unless the lid is closed.



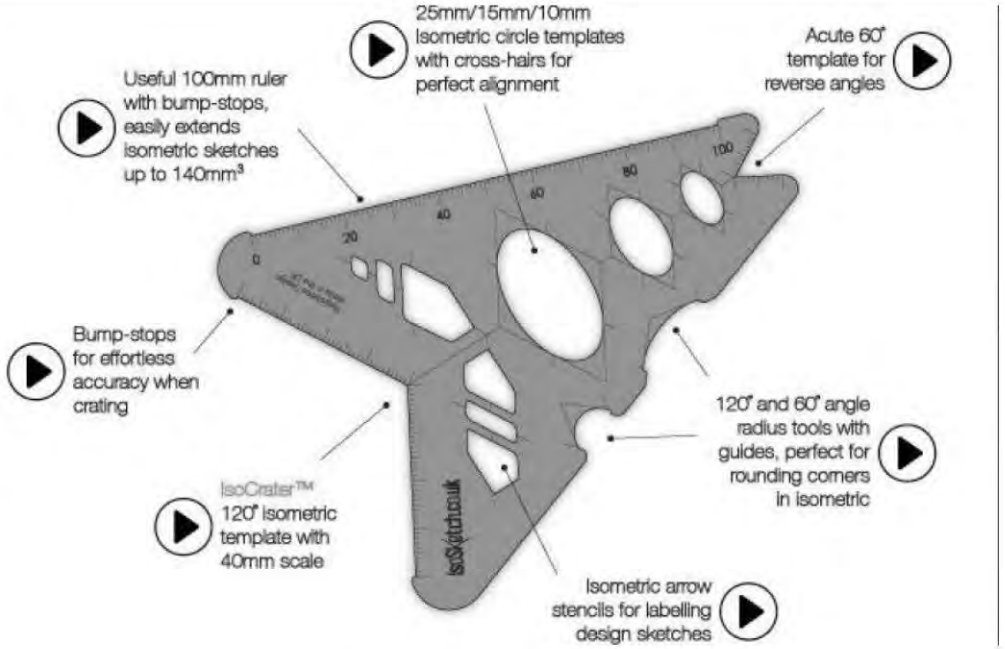


Lamination produces a high gloss finish on card and protection as it is normally water proof.
The printed card is placed inside a plastic film/sleeve. It is then placed in the 'in tray' of a laminating machine which pulls the card and film through its heater and rollers. The heater warms up the film almost to melting point and the rollers press the film sleeve until it is sealed. When the card reappears in the 'out tray', the finished item looks glossy and professional. However, laminating is much more expensive than varnishing but gives more protection to the card.



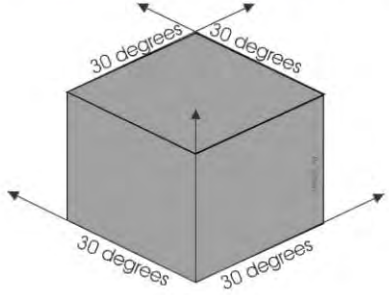
Year 7 Design and Technology Knowledge Organiser — Workshop skills

A	AESTHETICS	WHAT DOES THE PRODUCT LOOK LIKE? WHAT IS THE; COLOUR? SHAPE? TEXTURE? PATTERN? APPEARANCE? FEEL? WEIGHT? STYLE ?
C	COST	HOW MUCH DOES THE PRODUCT COST TO BUY? HOW MUCH DOES IT; COST TO MAKE? COST OF MATERIALS? IS IT GOOD VALUE?
C	CUSTOMER	WHO WILL BUY OR USE YOUR PRODUCT? WHO WILL USE THE PRODUCE? WHAT IS THEIR; AGE? GENDER? NEEDS/REQUIREMENTS?
E	ENVIRONMENT	WHAT IS THE ENVIRONMENTAL IMPACT OF THE PRODUCT? DOES THE PRODUCT MEET THE 6R'S OF DESIGN? RECYLCE/REUSE/REPAIR/RETHINK/ REDUCE/REFUSE? WHAT LOCATION WILL THE PRODUCT BE USED IN?
S	SIZE	WHAT IS THE SIZE OF THE PRODUCT? IS IT ERGONOMICALLY DESIGNED. WHOULD CHANGING THE SIZE IMPRPOVE THE PRODUCT
S	SAFETY	HOW SAFE IS THE PRODUCT TO USE? CAN THE USER INJURE THEMSELVES? WHAT ARE THE RISKS?
F	FUNCTION	HOW DOES THE PRODUCT WORK? WHAT IS THE PRODUCT JOB/ROLE? WHAT IS THE NEED FOR IT? HOW WELL DOES IT WORK? CAN IT BE IMPROVED?
M	MATERIALS	WHAT MATERIALS IS THE PRODUCT MADE FROM? WOULD AN ALTERNATIVE MATERIAL BE BETTTER? HOW DOES IT NEED TO BE MADE?



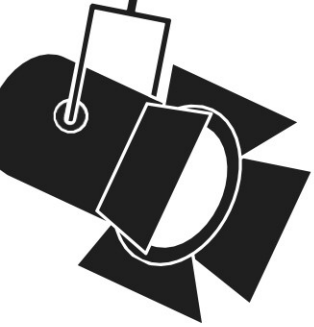
Isometric drawing is way of presenting designs/ drawings in three dimensions.

In order for a design to appear three dimensional, a 30 degree angle is applied to its sides. The cube below has been drawn in isometric projection.



DRAMA

Knowledge Organiser

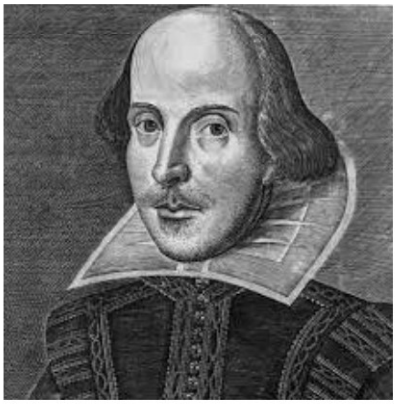


The Bishops' Blue Coat
Church of England
High School

Year 7 Drama
The Basics

Name:_____

Form:_____



WHAT IS DRAMA?

Drama is a literary genre and form of performance art that involves the portrayal of characters and their conflicts through dialogue and action on stage.

It aims to evoke emotions, engage the audience, and explore various themes and issues relevant to human experience.

Dramas often feature tension, suspense, and character development, and they can encompass a wide range of styles and subjects, from tragedy to comedy.

The interpretation and staging of dramas play a crucial role in conveying their messages and impact.

DRAMA Knowledge Organiser

THE BASICS- Storytelling and Creating Characters Year 7- Term 1a

Why are the 3 C's important when creating Drama?

what skills can we use to tell a story?

Key words

Concentration- the act or process of concentrating the state of being concentrated.

Communication - Communication is the act of giving, receiving, and sharing information -- in other words, talking or writing, and listening or reading.

Co-operation the process of working with someone to produce something.

Confidence- the feeling or belief that one can have faith in or rely on someone or something.

Sill image/freeze-frame- A still image is when actors stand in a frozen picture. This can be used to mark a moment in a piece of drama.

Levels- Levels refer to the use of different heights, e.g. through standing or sitting, to convey meaning on stage. They can be used to create visual interest but they can also signal status and character relationships. For example, a more dominant character may stand towering over a vulnerable character.

Mime- acting out a story through body motions, without use of speech (Linear, Manipulation and personification)

Characterisation- The act of changing voice, body language, movement, gesture etc when in role is called characterisation.

All people are different. The actor must use their skills to portray a character consistently throughout their performance.

Script- A script consists of dialogue (what the characters say to each other), stage directions and instructions to the actors and director.

Audience - A collection of people watching or observing something such as a television program, live speaker, or theatre performance

Facial expressions—Facial expressions are the way the face moves to convey an emotional state. They can be used to reveal subtext, e.g. a character may say they are feeling happy while their facial expression reveals the opposite

Body Language-communication by movement or position, particularly facial expressions, gestures and the relative positions of a speaker and listener.

Voice- the way you speak to show your character

Drama Knowledge Organiser

Year 7 Autumn Term 1b- A Christmas Carol

How can I use Drama techniques to create key moments and characters from A Christmas Carol?

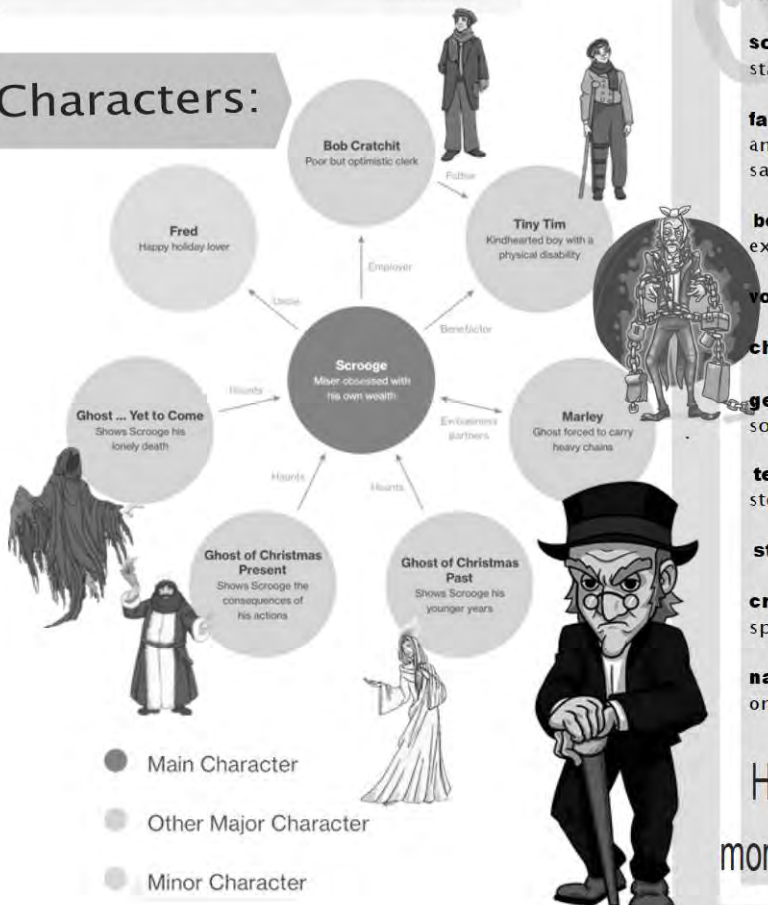
About the play:

The Author : Charles Dickens

1812-1870

As an appreciator of Christmas festivities, Dickens was inspired to write *A Christmas Carol* after witnessing children in extreme poverty in London. His goal was to encourage those with resources to help and educate those without. The classic holiday story has delighted generations of viewers and readers.

Characters:



Drama Keywords:

still image/freeze-frame- A still image is when actors stand in a frozen picture. This can be used to mark a moment in a piece of drama.

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body language-communication by movement or position, particularly facial expressions, gestures and the relative positions of a speaker and listener.

voice- the way you speak to show your character

character- A character is the role that the actor plays in a performance.

gesture- any movement made with any part of the body which indicates something to another character or the audience.

tension- a growing sense of expectation within the drama, a feeling that the story is building up towards something exciting happening.

status- the level of power or influence a character has.

cross-cutting- a device to move between two or more scenes staged in the space at the same time.

narration- adding a spoken commentary for the audience about the action onstage. A narrator is like a storyteller informing the audience about the plot

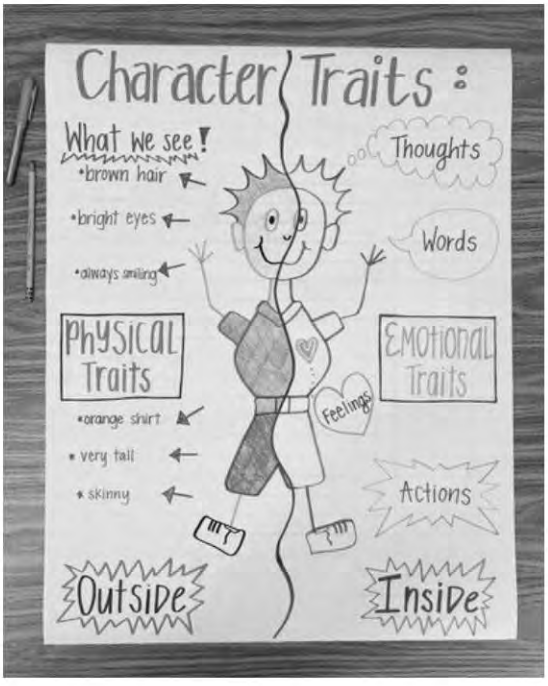
How can I use Drama techniques to create key moments and characters from A Christmas Carol

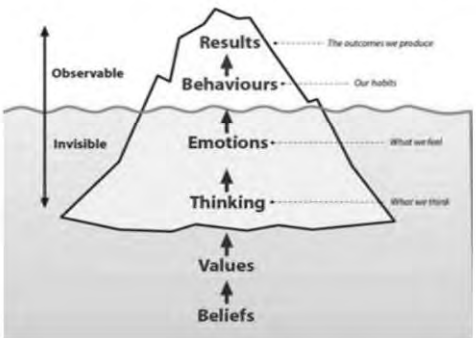
Year 7 Term 2a
WASHBROOK

Drama Knowledge Organiser

HOW CAN DRAMA BE USED TO EXPLORE REAL LIFE ISSUES THROUGH IMPROVISATION AND CHARACTER DEVELOPMENT?

Developing a character:





The Village of Washbrook:

Drama Keywords:

Improvisation– Making up a scene in order to explore a situation or relationship.

Teacher in Role- the teacher taking on the role of a character to take students into an imaginary situation for them to explore.

characterisation.– The processnif fully developing a character.

Body Language-Messages given by the position of the body.

Facial Expression - Look on the face to show emotion.

Eye Contact –Where the eyes are looking to portray emotion.

Mannerisms– A common movement used by a character to show personality

C**haracter**– A character is the role that the actor plays in a performance.

G**esture**– any movement made with any part of the body which indicates something to another character or the audience.

Tension– a growing sense of expectation within the drama, a feeling that the story is building up towards something exciting happening.

Status– the level of power or influence a character has.

Cross-cutting- a device to move between two or more scenes staged in the space at the same time.

Mime-A stylized form of movement which creates and illusion without speech or props.

Still image-A still image which represents a moment in the Drama.

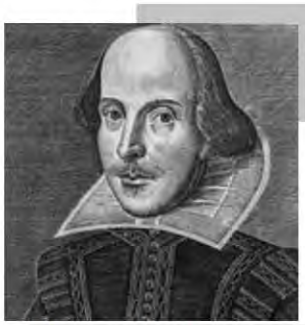
Drama Knowledge Organiser

Year 7 Term 2B

THE TEMPEST

What are the key moments in Shakespeare's The Tempest and how can we bring them to life on the stage?

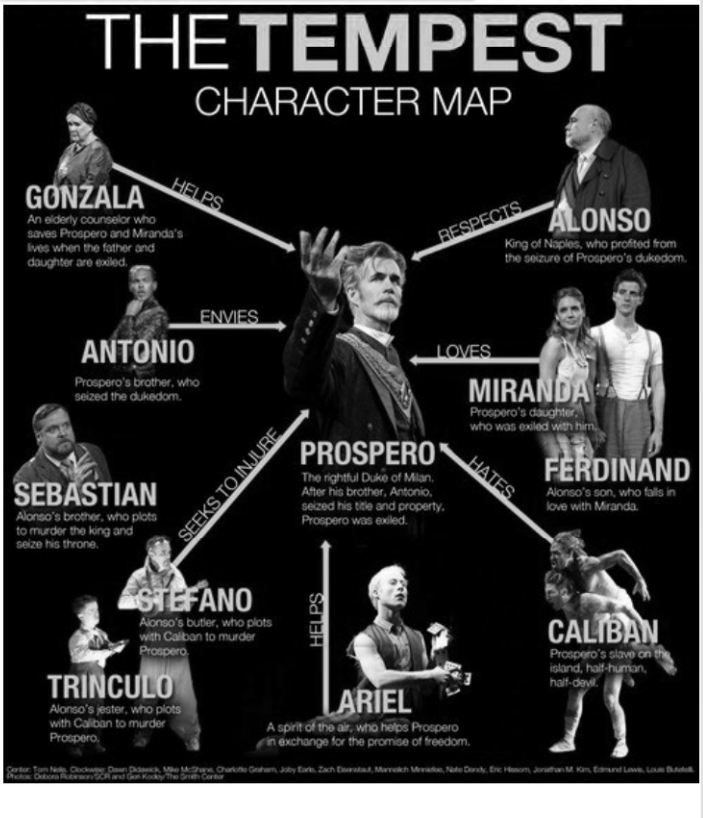
Context



William Shakespeare facts:

Full name: William Shakespeare.
Born: Exact date unknown, but baptised 26 April 1564. During England's **Tudor period**.
Hometown: Stratford-upon-Avon, England.
Occupation: Playwright, actor and poet.
Died: 23 April 1616.
Best known for: Writing hugely successful theatre plays!
Also known as: The Bard of Avon.

A large, open-air theatre, the **Globe** accommodated for people from all walks of life, meaning that anyone could watch a performance there. If you were poor, you could only afford tickets to the ground floor where there were no seats and you were exposed to the cold, wind and rain that came in through the open top. If you were rich, you could afford to sit in the higher-level, covered galleries in a comfy seat – away from the smelly poor people



Plot

Shakespeare's comedy about a major act of betrayal, ill treatment, the development of magic arts and a plot of revenge.
Twelve years ago, Prospero was Duke of Milan. Being of a bookish disposition, she withdrew more and more into her studies, leaving the management of her state to her brother Antonio. Eventually, with the help of Alonso, King of Naples, and the King's sister Sebastian - inveterate enemies of Prospero - Antonio usurped the dukedom for himself. Prospero and her baby daughter Miranda were put to sea in a rotten boat and eventually landed on a distant Island once ruled by the witch Sycorax but now inhabited only by her son, Caliban, and Ariel, a spirit.

MAGIC ARTS
Since then Prospero has ruled the island and its two inhabitants by the use of magic arts derived from her studies. Her daughter Miranda has grown up seeing no other human being.

REVENGE
Prospero divines that fortune has brought her enemies close to the island and she sees an opportunity to exact her revenge. She uses her powers to raise a storm which shipwrecks them. When Miranda questions this, she tells her the story of their arrival on the island and assures her that no real harm will come to the survivors.
The shipwrecked travellers are separated. At Prospero's bidding, the invisible Ariel directs their wanderings. Ariel leads Ferdinand, the King's son, to Prospero's cell, where he and Miranda fall instantly in love. Prospero sets heavy tasks to test Ferdinand.

MURDEROUS PLOTS
The King of Naples searches for his son, although fearing him to be drowned. Sebastian, the king's sister, plots to kill him and seize the crown. The drunken butler, Stephano, and the jester, Trinculo, encounter Caliban and are persuaded by him to kill Prospero so that they can rule the island. However, Ariel manages to make mischief between them and they are soon bickering among themselves.

BLESSINGS OF MARRIAGE
Satisfied that Ferdinand has met all his challenges, Prospero presents the young couple with a betrothal masque celebrating their love and the blessings of marriage. She is distracted from this, however, when she remembers Caliban's plot.

THE ENDING
If you don't want to know how it ends, stop reading now!
As Prospero's plan draws to its climax, she vows that upon its completion she will abandon her magic arts. Ariel brings Alonso and his followers to the cell, and Prospero, in her own persona as Duke of Milan, confronts her enemies and forgives them. In the betrothal of Ferdinand and Miranda, the rift between Naples and Milan is healed.
Finally, Prospero grants Ariel her freedom and prepares to leave the island for Milan and her restored Dukedom.

Drama Keywords:

William Shakespeare– Playwright

synchronised action- two or more performers doing the same movement at the same time.

slow motion-to reduce the speed to highlight a scene or bring a big moment into focus.

Shakespearean comedy– uses jokes and puns, mistaken identity and confusson to create funny moments often has a happy ending.

reporting– Where a character on stage describes what is happening, helping the audience to see things that aren't there)

Tempest- A violent windy storm.
script– A script consists of dialogue (what the characters say to each other), stage directions and instructions to the actors and director.

character– A character is the role that the actor plays in a performance.

gesture– any movement made with any part of the body which indicates something to another character or the audience.

tension– a growing sense of expectation within the drama, a feeling that the story is building up towards something exciting happening.

status– the level of power or influence a character has.

cross-cutting- a device to move between two or more scenes staged in the space at the same time.

Montage– a sieries of images of scenes joined together in a continuous sequence.

Term 3A and 3B
Year 7- Cloud Busting by Helen Blakeman

How can we bring a script to life?

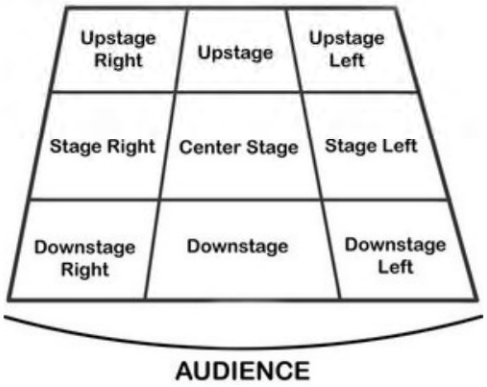
Plot

Cloud Busting by Helen Blakeman, based upon the novel by Malorie Blackman (a brilliant novelist for young people who continues to inspire in all her writings to date), focuses onthe unlikely friendship between a bully, Sam, and the bullied, Davey. It goes to show that sometimes it is in the opposites of personality that draw people together, as is the case between the level headed Sam and the whimsical Davey.

Characters

- Sam
- Mr Mackie
- Alicia
- Morgan
- Claudia
- Casey
- Jay
- Alex
- Rebecca
- Oliver
- Davey
- Head Teacher
- Sam's Mum
- Davey's Mum
- Man

Stage directions



Helen Blakeman-Playwright

An interview with the playwright

Drama Keywords:

- **Role on the wall-** visually mapping out a characters emotions and actions on a outline of a person. A rehearsal technique to build understanding of the character.
- **Blocking**- The process of placing performers in a specific space
- **stage directions-** provide instructions for the technical aspects of a play. They describe characters' appearances, movements onstage, and the setting
- **Still image/freeze-frame-** A still image is when actors stand in a frozen picture. This can be used to mark a moment in a piece of drama.
- **mime**- acting out a story through body motions, without use of speech (Linear, Manipulation and personification)
- **characterisation**- The act of changing voice, body language, movement, gesture etc when in role is called characterisation. All people are different. The actor must use their skills to portray a character consistently throughout their performance.
- **script**- A script consists of dialogue (what the characters say to each other), stage directions and instructions to the actors and director.
- **facial expressions**—Facial expressions are the way the face moves to convey an emotional state. They can be used to reveal subtext, e.g. a character may say they are feeling happy while their facial expression reveals thie opposite
- **body language-**communication by movement or position, particularly facial expressions, gestures and the relative positions of a speaker and listener.
- **voice-** the way you speak to show your character
- **character-** A character is the role that the actor plays in a performance.
- **gesture-** any movement made with any part of the body which indicates something to another character or the audience.
- **tension-** a growing sense of expectatiion within the drama, a feeling that the story is building up towards something exciting happening.
- **flashback -**an added scene that takes the narrative back in time from the current point in the story

Script layout

Plays are split into scenes like chapters in a book.

The writing in italics is the stages directions, they are the playwrights notes fornthe actors a d director on setting and how to act the scene.

The characters names are at the side of the page so you know who is speaking each line.

These are the lines spoken by the character.

Scene One

A hill.

Sam, a boy, about thirteen years old, lies on his back, staring up at the sky. Deep in thought. He's watching the clouds. He points at them, follows them with his finger. He smiles to himself.

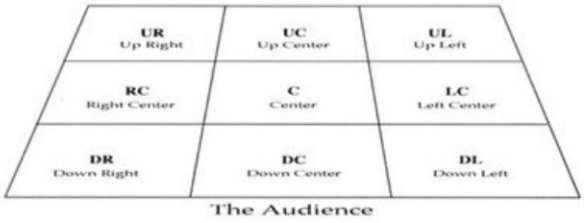
Bright sunshine.

He sits up and addresses the audience.

Sam It was just a day. Just another ordinary day . . . Not that I thought it would be any other sort of day – why should I? I didn't. I did not think when I woke up that morning that this would be the sort of day when I started to discover . . . When I started to realise . . . I just didn't, you know what I mean?

DRAMA-Core Knowledge

Use of Space



Stage Diagram

Space - Space refers to how performers or items are positioned on stage. The process of placing performers in a specific space is called **blocking**. The position between performers is important from a practical perspective to ensure that the audience can see everyone on stage clearly, but use of space can also reveal important information about character relationships - this is called **proxemics**

Core knowledge-Voice

Pitch – speaking in a high, low or natural voice.

Pace – the speed at which someone speaks, e.g. the speed of response in an argument.

Pause – a dramatic pause at a crucial moment could merit a comment.

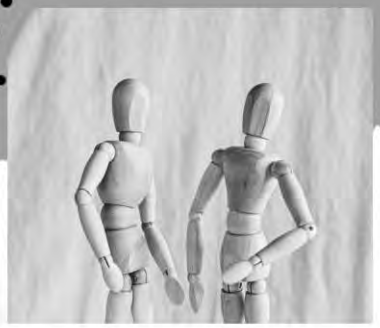
Tone – this suggests your mood and your intention towards the listener, e.g. happy or sad.. Adjective.

Volume – you might be commenting on audibility but you're more likely to be discussing the effect of a loud, powerful voice or a quiet, nervous or sad voice.

Accent – you may be talking about how someone has achieved a convincing accent or how the choice of accent enhanced their characterisation.

Emphasis – the pressure on individual words that makes them stand out. Emphasis or stress for a particular effect is significant and can change the meaning of a sentence as well as the feeling behind it.

Intonation – the rise and fall of the voice. There's a clear movement up at the end of a sentence when we ask questions for example. Intonation also helps us to say what we mean



Core Knowledge: Physicality

Eye contact—Eye contact is the state in which two people look directly into one another's eyes. It can be used to reveal the status and relationship between characters. For example, two characters in love may look adoringly into each other's eyes, whereas a character withdrawing or avoiding eye contact completely could indicate a strained relationship.

Facial expressions—Facial expressions are the way the face moves to convey an emotional state. They can be used to reveal subtext, e.g. a character may say they are feeling happy while their facial expression reveals the opposite

Gait— Gait is a person's manner of walking.

Gesture— is the way people communicate with their hands or other parts of the body. It can be used to show a character's emotions, e.g. shaking a fist to represent anger. Gestures can also show a character's personality, e.g. strong and sharp gestures such as wagging a pointed finger may show an aggressive character

Pace—Pace is the speed of a performer's movement. As well as focusing on pace individually, the pace of movement within a scene can completely change the atmosphere on stage. For example, in a period piece a scene may begin with lots of fast-paced movement as servants quickly prepare for a lavish meal. Then the Lord and Lady appear, entering the stage slowly and serenely, highlighting to the audience their power and demonstrating their status in contrast to the servants

Quality of movement - Quality of movement can help to emphasise character type to an audience. For example, a performer playing a fairy might move with a light and flowing quality, whereas a performer playing a troll might move with a much heavier, stomping quality. Quality of movement can help create atmosphere, mood and emotion in a scene.

Physical Tension- Physical tension is how tight or relaxed a performer's muscles are. For example, a character with very little physical tension will appear relaxed and calm, whereas an uptight character might show tension through high shoulders and minimal movement. Physical tension can also reflect the level of tension in the play as a whole, helping to build suspense. For example, an incredibly tense moment in a play may render a performer so tense that they are completely motionless.

FOOD

Knowledge Organiser

Knowledge Organiser Food and Nutrition Year 7

Fruit and Vegetables	Classification	**Stone** – peach, plum, apricot, **Hard** – apples, pears, **Soft** – strawberries, raspberries, blackberries, **Exotic** – pineapples, melon, mango, **Citrus** – oranges, lemons, grapefruit
	Why 5 a day? 80g per portion (adult)	Fruit and vegetables are a good source of vitamins and minerals, including folate, vitamin C and potassium. They're an excellent source of dietary fibre, which can help to maintain a healthy gut and prevent constipation and other digestion problems. A diet high in fibre can also reduce your risk of bowel cancer. They can help to reduce your risk of heart disease, stroke and some types of cancer. Fruit and vegetables contribute to a healthy, balanced diet. Fruit and vegetables taste delicious and there's so much variety to choose from.

Eatwell Guide

Skills + techniques	Claw grip	Tuck fingers back in a claw. Cut in front of knuckle
	Bridge hold	Arch thumb and index finger. Cut underneath arch
	Peeling	Angle peeler to 'catch on' to the ingredient. Push away from you
	Slicing	Knife at 45* angle. Point on board. Pull toward you
	Grilling	Intense radiant heat from a hot element either above or below food
	Rubbing In method	Fat is rubbed into flour using fingertips. Used for crumble, pastry
	Using the cooker	Main parts: hob, grill, oven, dials, timer, shelves
	Weigh / measure	Accuracy affects outcome. 1000g = 1kg. 1000ml = 1 litre. 3 tsp = 1 tbsp.
	Tolerance	Acceptable difference either side specified weight in a recipe e.g. +/- 1gram
First Aid	First Aid box items	Plasters, scissors, antiseptic wipes, bandages eye wash, tweezers, sterile gloves etc
	How to treat a burn	Cool the burn with cool or lukewarm running water for 20 minutes as soon as possible after the injury.
	How to treat a small cut	Stop the bleeding by applying pressure, raise the affect limb (if possible), clean and dress the wound.
Nutrition	Nutrients	Chemicals found in food which give the body nourishment + perform specific tasks
	Macronutrients	Corbohydrates (Starch, sugar, fibre), proteins (animal + vegetable), fats (solid + liquid)
	Micronutrients	Vitamins; B, C, D, A, K, E , Minerals e.g. iron, calcium. Trace elements e.g. zinc, flouride
Hygiene, safety, spoilage	Bacteria	Microscopic living organisms that can be harmful to health
	Personal hygiene	Acts of cleanliness to minimise contamination - Hand washing, apron, tie up hair
	Food safety routines	Sanitising bench, clean as you go, washing + drying up procedures, correct storage
	Cross contamination	Transfer of harmful bacteria to food from other foods, equipment or people
	Good practice	Wash hands, wear an apron, tie long hair back, collect your ingredients
	Storage temperatures	Fridge: 0-5*C. Freezer: -18*C. Chill to below 8*C within 90 minutes
	Hazard / risk	biological, chemical or physical agent that could cause risk to health
	4 Cs of food safety	cooking, cleaning, chilling, cross contamination (separating)
Science	Conduction	Heat is transferred to food by directly touching equipment. Energy then moves through food
	Convection	Current created in liquid/gas as molecules nearest heat, rise up + replaced by cooler ones
	Radiation	Transfer of energy through air by infra-red or micro waves to heat food.
Cake Making	Methods	Creaming method, Rubbing in method, Melting method and Whisking method
	Ingredients	Soft butter or margarine for the creaming method, Hard butter for the rubbing in method. Self-raising flour should be used if a raising agent is required. Caster sugar should be used because the granules are smaller therefore dissolves/mixes in more easily.
Raising Agent	Different Types	**Chemical**: SR flour, baking powder. **Biological**: yeast. **Mechanical**: sieving, whisking, folding
	Why do we need them?	To give baked products a light, open, soft, and 'springy' texture

Make it Stick

Routines:
Preparation of self.
Preparation of work area
Washing + drying up
Work area organisation

Skills:
Regular practice

Words to learn
Ingredients
Appearance
Texture
Flavour
Flour
Margarine
Vegetable
Ingredient
Nutrients
Healthy
Hygiene

Equipment
Paring knife
Chopping board
Sieve
Saucepan
Grater
Measuring jug
Digital scales

Breakfast
Eating a healthy breakfast: Helps fill you up, avoid the rumbling tummy mid-morning and resist the temptation to snack on less healthy foods, helps you feel more alert, helps you concentrate and think more clearly.

Apply knowledge
Correct fridge storage
Clean as you go
Sources of contamination
Food poisoning bacteria

Wider reading
Food a fact of Life website
BnF youtube videos

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food.
It shows how much of what you eat overall should come from each food group.

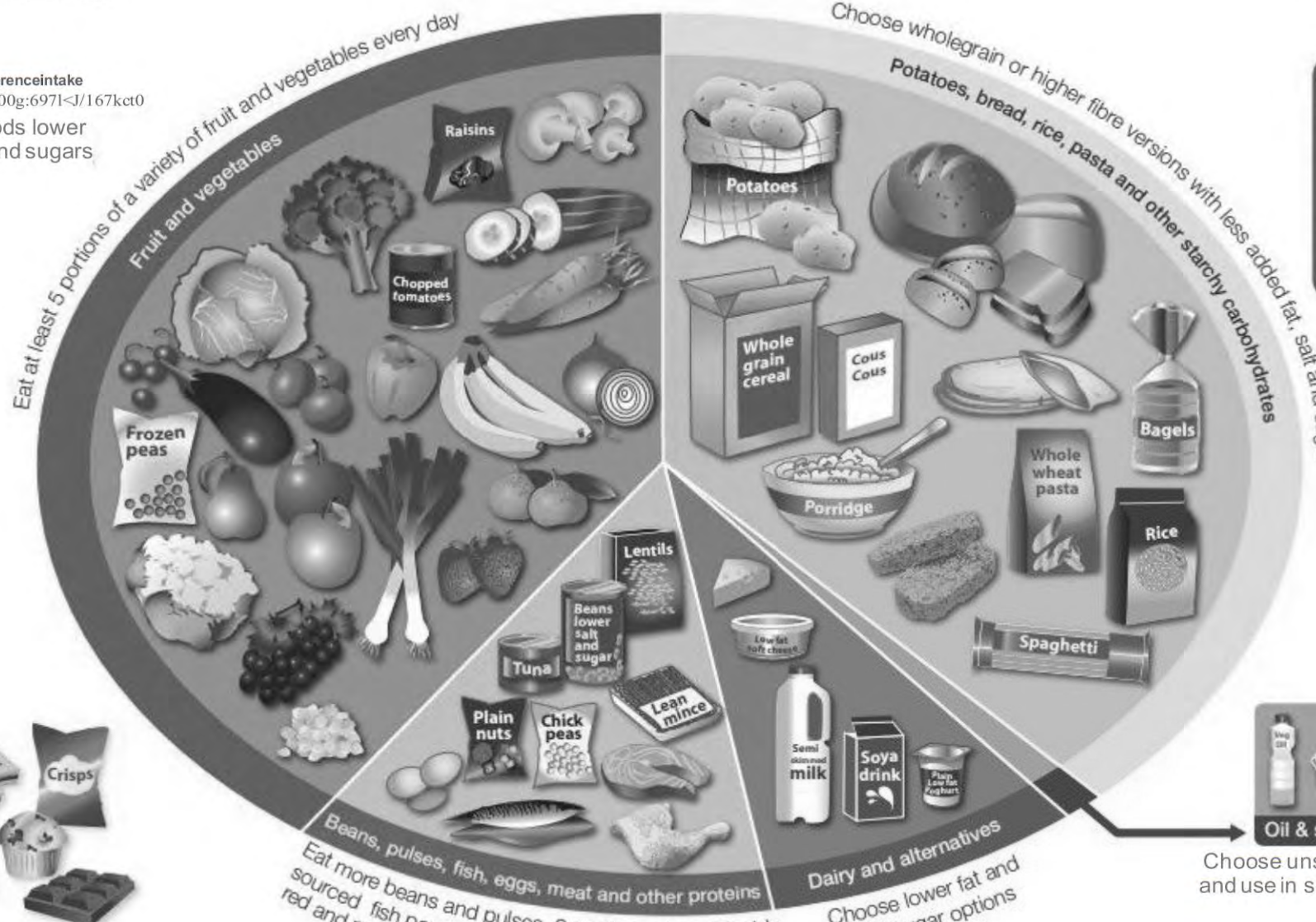
Check the label on packaged foods

EachseNing(150g) contains

of anadult'sreferenceintake

Ty-valJes(assold)per100g:697l<J/167kct0

Choose foods lower in fat, salt and sugars



6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

FRENCH

Knowledge Organiser

KNOWLEDGE ORGANISER YEAR 7 FRENCH LP1

Point de départ (pages 8–9)

Bonjour.	*Hello.*
Salut!	*Hi!*
Comment t'appelles-tu?	*What's your name?*
Je m'appelle …	*My name is …*
Comment ça va? (Ça va?)	*How are you? (Are you OK?)*
Ça va (très) bien.	*I'm (very) well.*
Pas mal, merci.	*Not bad, thanks.*
Ça ne va pas!	*Not good!*
Et toi?	*How about you?*
Au revoir.	*Goodbye.*
À plus!	*See you later!*

lundi, mardi, mercredi, jeudi, vendredi, samedi, dimanche	*Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday*
un, deux, trois, quatre, cinq	*1, 2, 3, 4, 5*
six, sept, huit, neuf, dix	*6, 7, 8, 9, 10*
onze, douze, treize	*11, 12, 13*
quatorze, quinze	*14, 15*
seize, dix-sept, dix-huit	*16, 17, 18*
dix-neuf, vingt	*19, 20*
vingt-et-un, vingt-deux, (etc.)	*21, 22, (etc.)*
trente, trente-et-un	*30, 31*

Unité 1 (pages 10–11) *As-tu des frères et sœurs?*

As-tu des frères et sœurs?	*Do you have any brothers or sisters?*
Oui. J'ai …	*Yes, I have …*
un frère.	*one brother.*
une sœur.	*one sister.*
un demi-frère.	*one half-/step-brother.*
(deux) frères.	*(two) brothers.*
(trois) demi-sœurs.	*(three) half-/step-sisters.*
Je n'ai pas de frères et sœurs.	*I don't have any brothers or sisters.*
Je suis fils/fille unique.	*I am an only child.*
Quel âge as-tu?	*How old are you?*
J'ai (onze) ans.	*I am (11) years old.*

avoir **(to have)**

*j'**ai***	I have
*tu **as***	you have
*il/elle **a***	he/she has
***J'ai** deux frères.*	**I have** two brothers.

You also use ***avoir*** with age.

*Quel âge **as-tu**?*	How old are you?
***J'ai** onze ans.*	I am 11 years old.

	indefinite article	**definite article**
masculine singular	***un*** (a / an) ➡	***le*** / ***l'*** (the)
feminine singular	***une*** (a / an) ➡	***la*** / ***l'*** (the)
plural	***des*** (some) ➡	***les*** (the)

Unité 2 (pages 12–13) *Voici ma salle de classe!*

Qu'est-ce qu'il y a sur la photo?	*What is on the picture?*
Sur la photo, il y a …	*On the picture, there is/are …*
un tableau (noir/blanc)	*a (black/white) board*
un poster	*a poster*
un/une prof (professeur)	*a teacher*
un écran	*a screen*
un ordinateur	*a computer*
une porte	*a door*
une fenêtre	*a window*
une tablette	*a tablet*
des tables	*some tables*
des chaises	*some chairs*
des élèves	*some pupils*
au fond/au centre	*at the back/in the middle*
à gauche/à droite	*on the left/on the right*
C'est …	*It's …*
sympa.	*nice.*
génial.	*great.*
moderne.	*modern.*
triste.	*sad.*
nul.	*rubbish.*
démodé.	*old-fashioned.*

Unité 3 (pages 14–15) *Tu aimes ça?*

Tu aimes …?	*Do you like …?*
J'aime …	*I like …*
Je n'aime pas …	*I don't like …*
le sport	*sport*
le foot	*football*
le vélo	*cycling*
le collège	*school*
le cinéma	*cinema*
le poisson	*fish*
la danse	*dance*
la musique	*music*
les pizzas	*pizzas*
les serpents	*snakes*
les glaces	*ice creams*
les jeux vidéo	*video games*
les vacances	*holidays*
les BD	*comics*
les mangas	*manga*
les araignées	*spiders*

Les mots essentiels *High-frequency words*

mon/ma/mes	*my*
Pronouns	
je	*I*
tu	*you*
il	*he*
elle	*she*
Articles	
un/une/des	*a(n)/some*
le/la/l'/les	*the*
Connectives	
et	*and*
mais	*but*
aussi	*also*
Qualifiers	
assez	*quite*
très	*very*
trop	*too*
un peu	*a bit*

Unité 4 (pages 16–17) *Tu es comment?*

Je suis …	*I am …*
Je ne suis pas …	*I am not …*
Il est/Elle est …	*He is/She is …*
amusant(e)	*funny*
arrogant(e)	*arrogant*
bavard(e)	*talkative/chatty*
fort(e)	*strong*
grand(e)	*big/tall*
intelligent(e)	*intelligent*
méchant(e)	*nasty/bad*
patient(e)	*patient*
petit(e)	*small/short*
timide	*shy*

Most adjectives agree with the noun they are describing: they change their ending, depending on whether the noun is masculine or feminine.

The most common pattern is to add ***–e*** in the feminine form.

Il est grand. ➡ *Elle est grand**e**.*
(He is tall.) (She is tall.)

If an adjective already ends in –e, the feminine form stays the same.

*Il est timid**e**.* ➡ *Elle est timid**e**.*
(He is shy.) (She is shy.)

Unité 5 (pages 18–19) *Qu'est-ce que tu fais?*

Ma vie, c'est …	*My life is …*
Pour moi, la rentrée, c'est …	*For me, going back to school is …*
chanter	*to sing/singing*
danser	*to dance/dancing*
retrouver mes amis	*to meet up/meeting up with my friends*
bloguer	*to blog/blogging*
surfer	*to surf/surfing*
tchatter	*to chat/chatting (online)*
rigoler	*to have/having a laugh*
étudier	*to study/studying*
nager	*to swim/swimming*
jouer	*to play/playing*
gagner	*to win/winning*

To make a verb negative, use ***ne … pas*** to make a 'sandwich' around the verb. Shorten ***ne*** to ***n'*** in front of a vowel sound.

*Je **ne** suis **pas** très patient.* (I am not very patient.)
*Je **n'**ai **pas** de frères.* (I don't have any brothers.)

The infinitive is the form of the verb meaning 'to' do something.

Many infinitives end in ***–er*** in French: e.g. *jou**er*** (to play) and *gagn**er*** (to win).

You use the infinitive to form other parts of the verb. Take off *–er* and add these endings:

*je jou**e***	I play
*tu jou**es***	you (singular) play
*il/elle jou**e***	he/she plays

Unité 6 (pages 20–21) *Mon interview par vidéo!*

C'est quand, ton anniversaire?	*When is your birthday?*
Mon anniversaire, c'est … le (15 mars/24 juin).	*My birthday is on … the (15th March/ 24th June).*
le premier	*the first*
janvier, février, mars	*January, February, March*
avril, mai, juin	*April, May, June*
juillet, août, septembre	*July, August, September*
octobre, novembre, décembre	*October, November, December*

YEAR 7 FRENCH KNOWLEDGE ORGANISER LP2

Unité 1 (pages 36–37) *Qu'est-ce que tu penses de tes matières?*

Qu'est-ce que tu penses de tes matières?	*What do you think of your subjects?*
le français	*French*
le théâtre	*drama*
la géographie	*geography*
la musique	*music*
la technologie	*technology*
l'anglais	*English*
l'EPS	*P.E.*
l'histoire	*history*
l'informatique	*I.C.T.*
les arts plastiques	*art*
les maths	*maths*
les sciences	*science*
aimer	*to like*
détester	*to hate*
adorer	*to love*

Tu aimes … ?	*Do you like …?*
j'adore …	*I love …*
j'aime …	*I like …*
j'aime assez …	*I quite like …*
je n'aime pas …	*I don't like …*
je déteste …	*I hate …*
C'est …	*It's …*
facile.	*easy.*
difficile.	*difficult/hard.*
intéressant.	*interesting.*
ennuyeux.	*boring.*
amusant.	*fun/funny.*
créatif.	*creative.*
nul.	*rubbish/awful.*
le/la prof est sympa	*the teacher is kind*
le/la prof est trop sévère	*the teacher is too strict*
j'ai trop de devoirs	*I have too much homework*

Unité 2 (pages 38–39) *Qu'est-ce que tu portes?*

Qu'est-ce que tu portes?	*What do you wear?*
je porte …	*I wear …*
on porte …	*we wear …*
l'uniforme scolaire	*school uniform*
un pantalon	*trousers*
un polo	*polo shirt*
un pull	*jumper*
un sweat	*sweatshirt*
un tee-shirt	*tee-shirt*
une chemise	*shirt*
une cravate	*tie*
une jupe	*skirt*
une veste	*jacket/blazer*
des chaussettes (f)	*socks*
des chaussures (f)	*shoes*
des baskets (f)	*trainers*
chic	*smart/stylish*
confortable	*comfy/comfortable*
démodé(e)	*old-fashioned*
pratique	*practical*

G

Most adjectives, including colours, come after the noun. The adjective must agree with the noun.

masculine singular	***un** pull vert*
feminine singular	***une** jupe verte*
masculine plural	***des** polos verts*
feminine plural	***des** chaussures vertes*

blanc is irregular:
***un** pull blanc* / ***une** jupe blanche*

Unité 3 (pages 40–41) *Ta journée scolaire est comment?*

Ta journée scolaire est comment?	*What is your school day like?*
je quitte la maison	*I leave the house*
j'arrive au collège	*I arrive at school*
je retrouve mes copains	*I meet (up with) my friends*
on commence les cours	*we start lessons*
je mange à la cantine	*I eat in the canteen*
je chante dans la chorale	*I sing in the choir*
je joue dehors	*I play outside*
on recommence les cours	*we start lessons again*
je rentre à la maison	*I go home*
à (quatre) heures	*at (four) o'clock*

The new *–er* verbs used in exercise 1 all follow the same pattern.

In the present tense, take *–er* off the infinitive and add these endings:

chanter	**to sing**
*je chant***e**	I sing
*tu chant***es**	you sing
*il/elle/on chant***e**	he/she sings / we sing
*nous chant***ons**	we sing
*vous chant***ez**	you (plural or formal) sing
*ils/elles chant***ent**	they sing

Je chante means 'I **sing**' or 'I **am singing**'.

You use the present tense to talk about what usually happens, or what is happening now.

In English, there are two forms of the present tense.

At weekends, **I wear** jeans. /
Today **I am wearing** my uniform.

In French, there is only one present tense: ***je porte*** means 'I wear' or 'I am wearing'.

To make the present tense form of a verb, you need to conjugate it, i.e. change the infinitive.

Lots of verbs have an infinitive which ends in *–er*: they are called '*–er* verbs'.

Other *–er* verbs are conjugated in the same way as the verb ***adorer*** (see page 52).

Unité 4 (pages 42–43) *C'est comment, un collège français?*

Quel est ton jour préféré?	*What's your favourite day?*
Mon jour préféré, c'est le …	*My favourite day is …*
J'ai deux heures d'anglais.	*I have two hours of English.*
C'est ma matière préférée.	*It's my favourite subject.*
Je suis fort(e) en maths.	*I am good at maths.*
l'emploi du temps	*timetable*
la rentrée	*start of new school year*
les vacances	*holidays*

Unité 5 (pages 44–45) *Un collège super cool*

Le collège est …	*The school is …*
grand / petit.	*big / small.*
de taille moyenne.	*medium-sized.*
Il y a 500 élèves.	*There are 500 pupils.*
On étudie …	*We study …*
le japonais.	*Japanese.*
la cuisine.	*cookery.*
les arts martiaux.	*martial arts.*
Il y a …	*There is … / There are …*
un cinéma en 3D.	*a 3D cinema.*
une piscine.	*a swimming pool.*
des courts de tennis.	*tennis courts.*
Il n'y a pas de …	*There isn't … / aren't …*
harcèlement.	*bullying.*
toilettes sales.	*dirty toilets.*
profs trop sévères.	*too strict teachers.*
on porte …	*we wear …*
Tu es d'accord?	*Do you agree?*
Je (ne) suis (pas) d'accord!	*I (dis)agree!*

Les mots essentiels *High-frequency words*

Pronouns
- on … *we/one/people*

Connectives
- et … *and*
- mais … *but*
- parce que … *because*

Qualifiers
- très … *very*
- vraiment … *really*
- trop … *too*

Question words
- qu'est-ce que tu …? … *what do you …?*
- à quelle heure? … *at what time?*
- combien (de)? … *how many/how much?*

Sequencing words
- d'abord … *first of all*
- ensuite/puis … *then*
- après … *afterwards*

Ask your partner to read your description to check if you have:

- extended your sentences with ***et*** (and), ***mais*** (but) and ***parce que*** (because)
- included opinions (using verbs such as ***j'adore*** and adjectives such as ***c'est cool!***)
- used ***il y a*** … and ***il n'y a pas de*** …
- spelled words accurately.

YEAR 7 FRENCH

LP3 KNOWLEDGE ORGANISER

Point de départ (pages 58–59)

Quel temps fait-il?	*What's the weather like?*
Il fait beau.	*The weather's fine.*
Il fait mauvais.	*The weather's bad.*
Il fait chaud.	*It's hot.*
Il fait froid.	*It's cold.*
Il y a du soleil.	*It's sunny.*
Il y a du vent.	*It's windy.*
Il pleut.	*It's raining.*
Il neige.	*It's snowing.*
au printemps	*in spring*
en été	*in summer*
en automne	*in autumn*
en hiver	*in winter*
Quand (il pleut / il fait chaud)	*When (it rains / it is hot)*
Je reste à la maison.	*I stay at home.*

Unité 1 (pages 60–61) *Tu es sportif/sportive?*

Je joue …	*I play …*
au basket	*basketball*
au billard	*pool*
au football (foot)	*football*
au rugby	*rugby*
au hockey	*hockey*
au tennis	*tennis*
au volleyball	*volleyball*
à la pétanque / aux boules	*boules*
aux cartes	*cards*
aux échecs	*chess*
Je suis	*I am*
Je ne suis pas	*I am not*
assez	*quite*
très	*very*
sportif / sportive	*sporty*
Il y a un garçon / une fille.	*There is a boy / a girl.*
Il/Elle joue …	*He/She is playing …*
Il/Elle porte …	*He/She is wearing …*
un short	*a pair of shorts*
un chapeau	*a hat*
une casquette	*a cap*
Le ciel est bleu / gris.	*The sky is blue / grey.*
Il y a un bâtiment.	*There is a building.*
Il y a une maison.	*There is a house.*
Il y a des arbres.	*There are some trees.*

G

jouer* (to play)** is a regular ***–er verb.

je joue	I play
tu joues	you (singular) play
il/elle/on joue	he/she plays / we play
nous jouons	we play
vous jouez	you (plural or polite) play
ils/elles jouent	they play

G

faire is an irregular verb. It often translates as 'to do'.

je ***fais***	I do
tu ***fais***	you (singular) do
il/elle/on ***fait***	he/she does / we do
nous ***faisons***	we do
vous ***faites***	you (plural or polite) do
ils/elles ***font***	they do

You also use *faire* to describe the weather.
Il fait beau / chaud / froid.

Unité 2 (pages 62–63) *Qu'est-ce que tu fais?*

Qu'est-ce que tu fais?	*What do you do?*
Je fais du skate.	*I go skateboarding.*
Je fais du patin à glace.	*I go ice skating.*
Je fais du vélo.	*I go cycling.*
Je fais du ski.	*I go skiing.*
Je fais du judo.	*I do judo.*
Je fais du théâtre.	*I do drama.*
Je fais de la cuisine.	*I do cookery.*
Je fais de la danse.	*I do dancing.*
Je fais de la gymnastique.	*I do gymnastics.*
Je fais de la natation.	*I go swimming.*
Je fais de l'athlétisme.	*I do athletics.*
Je fais de l'équitation.	*I go horse riding.*
Je fais des randonnées.	*I go hiking.*
Je ne fais pas de sport / danse, (etc.).	*I don't do sport / dancing, (etc.).*
Est-ce que tu fais souvent (du vélo)?	*Do you do / go (cycling) often?*
Je fais … (du vélo).	*I do / go (cycling) …*
parfois	*sometimes.*
souvent	*often.*
tout le temps	*all the time.*
tous les jours	*every day.*
tous les weekends	*every weekend.*
tous les lundis/mardis, (etc)	*every Monday/Tuesday, (etc.).*

Use ***faire de*** to talk about some sports and other activities.
de changes according to the noun that follows it.

de + ***le*** ➡ ***du***	*le vélo*	➡ *Je fais **du** vélo.*
de + ***la*** ➡ ***de la***	***la** cuisine*	➡ *Tu fais **de la** cuisine.*
de + ***l'*** ➡ ***de l'***	***l'**équitation*	➡ *Il fait **de l'**équitation.*
de + ***les*** ➡ ***des***	***les** randonnées*	➡ *Elle fait **des** randonnées.*

In the negative, just use ***de*** (or ***d'*** before a vowel).
*Je ne fais pas **de** natation. / Je ne fais pas **d'**athlétisme.*

Unité 3 (pages 64–65) *Le sport dans les pays francophones*

On fait du ski (alpin).	*We/People go skiing.*
On fait du snowboard.	*We/People go snowboarding.*
On fait du rafting.	*We/People go rafting.*
On fait de l'alpinisme.	*We/People go mountaineering.*
On fait du canyoning.	*We/People go canyoning.*
On fait du canoë-kayak.	*We/People go canoeing.*
On fait de la voile.	*We/People go sailing.*
On fait de la planche à voile.	*We/People go wind-surfing.*
On fait de la luge.	*We/People go tobogganing.*

Unité 4 (pages 66–67) *Tu aimes faire ça?*

Qu'est-ce que tu aimes faire sur ton portable?	*What do you like doing on your phone?*
Qu'est-ce que tu aimes faire sur ta tablette?	*What do you like doing on your tablet?*
J'aime	*I like*
Je n'aime pas	*I don't like*
J'adore	*I love*
Je déteste	*I hate*
bloguer	*blogging*
écouter de la musique	*listening to music*
envoyer des SMS	*sending texts*
prendre des selfies	*taking selfies*
partager des photos / des vidéos	*sharing photos/videos*
regarder des films	*watching films*
tchatter avec mes copains / copines	*chatting (online) with my mates*
télécharger des chansons.	*downloading songs*
parce que c'est …	*because it's …*
amusant	*fun*
marrant	*funny*
ennuyeux	*boring*
facile	*easy*
intéressant	*interesting*
rapide	*fast*

G

Use ***aimer*** (to like), ***adorer*** (to love) and ***détester*** (to hate), plus the infinitive of another verb, to say what you like or don't like doing.

When used after these verbs, the infinitive translates as 'do**ing** something'.

J'aime regarder …
J'adore télécharger …
Je n'aime pas prendre …
Je déteste faire …

*J'aime **écouter** de la musique.* I like **listening** to music.

Les mots essentiels *High-frequency words*

Question words

comment …?	*how … ? (also used to ask what someone or something is like)*
quand …?	*when … ?*
quel(le/s) …?	*which/what … ?*
est-ce que tu …?	*do you … ?*
qu'est-ce que tu …?	*what do you … ?*

Prepositions

avec	*with*
en	*in*
sur	*on*

Other key words

tout/toute/tous/toutes	*all, every*

Unité 5 (pages 68–69) *Questions, questions, questions!*

Qu'est-ce que tu aimes faire …?	*What do you like doing …?*
le weekend	*at the weekend*
avec tes amis	*with your friends*
quand il pleut	*when it rains*
Est-ce que tu aimes … ?	*Do you like … ?*
faire du judo	*doing judo*
prendre des photos	*taking photos*
jouer aux échecs	*playing chess*

YEAR 7 FRENCH KNOWLEDGE ORGANISER LP4

Point de départ (pages 82–83)

le pays de Galles	*Wales*
le Portugal	*Portugal*
la Belgique	*Belgium*
la France	*France*
la Grèce	*Greece*
la Pologne	*Poland*
la Suisse	*Switzerland*
l'Allemagne	*Germany*
l'Angleterre	*England*
l'Écosse	*Scotland*
l'Espagne	*Spain*
l'Irlande	*Ireland*
l'Irlande du Nord	*Northern Ireland*
l'Italie	*Italy*
As-tu un animal?	*Have you got a pet?*
J'ai …	*I have …*
un chat	*a cat*
un chien	*a dog*
un cochon d'Inde	*a Guinea pig*
un hamster	*a hamster*
un lapin	*a rabbit*
un lézard	*a lizard*
un oiseau	*a bird*
un poisson	*a fish*
un serpent	*a snake*
Je n'ai pas d'animal.	*I don't have a pet.*
vingt	*20*
trente	*30*
quarante	*40*
cinquante	*50*
soixante	*60*
soixante-dix	*70*
quatre-vingts	*80*
quatre-vingt-dix	*90*
cent	*100*

Unité 1 (pages 84–85) *Décris-moi ta famille*

la famille	*family*
la famille d'accueil	*foster family*
le (beau-)père	*(step-)father*
le grand-père	*grandfather*
le (demi-)frère	*(half/step-)brother*
le fils / la fille	*son / daughter*
la (belle-)mère	*step-mother*
la grand-mère	*grandmother*
la (demi-)sœur	*(half/step-)sister*
les parents	*parents*
il/elle est …	*he/she is …*
petit(e)	*small*
grand(e)	*tall*
de taille moyenne	*medium-sized*
il/elle a les yeux ...	*he / she has ... eyes*
bleus / verts / marron	*blue / green / brown*
il/elle a les cheveux …	*he/she has … hair*
noirs / blonds	*black / blond*
roux / gris / bruns	*red / grey / brown*
courts / longs / mi-longs	*short / long / medium-length*
bouclés / raides	*curly / straight*
une barbe	*a beard*
des taches de rousseur	*freckles*
des tatouages	*tattoos*
il/elle porte des lunettes	*he/she wears glasses*

Unité 2 (pages 86–87) *Où habites-tu?*

Où habites-tu?	*Where do you live?*
J'habite …	*I live …*
en Angleterre	*in England*
au pays de Galles	*in Wales*
dans un appartement	*in a flat*
dans une maison	*in a house*
J'aime habiter ici.	*I like living here.*
Je n'aime pas habiter ici.	*I don't like living here.*
C'est ...	*It's ...*
tranquille	*peaceful*
grand	*big*
confortable	*comfortable*
trop petit	*too small*
Il n'y a pas de place.	*There's no space / room.*
le salon	*the living room*
la cuisine	*the kitchen*
la chambre	*the bedroom*
la salle de bains	*the bathroom*
la salle à manger	*the dining room*
le jardin	*the garden*

Unité 3 (pages 88–89) *Qu'est-ce que tu manges au petit déjeuner?*

Qu'est-ce que tu manges au petit déjeuner?	*What do you have for breakfast?*
Je mange …	*I eat …*
un croissant	*a croissant*
un fruit	*a piece of fruit*
du pain (grillé)	*(toasted) bread*
du beurre	*butter*
du bacon	*bacon*
du yaourt	*yoghurt*
une tartine	*a slice of bread with jam or spread*
de la confiture	*jam*
des céréales	*cereal*
des œufs	*eggs*
Je bois …	*I drink …*
du jus de fruits	*fruit juice*
du chocolat chaud	*hot chocolate*
du lait	*milk*
de l'eau	*water*
Je ne mange rien.	*I don't eat anything.*

Unité 4 (pages 90–91) *On fait la fête!*

le 14 juillet	*Bastille Day*
la fête nationale	*national holiday*
un jour de congé	*a day off*
un défilé (militaire)	*a (military) parade*
un bal	*a dance*
regarder un feu d'artifice	*to watch fireworks*
faire un pique-nique	*to have a picnic*
faire la fête	*to celebrate*

Unité 5 (pages 92–93) *Une drôle de famille*

grincheux(-se)	*grumpy*
studieux(-se)	*studious*
marrant(e)	*funny*
sévère	*strict*
maigre	*thin*
furieux(-se)	*angry*
il habite	*he lives*
elle habite	*she lives*
ils habitent	*they live*

Les mots essentiels *High-frequency words*

Pronoun

nous ..... *we*

Prepositions

de ..... *of*
dans ..... *in*
à ..... *in/at*

Other useful words

du/de la/de l'/des ..... *some*
(ne) … rien ..... *nothing*

Stratégie 4

Cognates and near-cognates

1 Cognates may have the same spelling in French and English, but don't forget to learn them! You need to learn them with the correct article, e.g. ***le*** *Portugal,* ***des*** *céréales.*

2 Watch for small differences in spelling between English and French e.g. *app**p**art**e**ment*, *choco**lat***.
Try to spot patterns: -ic is *-ique* in words like *p**ique**-n**ique***;
-y is *-ie* in words like *Ital**ie***.

3 Remember that the pronunciation might sound quite different to the spoken English form. How do you pronounce these cognates?
France *Portugal* *hamster* *parents* *fruits*

Year 7 French

Knowledge Organiser LP5

Point de départ (pages 106–107)

Qu'est-ce qu'il y a dans … ?	*What is there in … ?*
ta ville/ton village	*your town/village*
Il y a …	*there is …*
un centre de loisirs	*a leisure centre*
un centre commercial	*a shopping centre*
un château	*a castle*
un marché	*a market*
un musée	*a museum*
une mosquée	*a mosque*
une patinoire	*an ice rink*
une piscine	*a swimming pool*
des magasins	*(some) shops*
Il n'y a pas de café / magasins.	*There isn't a café. / There aren't any shops.*
Il n'y a pas d'église.	*There isn't a church.*
le prix	*price*
un euro	*one euro*
trois euros cinquante	*3,50 € (three euros fifty)*
un adulte / un enfant	*an adult / a child*
moins de 12 ans	*less than 12 years old*

Unité 1 (pages 108–109) *Où vas-tu le weekend?*

Où vas-tu le weekend?	*Where do you go at the weekend?*
Je vais …	*I go …*
au bowling	*to the bowling alley*
au cinéma / parc	*to the cinema / park*
au stade	*to the stadium*
à la piscine	*to the swimming pool*
à la plage	*to the beach*
à l'église	*to the church*
aux magasins	*to the shops*
le samedi matin / après-midi / soir	*on Saturday mornings / afternoons / evenings*

G

The verb ***aller*** (to go) is irregular:

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

To say where you go with your friends, you can use ***on va*** … or ***nous allons*** … (we go …).

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à + le = au	*le parc* ➡ *Je vais **au** parc.*
à + la = à la	*la plage* ➡ *Il va **à la** plage.*
à + l' = à l'	*l'église* ➡ *Nous allons **à l'**église.*
à + les = aux	*les magasins* ➡ *Elles vont **aux** magasins.*

Unité 2 (pages 110–111) *Tu veux aller au café?*

Tu veux aller au café?	*Do you want to go to the café?*
Tu veux venir?	*Do you want to come?*
aujourd'hui	*today*
ce matin	*this morning*
cet après-midi	*this afternoon*
ce soir / weekend	*this evening / weekend*
Rendez-vous à quelle heure?	*What time will we meet?*
Rendez-vous à …	*Let's meet at …*
Merci. Bonne idée!	*Thank you. Good idea!*
Oui, je veux bien.	*Yes, I want to.*
D'accord	*OK*
Pourquoi pas?	*Why not?*
Non, merci.	*No, thanks.*
Désolé(e)!	*Sorry!*
Je ne veux pas.	*I don't want to.*
Tu rigoles!	*You're joking!*

G

vouloir (to want) is an irregular modal verb. It is usually followed by an infinitive.

je ***veux***	I want
tu ***veux***	you (singular) want
il/elle/on ***veut***	he/she wants / we want
nous ***voulons***	we want
vous ***voulez***	you (plural or polite) want
ils/elles ***veulent***	they want

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Unité 3 (pages 112–113) *Vous désirez?*

Vous désirez?	*What would you like?*
Pardon, madame/monsieur.	*Excuse me, madam/sir.*
Je voudrais …	*I would like …*
Pour moi …	*For me …*
un Orangina	*a fizzy orange*
un diabolo menthe	*a mint cordial*
une grenadine à l'eau	*a pomegranate cordial*
un café express	*an espresso coffee*
un café crème	*a milky coffee*
un chocolat chaud	*a hot chocolate*
un thé au lait/au citron	*a tea with milk/lemon*
un jus d'orange	*an orange juice*
un coca (light)	*a (Diet) Coke*
une eau minérale	*a mineral water*
un croquemonsieur	*a grilled cheese and ham sandwich*
un sandwich au fromage/au jambon	*a cheese/ham sandwich*
une crêpe au sucre	*a pancake with sugar*
une glace au chocolat/à la vanille/à la fraise/à la pistache	*chocolate/vanilla/strawberry/pistachio ice cream*
des frites	*chips*
Et pour vous?	*And for you?*
C'est combien, s'il vous plaît?	*How much is it, please?*
Ça fait …	*It comes to …*
Voilà, merci.	*Here you are, thanks.*

Unité 4 (pages 114–115) *Qu'est-ce que tu vas faire?*

Qu'est-ce que tu vas faire à Paris?	*What are you going to do in Paris?*
Je vais …	*I am going …*
visiter la cathédrale Notre Dame	*to visit Notre Dame Cathedral*
visiter la tour Eiffel	*to visit the Eiffel Tower*
aller au musée du Louvre	*to go to the Louvre*
aller aux Catacombes	*to go to the Catacombs*
faire une balade en bateau-mouche	*to go on a boat trip*
prendre des photos	*to take photos*
acheter des souvenirs	*to buy souvenirs*
admirer la *Joconde*	*to admire the* Mona Lisa
faire un pique-nique	*to go on a picnic*

G

You use the near future tense to say what you are going to do.

Use the present of the verb ***aller*** + an **infinitive**.

Je ***vais*** *visiter …*
Tu ***vas*** *visiter …*
Il/Elle/On ***va*** *visiter …*
Nous ***allons*** *visiter …*
Vous ***allez*** *visiter …*
Ils/Elles ***vont*** *visiter …*

Find examples of the near future tense in exercise 1 and work out what each one means.

Page 125

Unité 5 (pages 116–117) *Je vais visiter Paris!*

normalement/d'habitude	*usually*
le weekend	*at weekends*
le weekend prochain	*next weekend*
samedi prochain	*next Saturday*
Je vais …	*I am going …*
jouer au basket	*to play basketball*
jouer au foot	*to play football*
jouer au laser-tag	*to play laser-tag*
manger un gâteau	*to eat a cake*
manger une pizza	*to eat a pizza*
manger une glace	*to eat an ice cream*
aller au zoo	*to go to the zoo*
aller au centre de loisirs	*to go to the leisure centre*
faire un tour en Segway	*to go on a Segway tour*
faire les magasins	*to go shopping*

Les mots essentiels *High-frequency words*

Pronouns

tu	*you* (singular and familiar – one person you know well)
vous	*you* (plural – more than one person; or polite – someone older or who you don't know well)

Connectives

où	*where*
ou	*or*
si (s' before a vowel)	*if*

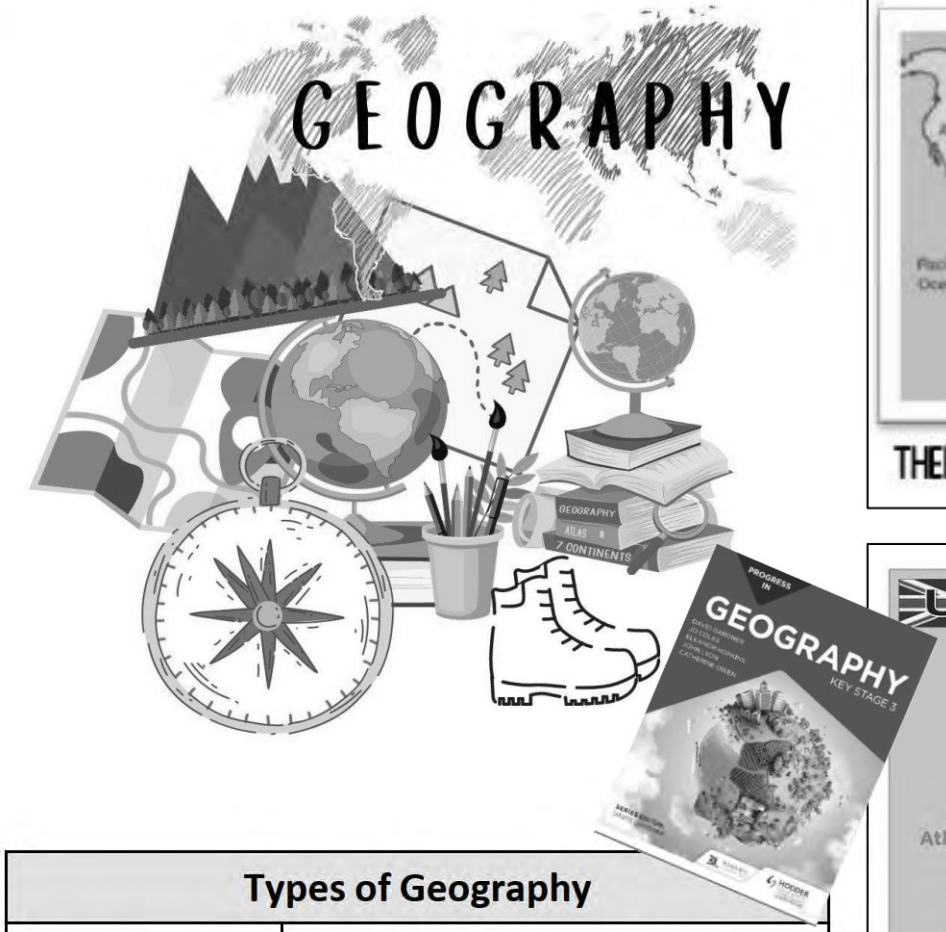
Time expressions

aujourd'hui	*today*
ce matin	*this morning*
cet après-midi	*this afternoon*
ce soir	*this evening*
ce weekend	*this weekend*
normalement/d'habitude	*usually*
le lundi matin	*on Monday mornings*
le mardi après-midi	*on Tuesday afternoons*
le samedi soir	*on Saturday nights*
le weekend	*at weekends*
le weekend prochain	*next weekend*
dimanche prochain	*next Sunday*

GEOGRAPHY

Knowledge Organiser

Year 7 What is a Geographer?



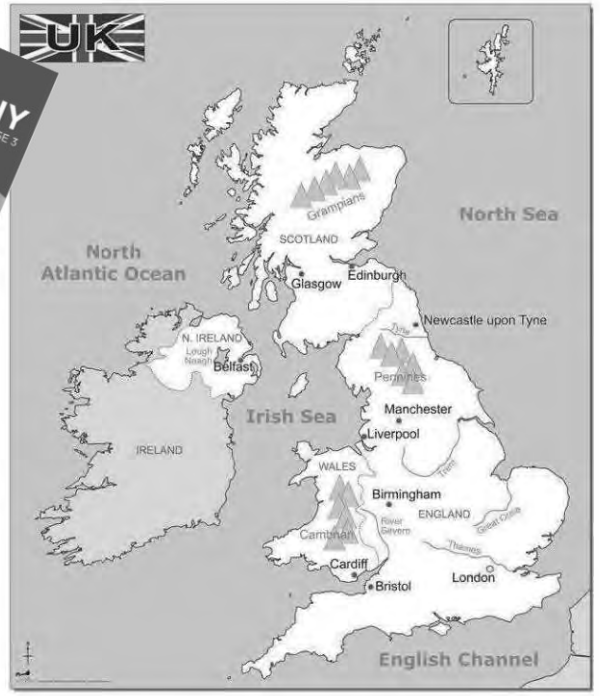
ATLAS SKILLS

There are generally three main types of maps shown in an atlas:

PHYSICAL MAPS these show topography/relief (the shape of the land) and other physical features such as rivers and lakes.

POLITICAL MAPS these show country borders, cities, transport links etc.

THEMATIC MAPS these show information such as climate data, agriculture types etc.



What is Geography?

Geography is the study of Earth's landscapes, peoples, places and environments. Put simply the study of the world we live in.

Geography is part of everyday life; you use it everyday without even realising!

Types of Geography	
Human	The impact of people on the Earth.
Physical	The Earth's natural processes and features.
Environmental	The interaction between humans and the natural processes and features.

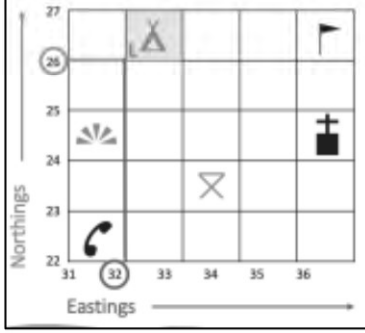
Name:

Map Skills – Grid References and Scale

These are vital skills for a geographer, they help us to investigate places, to understand the influence of the landscape on human activities and identify physical features.

4 FIGURE GRID REFERENCES

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



The first two numbers give the eastings.

32 26

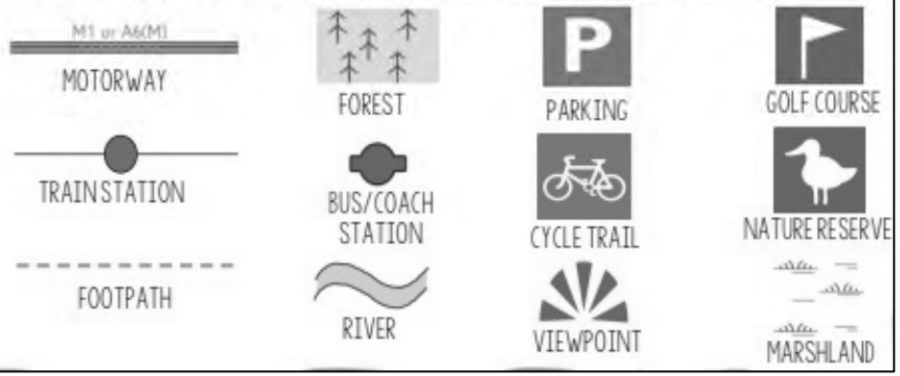
The second two numbers give the northings.

Remember... eastings then northings!

Along the corridor and up the stairs!

MAP SYMBOLS

Symbols are useful for lots of reasons including, space saving on a map, multi-lingual (all languages can understand them), saves time, clear.



6 FIGURE GRID REFERENCES

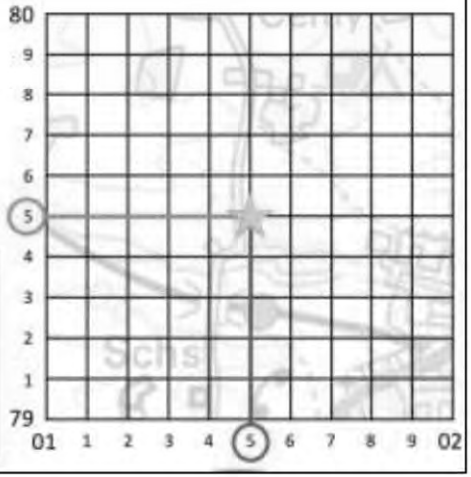
We can use six-figure grid references to find an exact location within a grid square, so they are much more accurate. The grid square is divided into tenths.

Example:

015 795

The first three numbers give the easting which includes the number of tenths.

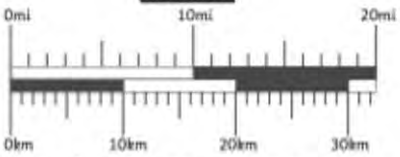
The last three numbers give the northing which includes the number of tenths.



SCALE AND DISTANCE

OS maps have a scale. On some smaller maps, 1cm on the map equals 250m in real life. On some larger maps, 1cm on the map equals 500m. Different maps might have different scales, so check on your map to find its scale.

LINE SCALE



Using a line scale on a map is as easy as using a ruler. The important thing to remember is that a line scale shows measurements in km and the measurements on a ruler are in cm.

WORD SCALE

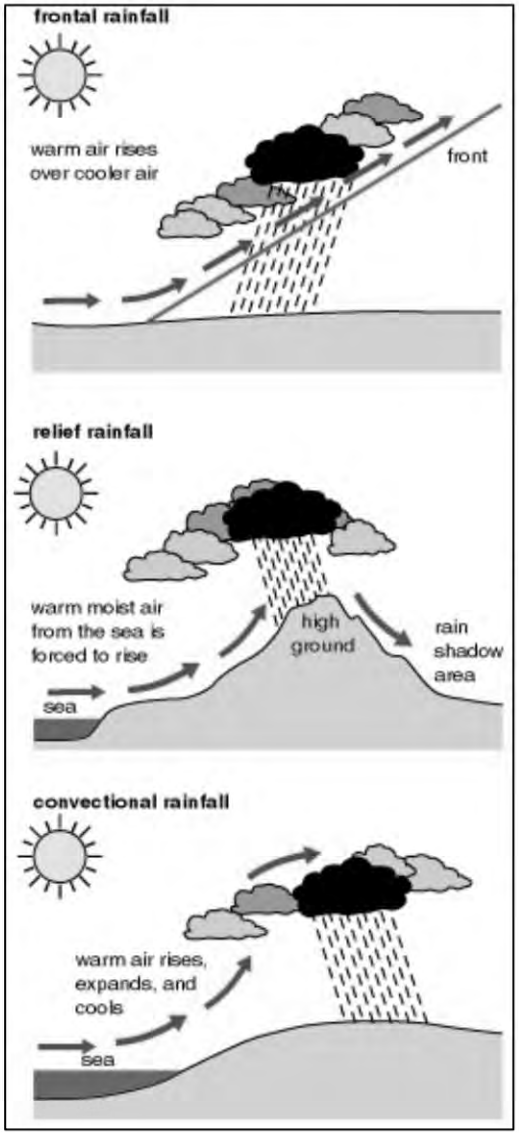
One centimeter on the map represents 3 kilometers on the ground. (1cm = 3 km)

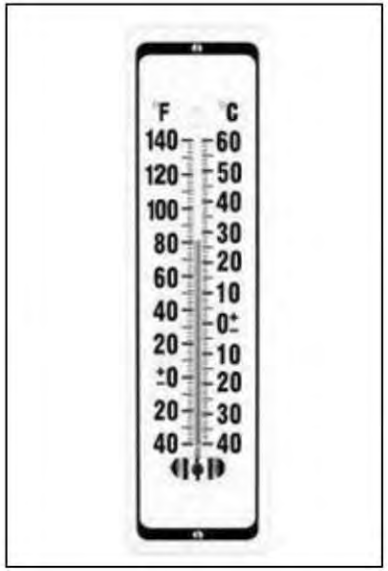
Using the scale above, if we measure the distance on a map between two places with our ruler. The measurement is 4cm. We then have to multiply that measurement by 3 to calculate that the real distance between the two places is 12km.

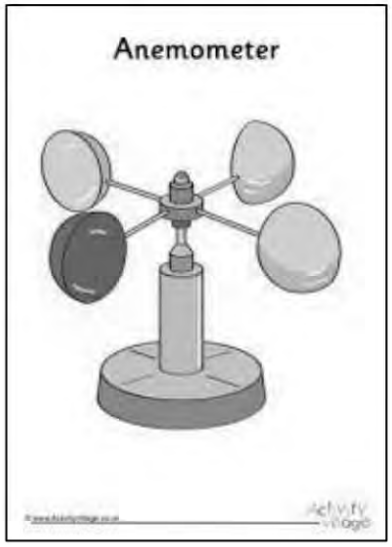
Remember ... along the corridor ..... And up the stairs!

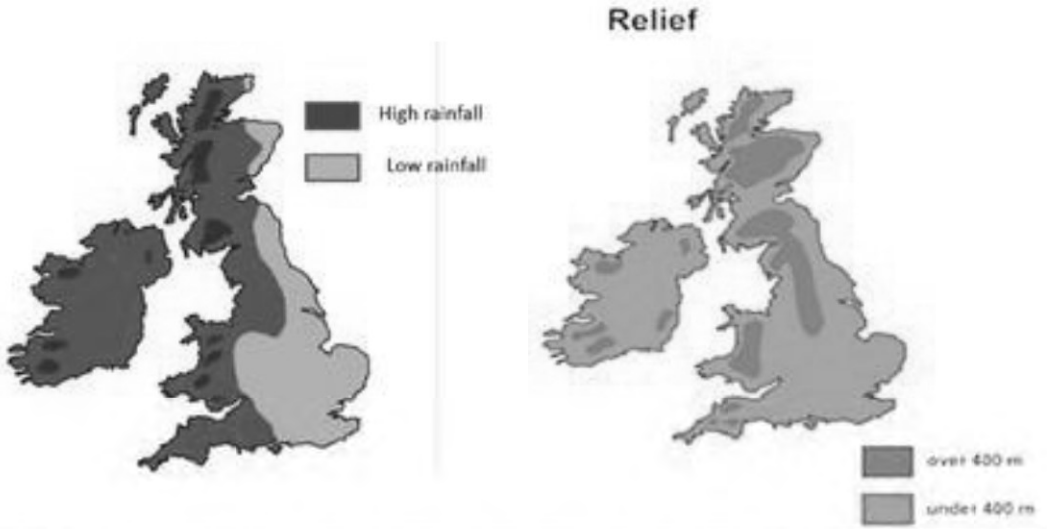
Weather and Climate

Weather is the day-to-day conditions of the atmosphere, whereas climate is the average conditions (temperature and rainfall) of a place over time (30 years).

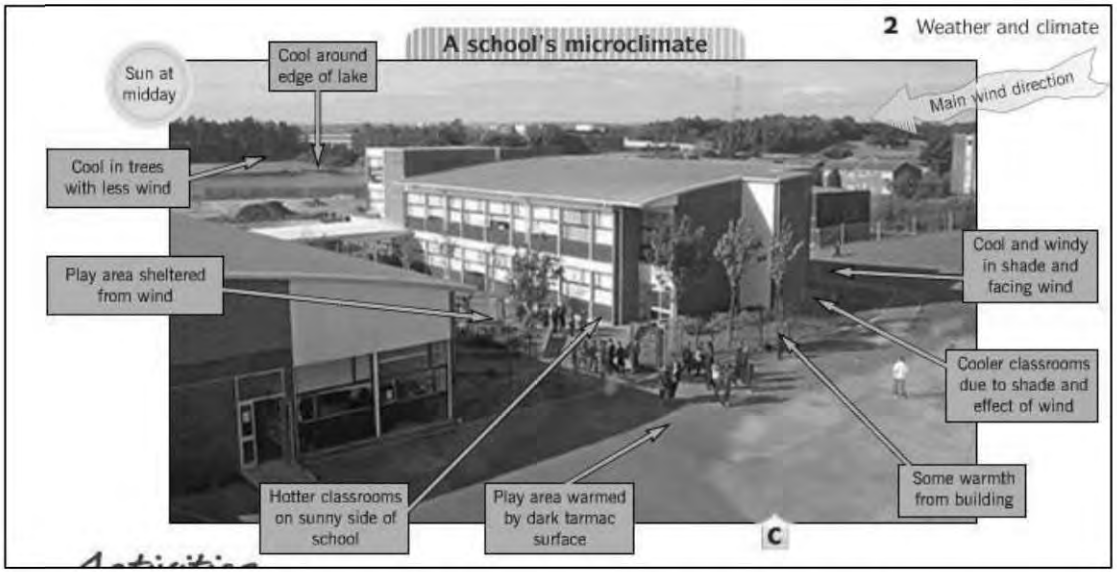






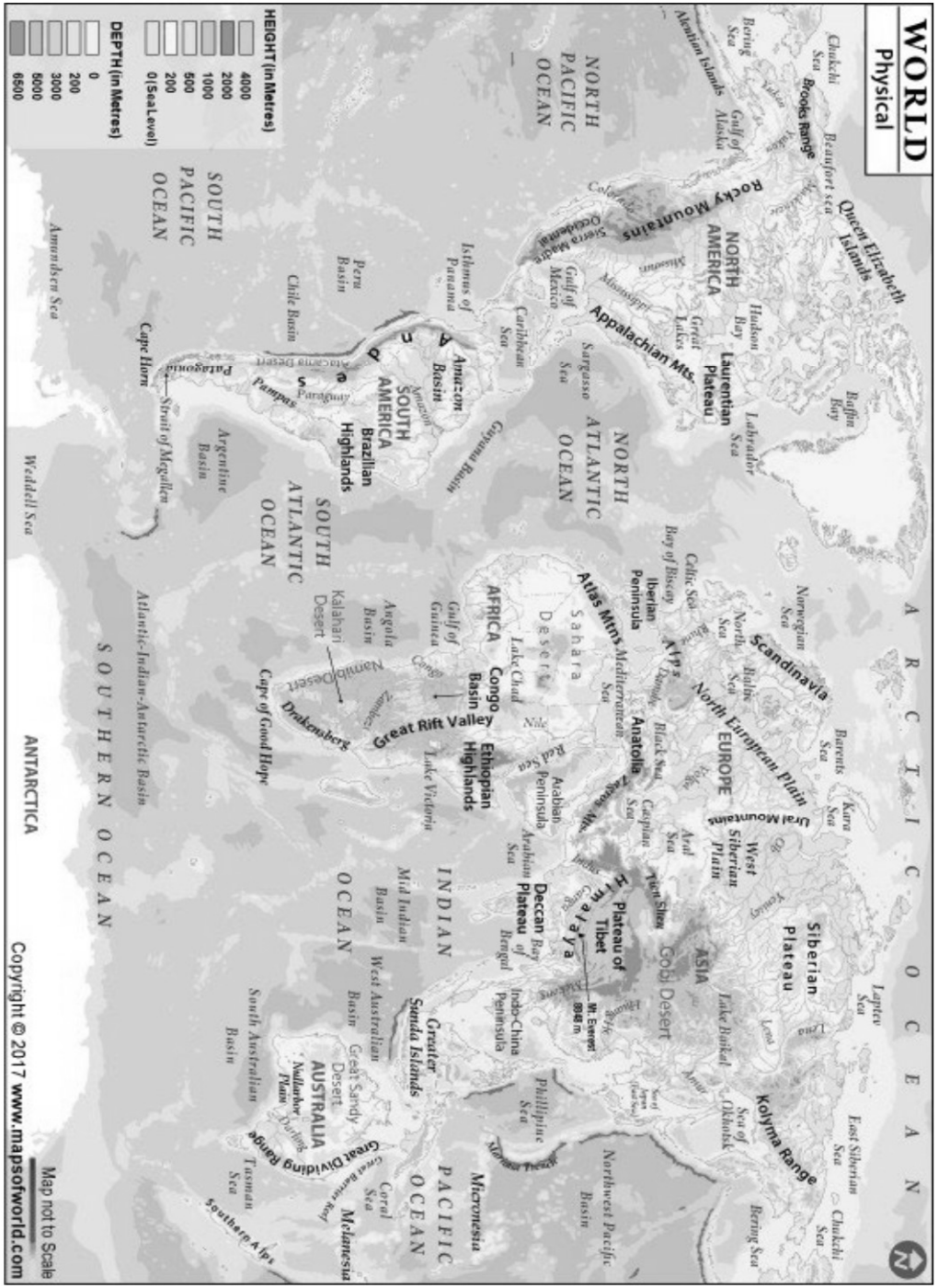


Rainfall in the UK is generally heaviest in the north and west of the country, with the east being much drier. This is a result of the prevailing wind coming from the southwest over the Atlantic ocean and the relief pattern matching the heavy rainfall.



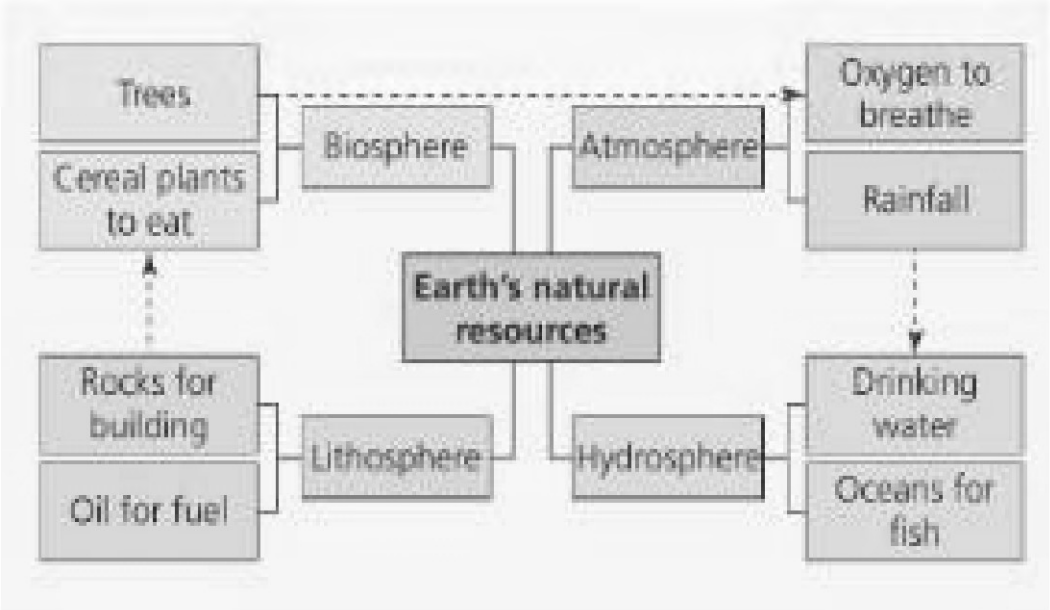
Microclimate a small localised climates created by factors such as buildings around school that may provide shelter from some weathers.

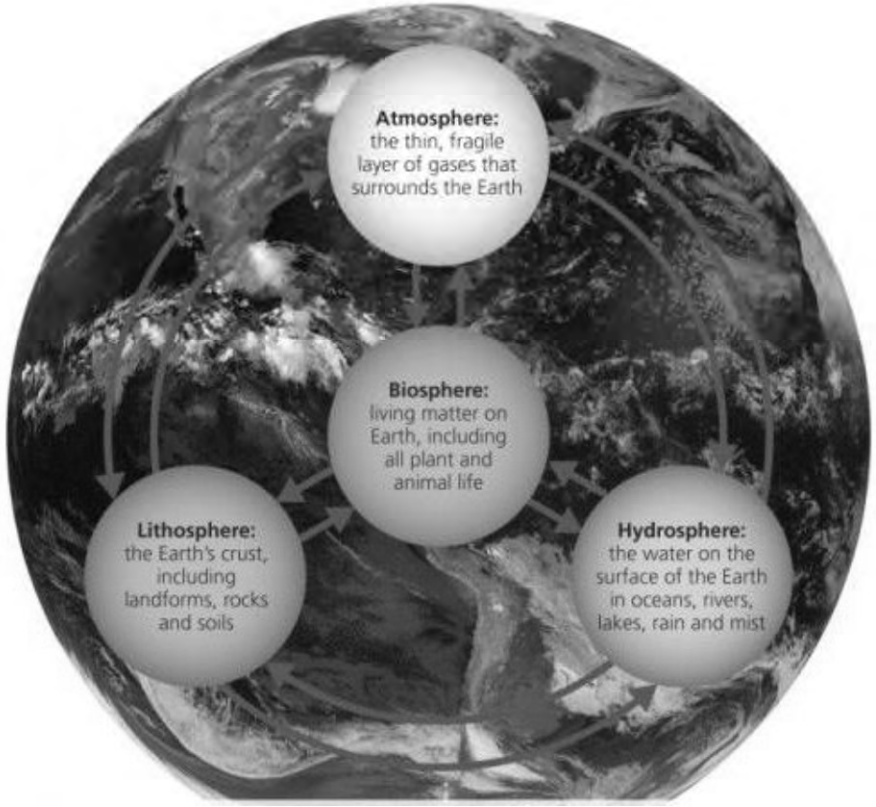
Subject Specific Vocabulary – the Key words you need to know to be able write like a Geographer	
Air pressure	The weight of air pushing down on earth.
Cold front	The boundary of an advancing mass of cold air.
Condensation	Water vapour is cooled and turns back to water droplets.
Climate	What the weather in a place is usually like over a period time (30 years).
Climate graph	A graph showing the average temperature and rainfall for each month of the year for a specific location.
Drought	A long period of low rainfall.
Eastings	A line representing the eastward distance on a map, the first part of a grid reference.
Environmental world	Habitats, such as mountains, forests, oceans, and how they develop and change.
Evaporation	The change from liquid to gas.
Grid reference	a set of numbers, or numbers and letters, that tells you where to find something on a map.
Human world	How and where people live, develop and earn a living.
Microclimates	Weather and climate conditions in a small area such as a city or forest.
Northings	A line representing northward distance on a map, the second part of a grid reference.
Physical world	What our planet is like, the work of rivers, the sea and ice.
Precipitation	Water droplets in clouds become too heavy and fall as rain, snow, hail etc.
Relief	The height and shape of the land.
Scale	A measurement of enlargement or reduction from the original size, often shown as a ratio, e.g., 1:50,000
Temperature	Measurement of heat or cold.
Warm front	The boundary of an advancing mass of warm air.
Weather	The state of the atmosphere – for example how warm or cold, wet or dry it is.
Weather station	Areas with tools and equipment for measuring changes in the atmosphere.



Year 7 Knowledge Organiser Is Earth running out of Natural Resources	
This topic will introduce concepts that are important throughout Y7 and KS3. You will study the **water cycle** which will be important when you look at rivers, weathering will appear again in **coasts (Y8)** and **glaciers (Y9)**. Biomes when you study the **tropical rainforest (Y8).**	
1. How do we use our planet as a natural resource?	
The Earth is made up of 4 Spheres.	
Atmosphere	The thin layer of gases that surround the Earth
Biosphere	Living matter on the Earth – plants and animals
Lithosphere	The Earth's crust, including the landforms, rocks and soils
Hydrosphere	The water in oceans, rivers, lakes, rain and mist.

Natural Resources	**Substances that are found in nature which can be used by humans for our benefit, such as water, soil, coal, minerals, wood, animals, etc.**
Raw materials	The **basic materials** or substances from which products can be made, such as wood can be transformed into furniture.
Renewable	Resources that can be **replaced over time**, and will not run out, such as water, wind forests, etc.
Non-renewable	Substances which are limited and so **will run out one day** or cannot be replaced during our lifetime, such as natural gas, coal, etc.



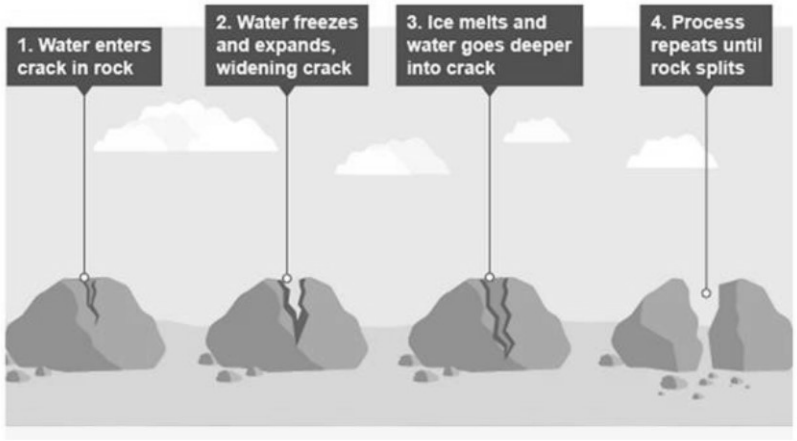


What are rocks?

Igneous Rocks	Formed from molten rock
Sedimentary Rocks	Laid down under the sea
Metamorphic Rocks	Changed by heat and pressure

Geologist	**An expert scientist who studies the structure of the Earth and its rocks.**

Weathering	**The process by which rocks and materials are broken down due to biological and weather processes such as rainfall, ice , wind, plant roots, etc.**
Freeze-thaw Weathering	When rocks are broken down and weakened when water seeps into cracks then **freezes and expands**, which breaks rocks apart over time.
Chemical weathering	When rocks and materials are weakened and broken down by **chemical reactions** from substances dissolved in water (such as salts, acids etc)
Biological Weathering	When rocks are weakened and broken down by plants, animals and microbes.

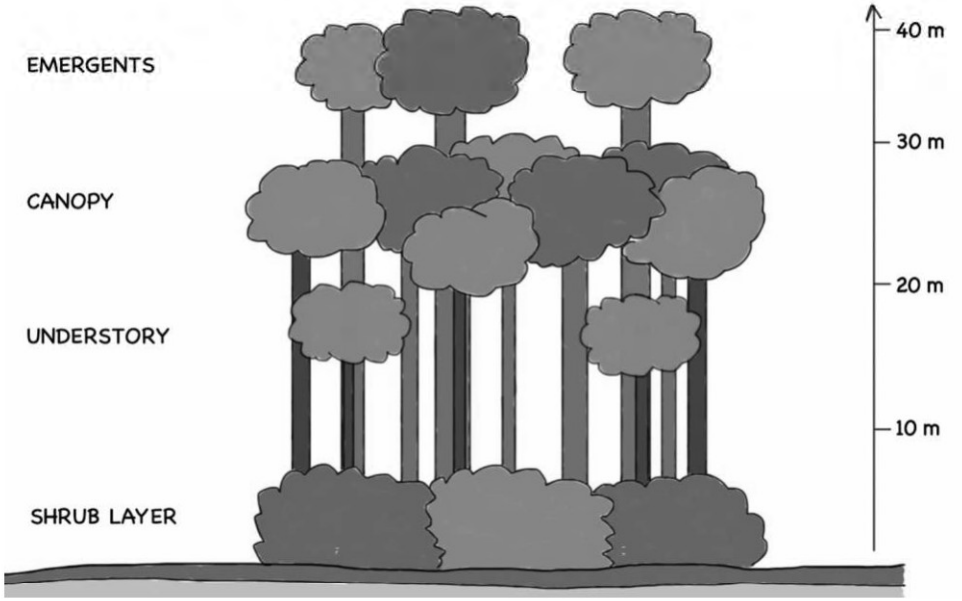


Why are soils the root of life?

Soil	**Soil is a thin layer on the Earth's surface. It is a layer of minerals, water and organic matter. Farming depends on it.**
Porous	When materials such as rocks have **small pores (holes)** which allow liquids or air to pass in and out.
Impermeable	When materials cannot let liquids in, are **water resistant.**
Clay	**A type of rock** that is very sticky, fine-grained and stiff, which can be shaped and moulded when wet. It can be dried and baked to form bricks and pottery.

How does the biosphere provide natural resources?

Biome	**A large community (large ecosystem) of plants and animals found in a major habitat such rainforest, desert or deciduous forest.**



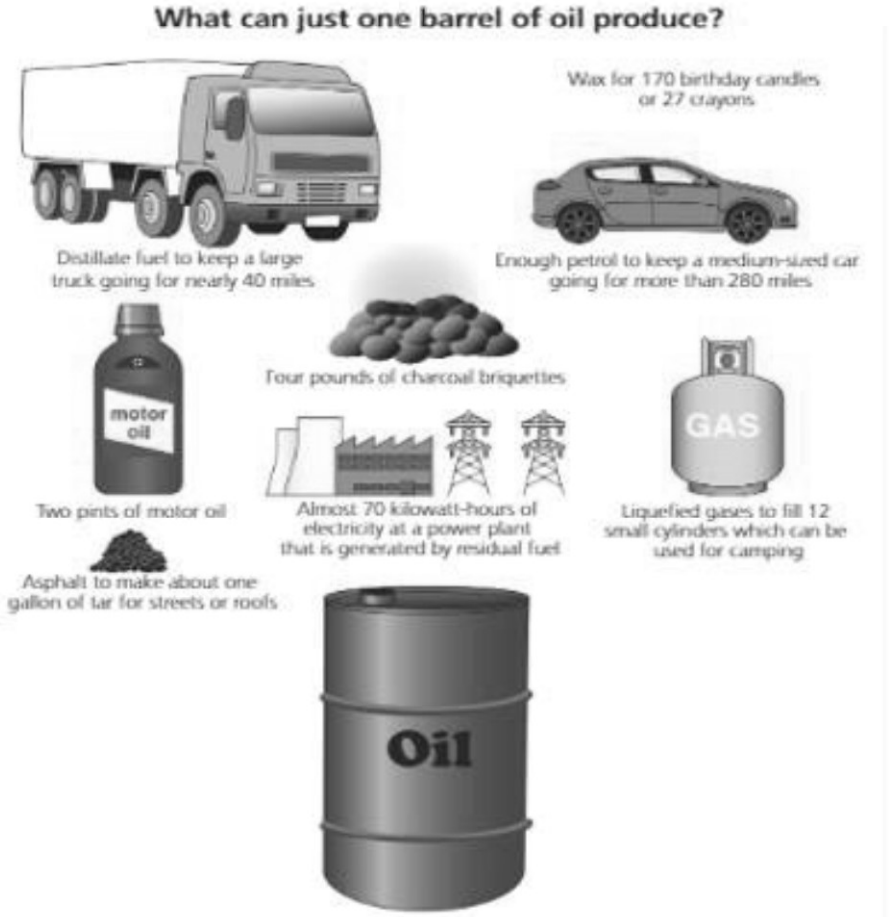
Tropical rainforests are useful for us!	
Food	The world's most popular fruit, the banana comes from the rainforest. Other examples include coffee, Brazil nuts, cocoa and vanilla.
Medicine	Many medicines we use today are derived from plants found In the rainforest which can be used to treat diabetes, arthritis, malaria and many others.
Timber	We use the high-quality hardwoods such as teak and mahogany for furniture, doors and panelling.
Cosmetics	Tropical oils are key ingredients in cosmetics, soaps and shampoos.
Role in the Earth's system	Rainforest makes a vital contribution to the Earth's systems. The thick vegetation protects soil from heavy rainfall and the dense forest absorbs carbon dioxide from the atmosphere.

How does the hydrosphere provide natural resources?

- Water is our most basic need. It accounts for 71% of the Earth's surface.
- It is continuously flowing between the oceans, atmosphere and land as part of the water cycle.
- Water is an important resource but 97% of the Earth's water is saltwater and only a small percent of the remaining 3% is easily accessible.
- About 2 billion people suffer from water shortages.

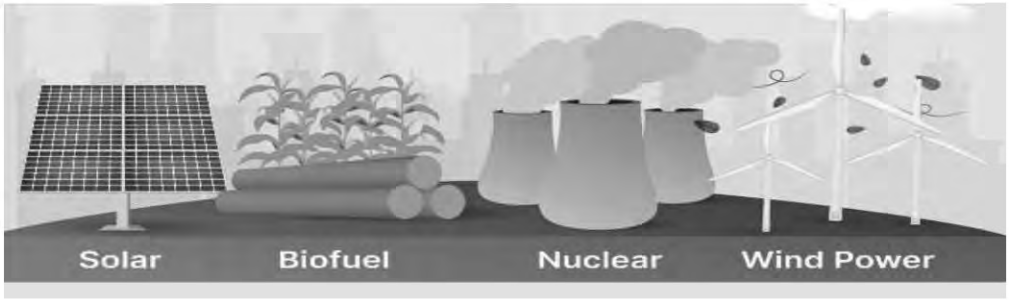
Why is the world so dependent on oil resources?

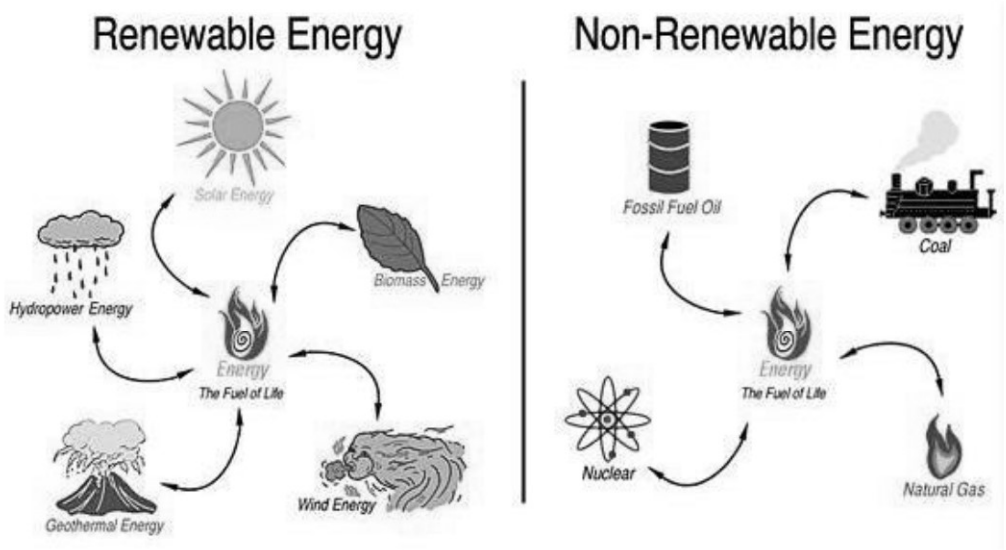
Fossil fuels	A natural hydrocarbon fuel such as petroleum (oil), coal or natural gas, which is formed by the fossilised remains of ancient plants and animals that are deposited over millions of years.

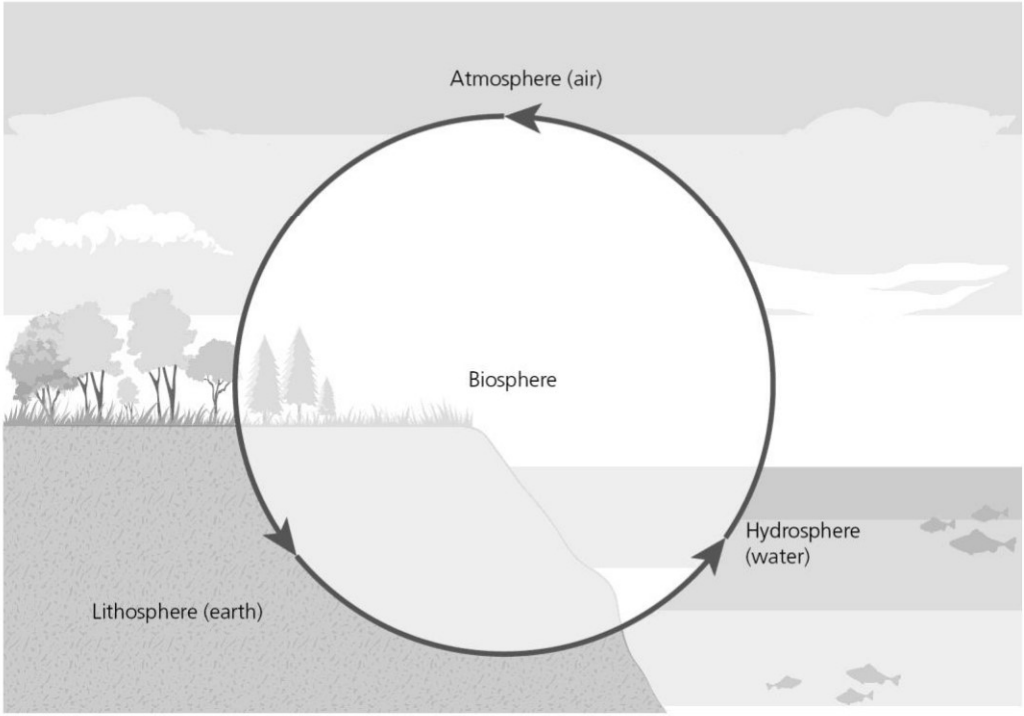


Natural resources that can generate energy	
Biomass	Burning plants, trees and organic matter to heat steam to drive turbines.
Wind Power	The wind turns large turbines to generate electricity. They only work when it is windy.
Hydroelectric power (HEP)	Using fast flowing water to turn generators (like a water wheel). You need dams which are expensive to build but they can generate huge amounts of electricity.
Tidal energy	Works in a similar way to HEP but uses the movement of the tide to generate the electricity. Needs a coastal location!
Geothermal Energy	Uses heat produced from the Earth's crust to heat water and turn it into to steam.
Fossil fuels	Natural gas, oil and coal are burnt to generate huge amounts of electricity. Unfortunately, this generates carbon emissions which are leading to global warming

How can we use natural resources sustainably?	
Sustainability	When materials and resources are used in a way that will balance **the needs of the present without compromising the future,** the ability to maintain something such as economic growth.







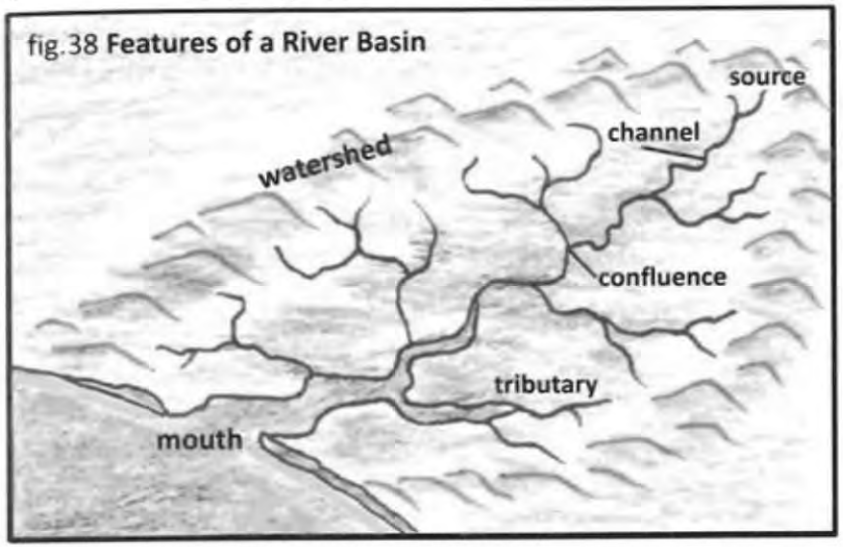
Year 7 Rivers Knowledge Organiser.

Remember the **water cycle** from earlier in Y7 and the processes of **weathering**, you will also use your **map skills** in this topic.

Parts of a River

1. Source	The starting point of a river, usually a spring bursting from the ground
2. Tributary	A smaller river that joins the main one.
3. Confluence	The point where two rivers meet
4. Drainage Basin	The area of land that a river and its tributaries drain.
5. Watershed	High land that separates one drainage basin from another
6. Flood Plain	The low lying land that may get flooded when a river bursts its banks
7. River Mouth	Where the river flows into a lake or the sea.

fig.38 **Features of a River Basin**



The Water Cycle

EVAPORATION is where the sun warms oceans, seas and lakes turning water into water vapour, a gas.

CONDENSATION is where rising air cools and water vapour turns back into tiny water droplets. It goes from a gas to a liquid.

PRECIPITATION is where the water droplets fall back to the Earth as rain, sleet or snow.

SURFACE RUNOFF is where rainwater will run over the surface of the ground because the ground is wet or already soaked with water.

GROUNDWATER FLOW is water soaking through the pores and cracks of the rocks underground.

INFILTRATION – is where the rainwater soaks into the soil after falling

TRANSPIRATION – where rainwater is evaporated from the leaves of vegetation back into the atmosphere

Exam Tip

Make a series of flashcards for these definitions. Write the word on one side and the definition on the other. Get someone to test you on these – keep repeating the ones you don't get!

How does the Water Cycle work?

Evaporation:

- The Sun causes the water from the Earth to **evaporate.**
- This water **evaporates** from seas, lakes, streams and even puddles.
- When it **evaporates,** water turns into **water vapour**.

Condensation:

- As the **water vapour** rises, it cools down.
- As it cools down, **condensation** happens and **water vapour condenses** to small droplets of water.
- Clouds are made from a mix of dry air and small droplets of water.

Precipitation:

- As **condensation** continues to happen, more droplets of **water vapour** are formed.
- When the droplets become heavy and large enough, they fall back to the Earth's surface in the form of rain or snow.

Runoff and Transpiration:

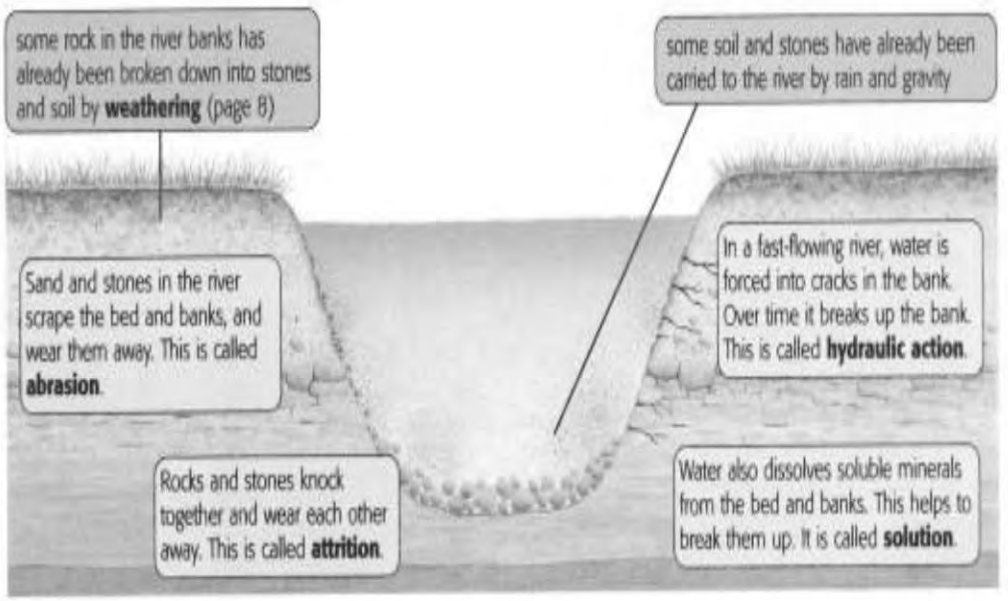
- As **precipitation** happens in the form of rain or snow falling back to Earth, water is **absorbed** into the soil.
- This water is used by plants to grow - when water from plant leaves **evaporates** back into the **atmosphere**, this is called **transpiration.**
- Water may also run off and enter oceans, seas and rivers.
- Water then **evaporates** again and the water cycle begins again!

Rivers at work – the processes of erosion, transportation and deposition

Erosion is the wearing away of rock, stones and soil by rivers. You need to know the 4 main types.	
Hydraulic Action	Water is forced into cracks in the bank and over time breaks it up.
Abrasion	Sand and stones in the river scrape the beds and banks wearing them away.
Solution	Water dissolves soluble minerals from the bed and banks breaking them up over time.
Attrition	Rocks and stones knock together and wear each other away becoming smaller and smoother.

Transportation Processes – Rivers move sediment (rocks, pebbles, sand) in four ways	
Traction	Is where large rocks and boulders are rolled along the bed
Saltation	Is where rocks bounce along the river bed.
Solution	Is where material has actually dissolved into the water like sugar in tea.
Suspension	Is where small light particles of rock are carried along in the water – they make it look cloudy or muddy.

Deposition – when the river slows down and loses energy it can no longer carry its load and so it puts it down or 'deposits' it. The larger material is always deposited first and the lighter material last.



The faster it flows, and the more water it has, the faster the river erodes.

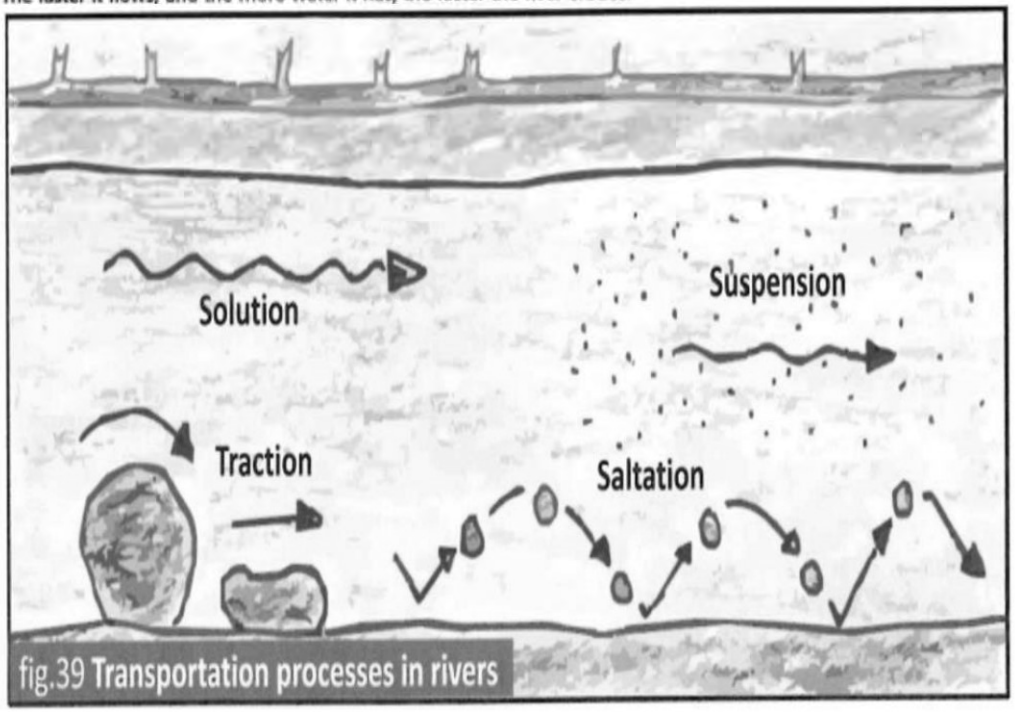
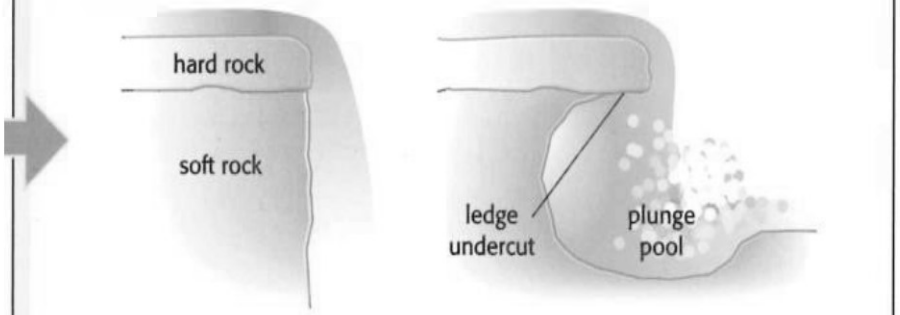


fig.39 Transportation processes in rivers

River landforms – Waterfalls, gorges , meanders and ox-bow lakes

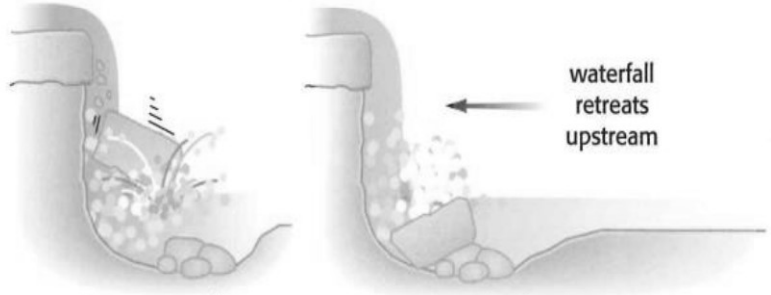
A waterfall is formed when the river meets a band of hard rock that is resistant to erosion. They are found in the upper course of the river where the river is eroding downwards.

How a waterfall develops



1 The soft rock is easy to erode, but the hard rock is not. So, as the years go by, a ledge develops.

2 The water rushes over the ledge and erodes the soft rock, forming a **plunge pool**.



3 In time, the ledge falls into the plunge pool, where the debris helps to speed up erosion.

4 Steps 1–3 are repeated. The waterfall gradually retreats upstream, carving out a **gorge**.

Meanders are found lower down on the floodplain where the river is eroding from side to side

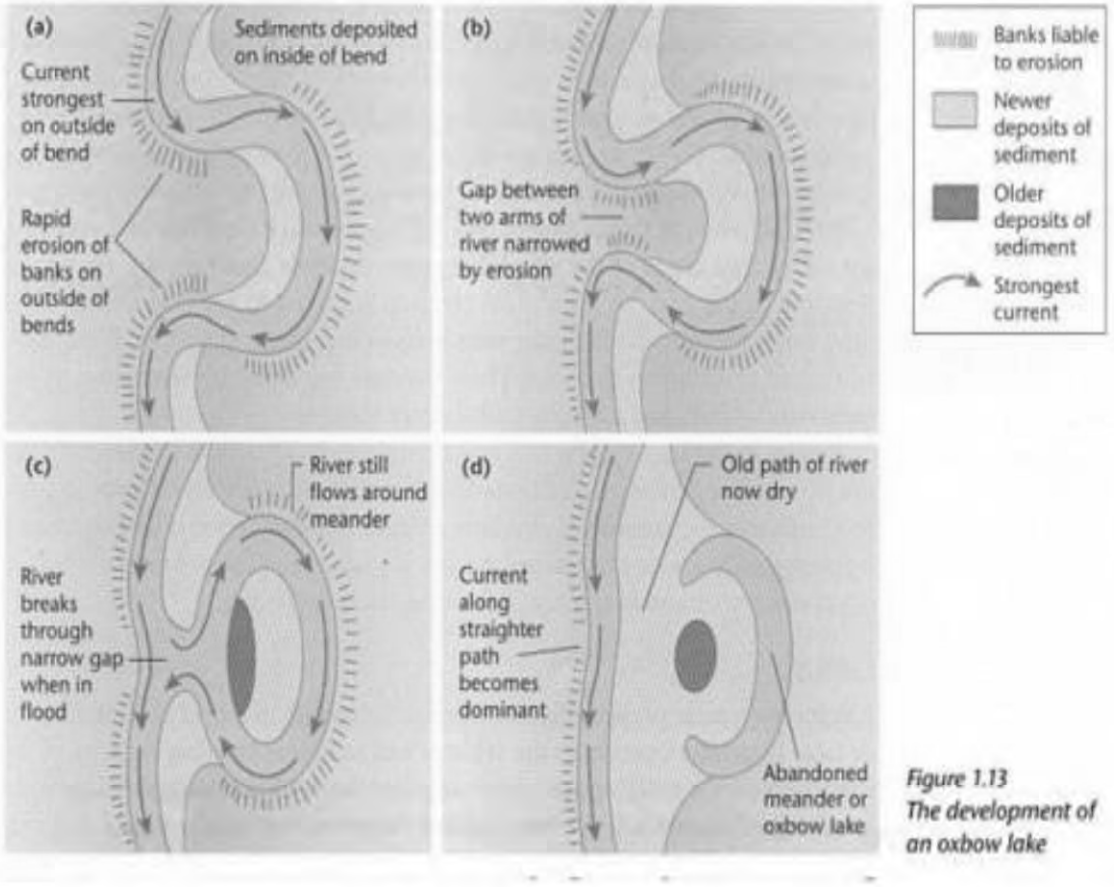


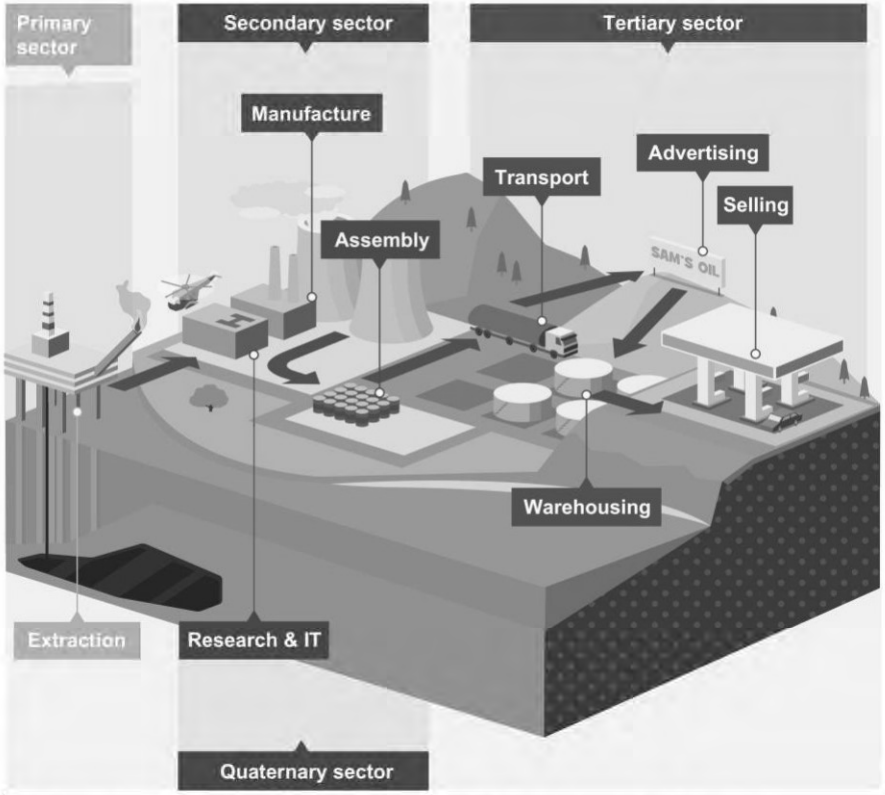
Figure 1.13 The development of an oxbow lake

At point A on the inside of the bend the river **loses energy** and **deposits** material forming a **beach**

At point B the river is **moving faster** and **erodes** the river bank forming a **small river cliff.**

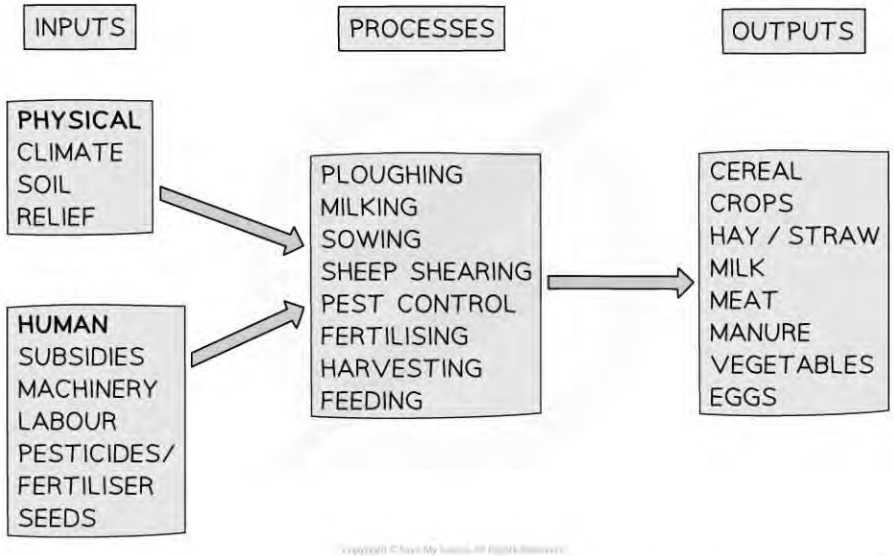
What is the economy?

This topic will help develop your knowledge and understanding of natural resources and the Earths spheres from earlier in Y7.

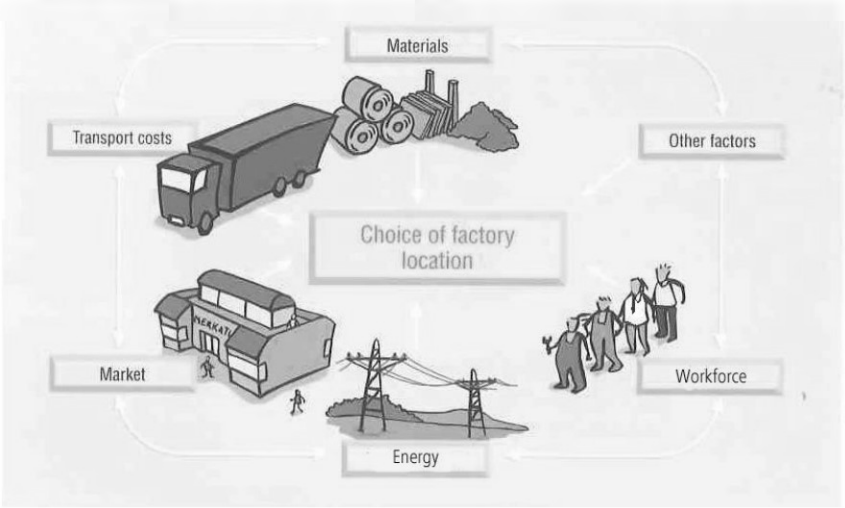


Primary	Getting raw materials from the land or sea.
Secondary	Making things from raw materials.
Tertiary	Providing a service to others.
Quaternary	Involves research and development.

Primary Sector: Farming



Secondary Sector: Manufacturing



Tertiary Sector: Tourism

THE GROWTH OF TOURISM

CHEAP AND EASY TRAVEL

- **Roads** and **motorways** have improved in quality. **Flights** are much cheaper than in the past. Additionally, the **internet** makes it easier to plan trips and book accommodations.

People in line in the Maiquetia Airport

DISPOSABLE INCOME

- Nowadays, people have more **disposable income**—the money remaining after having paid for necessities.

HOLIDAYS

- In many countries, employees are entitled to a longer period of **paid holiday**. This means that people have more opportunities to go on trips.

Geography Revision geography-revision.co.uk

The economy of a chocolate bar

1

2

A container ship transports the cocoa beans by sea to

3

The products are transported by ship for world export

4

The dried, cured cocoa beans are then packed into sacks for transport

5

Cocoa pods are harvested from trees (October to December)

6

Chocolate is manufactured in the consuming country

7

Orders are assembled at the distribution centre for customers

8

The cocoa beans are transported in trucks by road to the Ghanaian port where they are packed into containers

9

Chocolate is sold in the supermarket

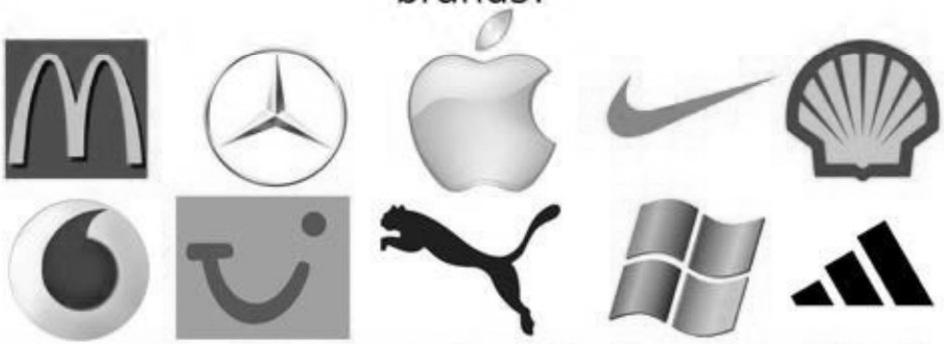
UK trade

No single country has all the natural resources it needs, countries need to work together to exchange goods and services. Trade has always been important to the UK. Much of this trade is transported by sea through ports like Liverpool and Southampton.

What is globalisation?

Multinational or Transnational Corporations that work in many different countries worldwide.

What is the connection between all of these brands?



How many other brands can you think of that match their profile? Why do you know so much about them?

Transnational corporations, manufacturing, and transporting goods globally

Growth of online social networks such as Facebook, and communication media, e.g. Facetime, and Skype

There are organisations such as the United Nations, making decisions beyond national governments

News and events are spread quickly around the world, as well as the worldwide release of music and films. Global tourism contributes to this

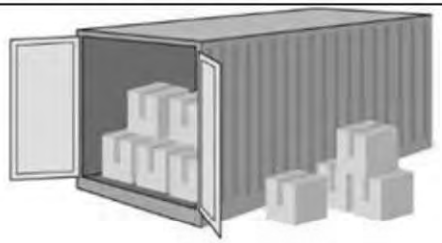
The iPhone a global product

The iPhone is a symbol of globalisation in the way it connects users and in how it is manufactured.

Containerisation and globalisation

Containerisation is a system of standardised transport that uses a common size of steel container to move goods. These containers make the movement of goods from ships to trains and lorries is quick and cheap. This used to be a very labour-intensive process.

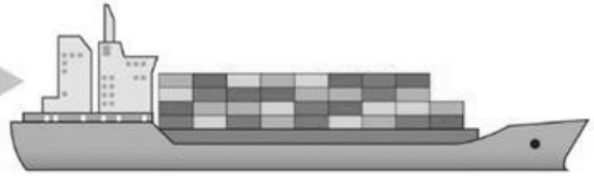
1 Products inside a container travel by truck or rail to a port



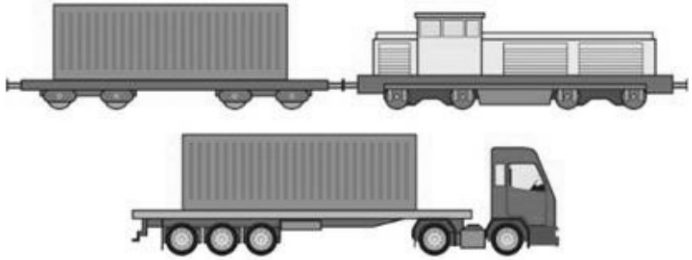
5 When it reaches its destination each container is unloaded and reused

2 The container is loaded onto a ship by crane

Steel shipping containers are designed to be carried on all three modes of surface transportation – ships, trains and trucks



3 Thousands of containers are carried by ship to other ports where they are offloaded



4 The containers are placed onto trucks or railcars to be transported inland or are kept in the port's yard for shipment later

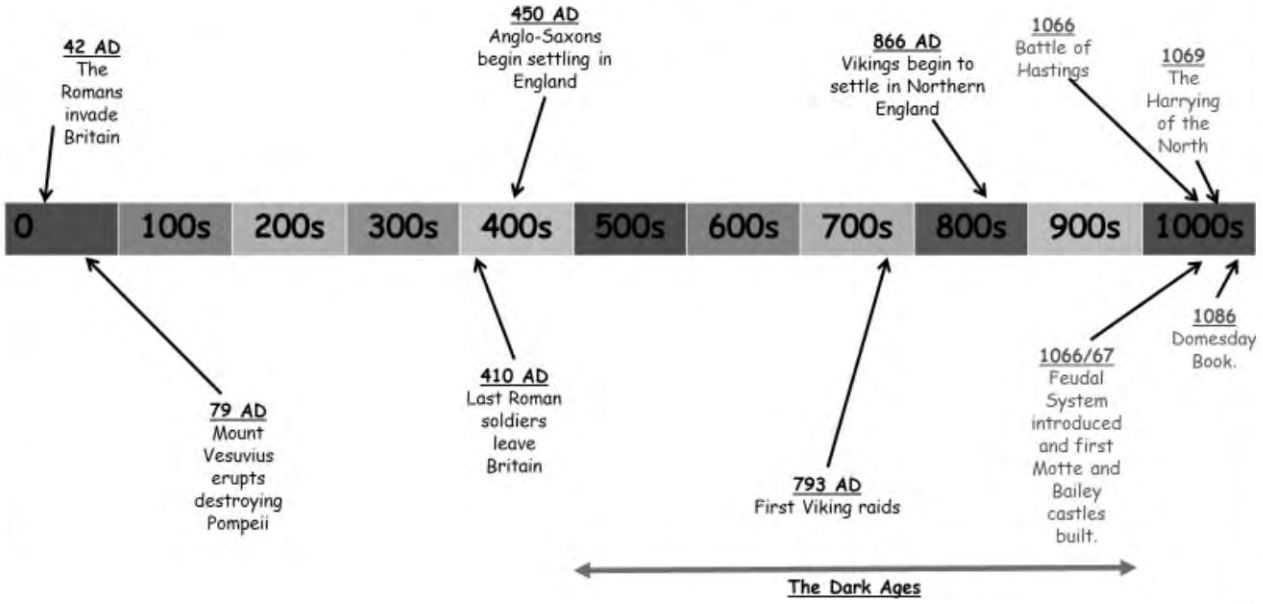
HISTORY

Knowledge Organiser

Year 7 History – How can historians discover the past?

Keywords
Historians – Someone who writes about or studies history.
Decade – Every ten years
Century – One hundred years
A.D. – Anno Domini (in the year of the Lord)
B.C. – Before Christ
Millenium – One thousand years
Periods – Separate division of time
Chronological order – the order in which events happened starting with the earliest event first.
Timeline – a chronological arrangement of events in the order of their occurrence.
Source – evidence made or written at the time of an event and within 5 years of the event
Interpretation – evidence made or written 5 or more years after an event
Archaeology – The study of human history from digging up objects and other remains.
The Romans – Name for a civilisation founded in the Italian city of Rome in the 8th century BC which lasted to the collapse of the Western Roman Empire in the 5th century AD

Where does it fit?



SKILLS:

Evidence – sources from the time which gives us facts about an event

Interpretations – information about past events/people written 5 years after the time

Investigation – studying sources and interpretations and answering questions

Judgement – coming to a decision about a historical question

Keywords
Invasion – the act of entering a place in an attempt to take control of it
Dark Ages – period of time from around 400AD – 1000AD
Vikings – Scandinavian seafaring pirates and traders who raided and settled in many parts of north-western Europe in the 8th–11th centuries.
Anglo-Saxon – Collective name for the tribes who settled in Britain after the Romans left in the 5th century.

Year 7 History – The Norman Conquest

TIMELINE
≈

January 5th 1066
King Edward of England dies

January 6th 1066
Harold Godwinson is crowned King of England.

September 25th 1066
Battle of Stamford Bridge.

September 27th 1066
William of Normandy and his army invade England.

October 14th 1066
The Battle of Hastings takes place.

December 25th 1066
William of Normandy is crowned King of England.

Keywords
Heir A person who has legal claim to a title or a throne when the person holding it dies.
Shield Wall A protective wall made by interlocking the shields of foot soldiers.
Turning point A time at which a decisive change in a situation occurs.
Rebellion An act of armed resistance to a government or leader.
Harrying 'Harrying' means to destroy a place
The Feudal System: is the name for a power structure where people held their land in return for promising loyalty, known as doing homage, and providing services such as working or fighting for their lord.
Survey A survey is a data collection tool in which a list of questions is used to gather information about individuals or a group of people.
Castle A type of home that was built to protect the people inside.
Buhr was an Old English fortification or fortified settlement.
The Anglo-Saxon Chronicle: Is a collection of stories, which tell the history of the Anglo-Saxons.

FACTS:

January 5th 1066 - King Edward of England dies. Did you know that he was known as Edward the Confessor because of his deep religious faith? After his death, the Christian church made him a saint.

January 6th 1066 - Harold Godwinson is crowned King of England. As Edward had no living children there was no direct heir to the throne. This meant there were some argument as to who should be King. Two men who thought they had a right to be King were William of Normandy and Harold Hardrada of Norway.

September 25th 1066 - Battle of Stamford Bridge. Harold Hardrada and his army invade England. Harold Hardrada is killed in the battle and King Harold of England declares victory.

September 27th 1066 - William of Normandy and his army invade England. King Harold and his army march south to meet them.

October 14th 1066 - the Battle of Hastings takes place. King Harold is killed and William of Normandy declares victory.

December 25th 1066 - William of Normandy is crowned King of England.

SKILLS:

Evidence – sources from the time which gives us facts about an event

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KINGS OF ENGLAND:

Norman Kings

- William I 1066- 1087 (*The Conqueror*)
- William II 1087-1100 (*Rufus*)
- Henry I 1100-1135
- Stephen 1135-1154

Plantagenet Kings

- Henry II 1154-1189
- Richard I 1189 – 1199 Lionheart
- John 1199 -1216

Year 7 History – Power in the Middle Ages

Keywords

Power – is when a group of people or an individual has control and influence over people's beliefs, actions, and behaviour.

Monarch – King or Queen, who has the authority to rule a country.

Succession – the order in which a title (such as role of King) is passed from one person to the next

Baron – A powerful lord granted land by the King.

Pope – Leader of the catholic church.

Peasant – During the Middle Ages, peasants were people who generally worked in farming, usually earning very little money. They were at the bottom of the medieval social hierarchy.

Church – an organisation of religious believes and structure

Priest – a Christian leader in a church building

The Clergy – Someone who works for the church.

Heaven/Hell - Heaven is a reward for those who lived a good life on earth. Hell is a punishment for those who sinned.

Church Courts - Courts that punished priests and members of the church for crimes. They were not as harsh as the courts owned by the King.

Chancellor - One of the king's closest advisors, helping with the creation and writing of laws.

Archbishop of Canterbury - The most senior bishop in England. A bishop is a religious authority figure in the Church.

Excommunicated - To be banned and cut off from the Catholic Church.

Crusade - Military campaigns by Christians who believed that it was possible for them to 'reclaim' the Holy Land for Christianity from Islam.

Revolt – fighting against your leader.

Charter – written description of agreements.

Democracy – system of running a country where the whole population makes decisions by voting.

Law – rules created and enforced to keep order.

Tax – Sum of money paid to the government or king

SKILLS:

Evidence – sources from the time which gives us facts about an event

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Judgement – coming to a decision about a historical question

FACTS:

Medieval Church

- The Catholic Church in medieval England was hugely powerful, because almost everyone believed in God, and that the Pope in Rome had been given authority by God.
- Everyone was expected to go to church, which meant it had a powerful position from which to influence people.
- Christianity had spread across England well before the Norman Conquest, but William I's rapid building programme of churches and monasteries ensured its influence would last for many centuries.

Thomas Beckett

- Thomas Becket was Archbishop of Canterbury, the most important bishop in England.
- In 1170, he was brutally murdered in Canterbury Cathedral.
- Historians have long debated whether his murder was on the orders of Henry II or if it was a terrible mistake.

King John and Magna Carta

- King John ruled England at a difficult time. He faced wars with France, a shortage of money and clashes with powerful English barons
- The barons became increasingly angry with John and eventually forced him to agree to changes in how England worked, written down in the Magna Carta.
- The Magna Carta is seen as the basis of many English laws and helped to influence the US constitution, which was written over 500 years later.

The peasants revolt

- In 1381, peasants rebelled against King Richard II.
- The peasants were angry about a range of issues, such as low pay and the introduction of a poll tax. They demanded changes were made.
- The revolt did not achieve all of the peasants' aims and the leader, Wat Tyler, was killed. In the longer term, there were some changes and improvements to peasants' rights.

Year 7 History – The Black Death

Cures

Carry flowers or wear perfume

Carry a lucky charm such as a hare's foot

Smoke a pipe

Take hot drinks to sweat out the illness

Place a chicken's bottom against lumps

Use leeches to suck out infected blood

Cover in mercury and place them in the oven

Flagellant people whipped themselves and hurt themselves, God would take pity on them

Praying to God and asking for forgiveness

Keywords
Buboes – Swellings in a persons armpit or groin
Bubonic – type of the plague carried by flees (bacteria)
Cause – what made people get catch the Black Death
Cures – what people believe stopped the Black Death or helped them recover from it
Epidemic - the rapid spread of disease to a large number of people within a short period of time
Flagellant - people who believed that if they whipped themselves and hurt themselves, God would take pity on them
Plague – a very infectious disease that spread quickly and kills large numbers of people
Pneumonic – type of plague spread by germs in the air
Symptom – the ill feeling and bodily changes caused by sickness
Trade – moving goods (objects) around from one place to another to be sold

FACTS:

The Black Death spread from Asia to Europe and then to England in 1348

1/3 of the population of Europe dies of the Black Death

Victims who caught the Black Death often died after 5 days

The main reason used to explain the Black Death was that it was a punishment from God for Sins

On of the cures was to place a chickens bottom on the buboes

About 1/2 of priests died from the Black Death

Peasants demanded more money for their work afterwards and this carried on until the Peasants' Revolt in 1381

SKILLS:

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Judgement – coming to a decision about a historical question

KINGS OF ENGLAND:

HENRY III 1216 -1272

- Became king at 9 years old and raised by priests

EDWARD I 1272 – 1307

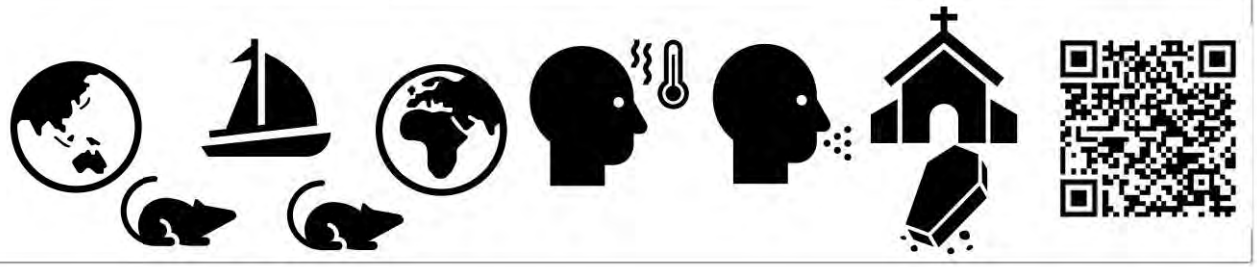
- First person to make his son Prince of Wales before becoming King of England

EDWARD II 1307 –1327

EDWARD III 1327 – 1377

RICHARD II 1377 –1399

War of the Roses



Year 7 History – Life through the Ages

Periods of world history					
Ancient history Before c476AD	'Dark ages' c476 – c1000	Medieval period c1000 – c1450	Early modern period c1450 – c1750	Late modern period c1750 – c1945	Contemporary period c1945 - present

Periods of British history								
Pre-history Before 43AD	Romans 43-410AD	Early Medieval 410-1066	Medieval 1066-1485	Tudors 1485–1603	Stuarts 1603-1714	Georgians 1714–1837	Victorians 1837-1901	C20th (& modern) 1901 – present

Year 7			
What is history?	William the Conqueror	The King or the Church?	
	Castles		
Life Through the Ages			

Keywords

Historians - Someone who writes about or studies history.

Decade – Every ten years

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A.D. – Anno Domini (in the year of the Lord)

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Archaeology - The study of human history from digging up objects and other remains.

Keywords

Standard of living - the quality of peoples' lives – housing, food, jobs, health, etc.

Medicine – What people are given to treat illnesses

Surgery – operations that are performed on people

Public health – the health of all the people in the country and what the government does to look after this

Crime and Punishment – the laws of a land, how they protect people, and how they punish them

Law enforcement – the people who ensure that the laws of the land are followed

SKILLS:

Source – evidence from the time which gives us facts about an event

Interpretations – information about past events/people written 5 years after the time

Investigation – studying sources and interpretations and answering questions

Judgement – coming to a decision about a historical question

ICT

Knowledge Organiser

Using Computers safely

Passwords

- Always use text, numbers and symbols
- At least 8 characters long
- Do not tell anyone!

File management

File Types

.pptx – PowerPoint presentation
.wordx- Word document
.xls- Spreadsheet
.jpeg- Image
.png- Image
.mov- Movie
.exe- Executable file

File Names

Sensible names that reflect the contents of the file e.g. MathsHomework2Oct.docx

Using folders to save work

Having your computer files organised means that it is easier to find the files that you want to locate

Digital tattoo

- Everything you put on the internet leaves a trace
- Be kind to others- don't cyberbully
- Think before you post
- Think before you share- is it useful, helpful, kind, true?
- Avoid digital drama
- Report if you receive any messages that are unkind, hurtful or make you feel uncomfortable

Fake News

- Check where the news is from
- Fake news can be totally fake or made more extreme to gain attention
- Only share facts from well known news sites e.g. bbc.co.uk/news

Phishing emails

Emails pretending to be from real companies that are trying to get you to click on a link and share personal information.
Features:
Fake links, spelling mistakes, not using your real name, sense of urgency

PowerPoint

PowerPoint

Software used to create presentations.
Presentations are made up of different slides of information.
Presentations can include images, text, hyperlinks, diagrams, tables, graphs and charts, **animations**, **transitions** and **action buttons**

Target audience

Creating a presentation means you need to think about the target audience- who are you making it for and what appeals to them?

Younger children-	Bright colours Large text Simple words Lots of images
Teens-	Bright colours Easy to read font Some images with some supporting text
Adults	Neutral colours Easy to read font Images or diagrams less text

Action Buttons

Used to perform actions when you click on an object.
e.g. clicking a button to move to another slide
clicking an image or button to link to a website

Animations

Adding movement to objects on your slide.
e.g. fade out
fade in
blinds
bounce
grow/shrink
You can make them run automatically or on your mouse click

Transitions

This is the movement from one slide to another.
e.g. Page curl
Split
Reveal

These can be set to happen after a set time or on your mouse click.

How a computer works

Hardware and Software

Hardware- Parts of a computer you can physically touch
e.g. mouse, keyboard, monitor
Software- Programs that allow the computer to run
e.g. Operating system, applications (Microsoft Word)

Hardware

Motherboard: main circuit board in a computer. It connects all the important parts together
CPU : Central Processing Unit. Where a computer processes all instructions.
ROM: Read only memory. Contains all the instructions on how to boot up the computer
RAM: Random access memory. Used to store data and programs that are currently in use.
Fan: Used the keep the components of the computer cool.

Hard Drives
Magnetic- uses magnetic discs that spin around as a red/write head moves backwards and forwards over it
Solid state- stores all the data on microchips

Expansion Cards
Graphics card
Sound card

Input and Output Devices

Input Devices	Output Devices
Enter data into a computer	Output data to the user
Mouse Keyboard Webcam Microphone	Monitor Printer Speakers Headphones

Software

Operating system- performs basic operations like staring up your computer and assigning time for each task to the CPU

Utilities Software- Make sure that your computer is working effectively e.g. backup software, encryption software, screensaver, file manager and antivirus

Application software- helps the user perform a task e.g. Microsoft Word, Email software, Internet Browser, Presentation software

Algorithms

Algorithm

A set of instructions designed to perform a specific task

Instructions need to be:

Specific	In Order
Clear	Nothing Missing

Search and sort algorithms

Binary search

Searching through an ordered list of items by splitting the list in two. Continue to do this until the item is found

e.g. searching for Cat

Bat, Cat, Dog, Owl, Pig, Rat

Split in two- as it is an even amount of items compare Cat to the last item on the right

Bat, Cat, Dog ~~Owl, Pig, Rat~~

Dog is not cat, get rid of the right list, split the left list and search again

Bat Cat Dog **Cat is cat- item found**

Merge sort

Sorting an unorganised list by taking all the items and comparing them in pairs to begin organising the list

e.g.

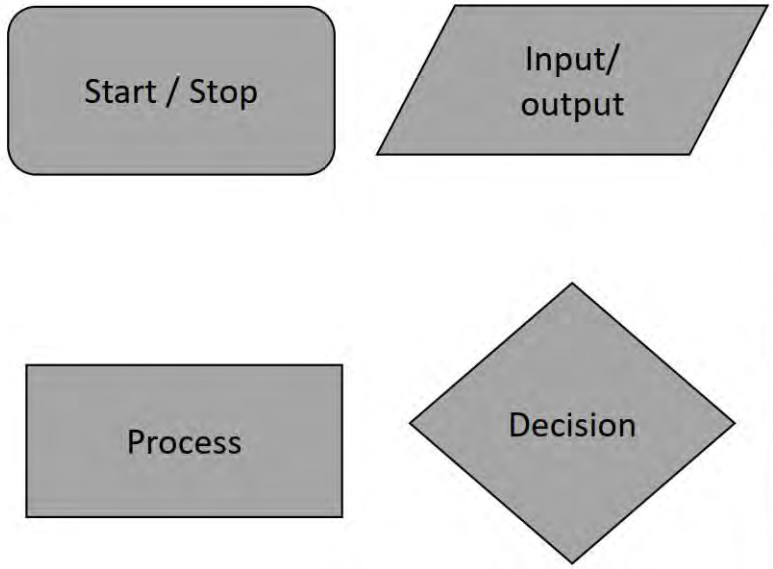
Dog Owl Bat Cat Rat Pig

Dog, Owl Bat, Cat Pig, Rat

Bat, Cat, Dog, Owl Pig, Rat

Bat, Cat, Dog, Owl, Pig, Rat

Flowchart Symbols



Scratch programming

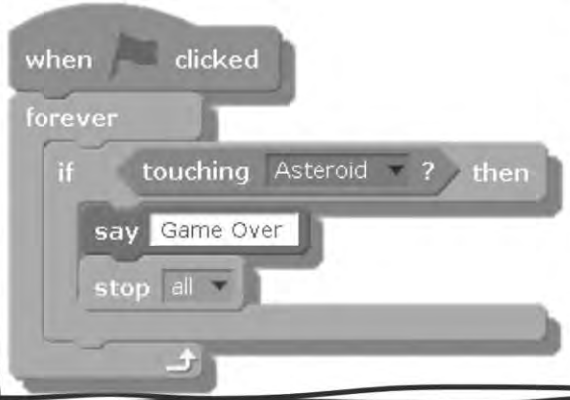
Sprite Animated characters or objects that are separate from the background in a game.

Movement Blocks

Help you make sprites move around the screen.

- You can change the direction a sprite moves
- You can choose how far it moves
- With looping you can make it follow you mouse pointer or another sprite
- You can make it move with keyboard keys
- You can make it move with mouse movements

Looping and selection



Helps the program make decisions based on actions of the sprites, or user inputs

Variables

Storing information in the code so that it can be used later. Can be used for scoring, messages to the user or for storing information input by the user.

e.g. Set 'score' and change 'score'

Digital Media

Marketing

Creating documents to promote something. These documents can be mase for different reasons including:

- encourage people to use or visit something
- Provide information about something

Design

Colour scheme – making sure you use a small range of colours consistently throughout all your documents. This means that people can identify your product or service based on these colours.

Consistent design- Making sure that all documents made have the same design features such as colour scheme, fonts, font sizes, logos.

Key information- as well as the logo it is important to make sure that all key information is on documents. This can simply be adding a website address or you could add an address, opening times, social media handles etc.

Brand

A good brand helps to identify an organisation. What are their key colours, fonts, images/logo?

Target Audience

Who you are designing a document for. This can be based on age, location, gender, interests or hobbies.

Credible sources

When researching information, how do we know it is accurate, relevant and up-to-date?
How true is the information you are reading?
Look at:
Author
Date posted
Site address
What other source says the same?

Copyright

Make sure that any media you use is copyright free. Copyright protects artistic content from being copied by others without consent.

Creative Commons licenses allow people to share media with certain rules applied.

MUSIC

Knowledge Organiser

Sonority City

Exploring Instruments of the Orchestra

A. Key Words, Terms and Facts about the Orchestra

ORCHESTRA – A large **ENSEMBLE** (group of musicians) of performers on various musical instruments who play music together. No set numbers of performers although a **SYMPHONY ORCHESTRA** (a large orchestra) can have between **80-100+** performers. Famous orchestras include: **THE LONDON SYMPHONY ORCHESTRA, THE BBC SYMPHONY ORCHESTRA** and the **HALLÉ ORCHESTRA** (Manchester).

CONDUCTOR – Leads the orchestra with a **BATON** (white 'stick') and hand signals. Stands at the front so they can be seen my all performers. Sets the **TEMPO** and **BEATS TIME.** Brings different instruments 'in and out' when it is their turn to play. Keeps the performers together. Takes charge in rehearsals. In ultimate control of the performance of the music, adjusting **DYNAMICS, TEMPO,** and mood.

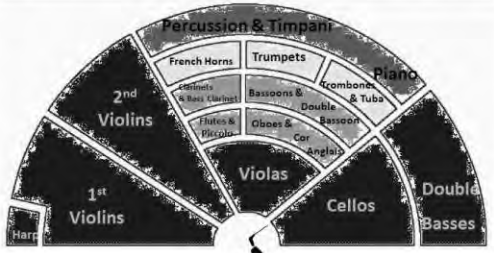
FAMILIES/SECTIONS – Instruments of the orchestra can be divided into 4 families or sections: **STRINGS, WOODWIND, BRASS** and **PERCUSSION**.

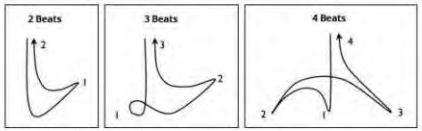
TUNING UP – Before the orchestra rehearses or plays, all instruments need to be **IN TUNE** with each other. The **OBOE** always sounds the note '**A**' which all other instruments **TUNE** to.

SONORITY (also called **TIMBRE**) – Describes the **UNIQUE SOUND OR TONE QUALITY** of different instruments and the way we can identify orchestral instruments as being distinct from each other –Sonority can be described by many different words including – ***velvety, screechy, throaty, rattling, mellow, chirpy, brassy, sharp, heavy, buzzing, crisp, metallic, wooden etc.***

PITCH - The **HIGHNESS** or **LOWNESS** of a sound, a musical instrument or musical note (***high/low, getting higher/lower, step/leap***).

B. The Layout of the Orchestra and Famous Conductors





C. Strings Section/Family

Largest section of the orchestra who sit at the front, directly in front of the conductor. Usually played with a **BOW (ARCO)**, (not the **HARP**) but can be **PLUCKED (PIZZICATO)**. **VIOLINS** split into two groups: **1st VIOLINS** (often have the main **MELODY** of the piece of music) and **2nd VIOLINS**.

Violin Viola

Cello Double Bass Harp

D. Woodwind Section/Family

Originally (and some still are) made from wood (some now metal and plastic). All are **BLOWN**.

FLUTES: Flute and Piccolo – air blown over hole.

SINGLE REED (small piece of bamboo in the mouthpiece): Clarinet, Bass Clarinet & Saxophone (not traditionally in the orchestra, but some modern composers have used it)

DOUBLE REED (two reeds in the mouthpiece): Oboe, Cor Anglais, Bassoon, Double Bassoon.

E. Brass Section/Family

Four types of brass instruments in an orchestra, all made from metal – usually brass and **BLOWN** by the player 'buzzing their lips' into a **MOUTHPIECE** *(shown right)*.

The Trumpet, French Horn and Tuba all have three **VALVES** which, along with altering the players mouth positions, adjust the length of the tubing allowing for different notes to be played. The Trombone has a **SLIDE** which adjusts the length of the tubing. Brass instruments (along with Percussion) have often been used to play **FANFARES**: a short, lively, loud piece of music usually warlike or victorious in character used to mark the arrival of someone important, give a signal *e.g., in battles*, of the opening of something *e.g., a sporting event or ceremony*.

Fanfares often use notes of the **HARMONIC SERIES** – a limited range of notes played by **BUGLES** (smaller trumpets with no valves) and valveless trumpets.

F. Percussion Section/Family

Always located at the very back of the orchestra (due to their very loud sounds!). Large number of instruments which produce their sound then ***hit, struck, scraped, or shaken.***

TUNED PERCUSSION (able to play different pitches/notes)

Piano Xylophone Glockenspiel Timpani Celesta Tubular Bells

UNTUNED PERCUSSION (only able to produce 'sounds').

Bass Drum Snare Drum Cymbals Woodblock Guiro

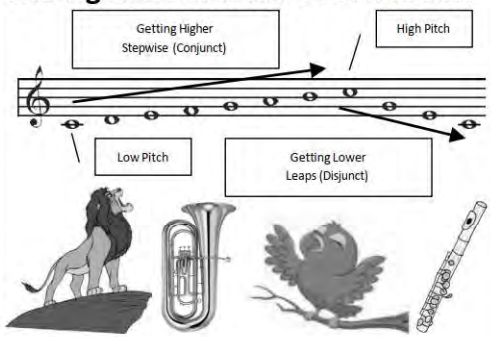
Triangle Gong Tambourine Cabasa Maracas

Building Bricks

Exploring the Elements of Music

A. Pitch

The **highness** or **lowness** of a sound.



B. Tempo

The **speed** of a sound or piece of music.

FAST: *Allegro, Vivace, Presto*
SLOW: *Andante, Adagio, Lento*
GETTING FASTER – *Accelerando (accel.)*
GETTING SLOWER – *Ritardando (rit.) or Rallentando (rall.)*

C. Dynamics

The **volume** of a sound or piece of music.

VERY LOUD: *Fortissimo (ff)*
LOUD: *Forte (f)*
QUITE LOUD: *Mezzo Forte (mf)*
QUITE SOFT: *Mezzo Piano (mp)*
SOFT: *Piano (p)*
VERY SOFT: *Pianissimo (pp)*
GETTING LOUDER: *Crescendo (cresc.)*
GETTING SOFTER: *Diminuendo (dim.)*

D. Duration

The **length** of a sound.

SHORT → **LONG**

E. Texture

How much sound we hear.

THIN TEXTURE: *(sparse/solo)* – small amount of instruments or melodies.

THICK TEXTURE: *(dense/layered)* – lots of instruments or melodies.

F. Timbre or Sonority

Describes the **unique sound or tone quality** of different instruments voices or sounds.

Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.

G. Articulation

How individual notes or sounds are **played/techniques**.

LEGATO – playing notes in a long, smooth way shown by a **SLUR**.

STACCATO – playing notes in a short, detached, spiky way shown by a **DOT**.

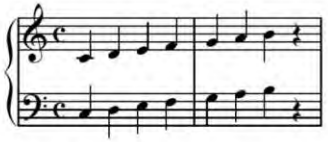
H. Silence

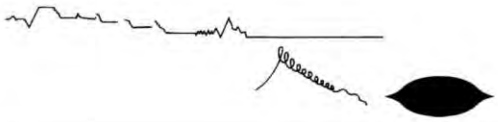
The opposite or absence of sound, **no sound**. In music these are **RESTS**.

I. Notation

How music is **written** down.

STAFF NOTATION – music written on a **STAVE** (5 lines and spaces)





GRAPHIC NOTATION/SCORE – music written down using shapes and symbols to represent sounds.

Fanfares – (with a focus on the element texture)

What is a Fanfare?

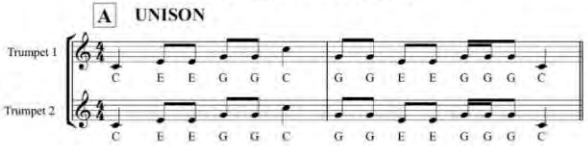
A piece of Music that is used to introduce someone important.

Fanfare Instrumentation

Brass

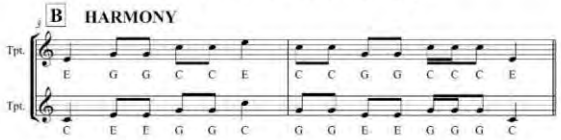
Percussion

Texture: Unison



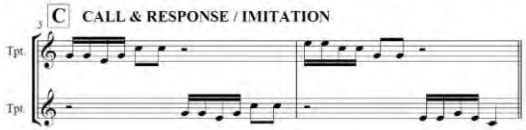
Everyone playing the same thing at the same time.

Texture: Harmony



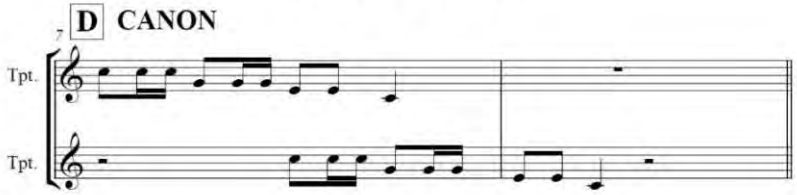
Two parts with the same rhythm but different pitches.

Texture: Call & Response



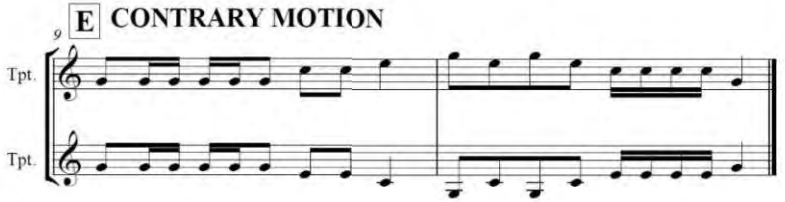
One instrument plays, then another responds with either the same or something similar

Texture: Canon



When two instruments play the same thing but start at different times.

Texture: Contrary Motion

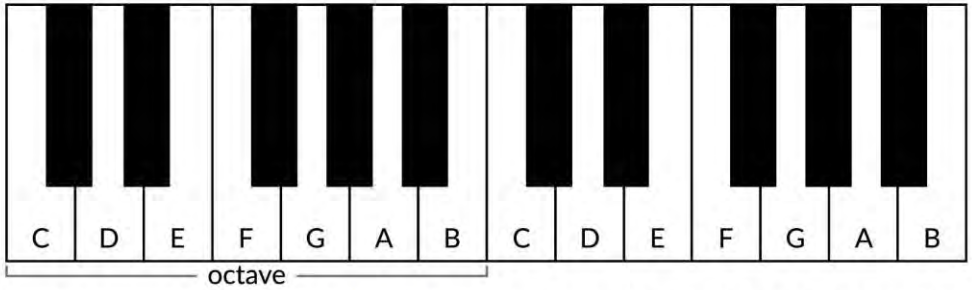


Both instruments play the same rhythm, but the melodies move in opposite directions.

Keyboard Skills

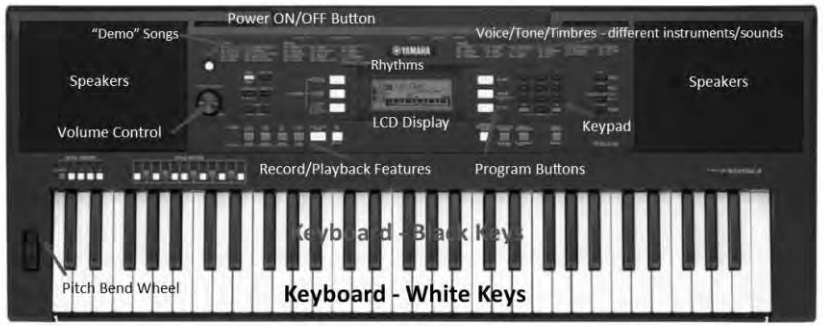
Exploring Treble Clef Reading and Notation

A. Layout of a Keyboard/Piano



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

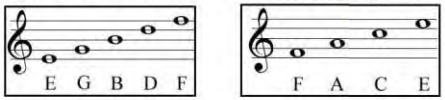
D. Keyboard Functions



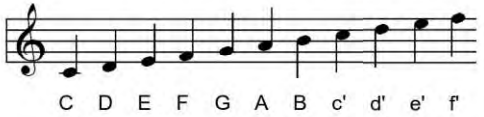
B. Treble Clef & Treble Clef Notation

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

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



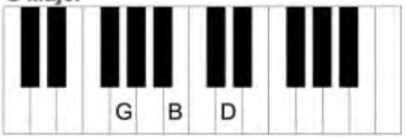
Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.



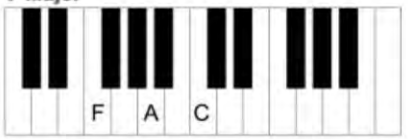
C. Keyboard Chords

C Major

G Major



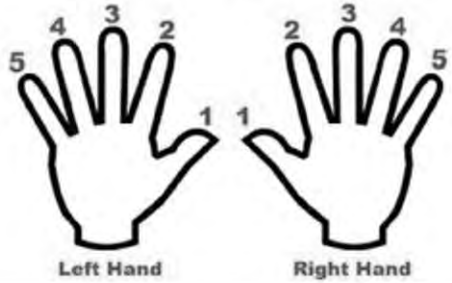
F Major



A Minor

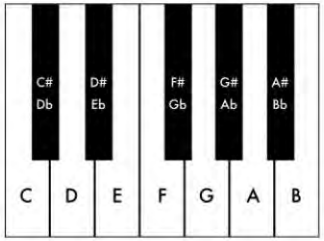
Play one – Miss one – play one – miss one – play one

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



F. Black Keys and Sharps and Flats

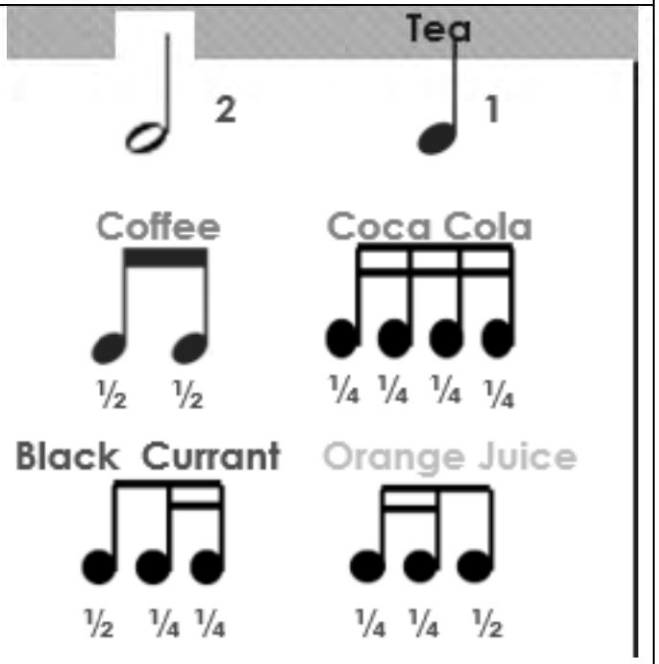
There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone *(e.g. C# is higher in pitch (to the right)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



Basic Theory – RHYTHM

Rhythm is a series of sounds or notes of different lengths that create a pattern.

Note Name	Symbol	Beats
Semibreve		4
Minim		2
Crotchet		1
Quaver		½
Semi Quaver		¼



Basic Theory – Treble Clef Notation

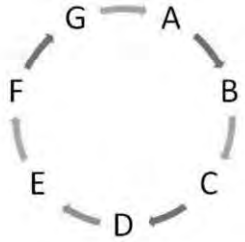
STAVE

Music notes are written on the STAVE. The higher up on the stave a note is the higher pitched its sound.

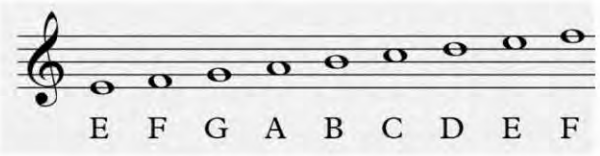
TREBLE CLEF

The treble clef represents high notes or sounds

The Musical Alphabet

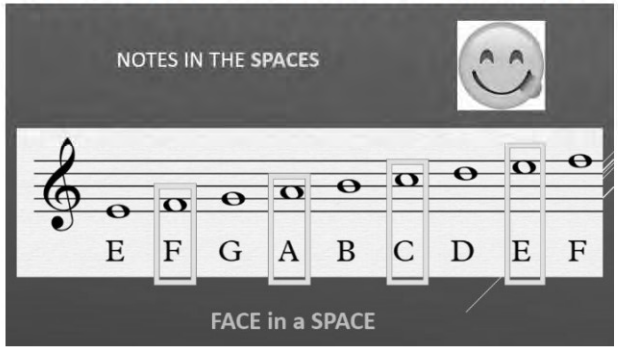


Notes in the STAVE

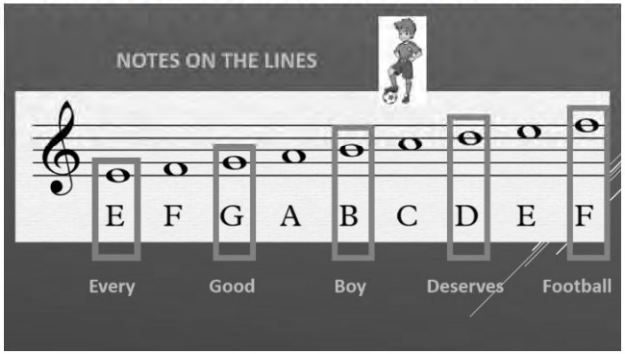


Staring on E, the notes go in order of the musical alphabet step by step up the lines and spaces of the stave.

NOTES IN THE SPACES OF THE STAVE

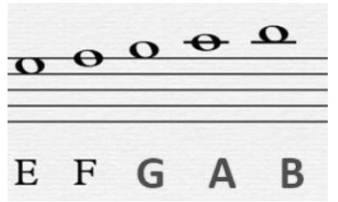


NOTES ON THE LINES OF THE STAVE



Notes above or below the stave use

LEDGER LINES



RS

Knowledge Organiser

The Bishops' Blue Coat C of E High School

Religious Education

Knowledge organiser

Tips for writing in RE

✓ You must always explain your points in RE. Do this by using the word 'because' in a sentence.

✓ Please always write in a full sentence. E.g., if the question was 'Why might someone believe in God?' Your response should be 'One reason people might believe in God is…'

✓ Make sure you link your answer back to the question. By using the question in your sentences, it will help you to do this.

✓ Check your SPAG! Remember some words always need capital letters (Buddhism/Jesus etc.)

✓ When you are doing an extended writing evaluating a question, you must come to a final judgement in a conclusion. You must also give both sides of the argument and religious teachings. This is how you get the best marks.

✓ When giving a religious teaching make sure you explain it! E.g., 'Christians believe you should help others as Jesus taught you *should love your neighbour as you love yourself*. This means they will want to help a person who is in need like someone who is homeless'.

1. Understand the question: Carefully read the question before you start writing. Identify the key elements and requirements to ensure that you address them effectively in your response.

2. Plan your response: Take a few minutes to plan your essay or extended writing piece.

3. Provide evidence: When making claims or arguments, support them with evidence from religious texts, historical events, or real-life examples.

4. Analyse and evaluate. Consider different people's perspectives. E.g. A Christian and an atheist.

5. Use appropriate terminology: Familiarise yourself with key religious vocabulary and terminology relevant to the topic. Incorporate these terms accurately and appropriately to demonstrate your understanding and enhance the quality of your writing.

6. Structure your writing: Organise your writing into clear paragraphs. Use supporting evidence and examples to develop your points and ensure a logical flow between paragraphs.

7. Develop coherent arguments: Present your ideas and arguments in a logical and coherent manner. Connect your points effectively and use linking words and phrases to create a smooth transition between different aspects of your writing.

8. Proofread and edit: If in class, after completing your first draft, take the time to proofread and edit your work. Check for spelling, grammar, and punctuation errors. Consider seeking feedback from a peer to further improve your writing.

9. Practice time management: Extended writing tasks often have time limits, so practice managing your time effectively.

10. Make sure you do some revision for assessments. If you do not prepare, you might struggle.

Remember, these tips are not exhaustive, but they can provide a solid foundation for successful extended writing in Religious Education.

Year 7 RE Knowledge Organiser- Introduction to RE and the Indian/Semitic traditions

Key Words			
Agnosticism	Not being sure whether God exists	**Numinous**	The feeling of the presence of something greater than you.
Atheism	Believing that God does not exist	**Omni-benevolent**	The belief that God is all-good
Semitic	The word `Semitic` is the languages, people, cultures and religions of people who are from an area in the world known as the **Middle East**.	**Omnipotent**	The belief that God is all-powerful
Free will	The idea that humans are free to make their own choices	**Omniscient**	The belief that God knows everything that has happened and everything that is going to happen.
miracle	Something which seems to break a law of science and makes you think only God could have done it	**Prayer**	An attempt to contact God, usually through words
Moral evil	Actions done by humans which cause suffering	**Polytheistic**	Belief in many Gods
Natural evil	Things which cause suffering but have nothing to do with humans	**Monotheistic**	Belief in one God
Secular	Non-religious/people who are not really influenced by religion	**Humanism**	People who call themselves Humanists are generally atheists and believe in science more than religion as a way of explaining the world.

Key Ideas

Semitic Religions

Judaism, Christianity and Islam are, of course, all distinct and separate religions. For example, they all have have their own holy books, with Jews following the Torah, Christians using the Bible, and Muslims following the Qur`an. These religions all also have their own special beliefs and religious practices, their own rules and codes for behaviour, and their own histories and ways of organising themselves. However, we group them together as the `Semitic religions` because they also have a lot in common with each other.

Other similarities between the Semitic religions are:

- a belief that God created the world and everything in it
- a belief that life should be lived in line with God`s rules
- a belief that God should be worshipped and prayed to
- a belief in life after death, often in some form of heaven or hell

Indian Religions

The country of India has given rise to some of the main religions that can now be found all over the world. The oldest of these religions, and still the main religion that can be found across **India**, is **Hinduism**. Hinduism is over 4000 years old which makes it one of the most ancient religions on Earth. It is a very varied religion and not all Hindus believe and practice the same things. However, it is true to say that many Hindus are **polytheistic** which means that they believe in and worship a number of gods and goddesses. The religion of **Buddhism** grew out of Hinduism about 2, 500 years ago. Buddhists follow the teachings and example of a man they call the Buddha (which means `the enlightened one`). The Buddha encouraged people to focus on developing their own minds as a way of getting enlightened rather than worshipping and relying upon gods and goddesses. **Buddhists** therefore place more emphasis on meditation to train their minds. **Sikhism** is by far the youngest of the main Indian

- a belief that God will judge people based on how they lived their lives
- a belief that some places on earth, such as Jerusalem in Israel, are particularly special or holy

religions because it is only about 500 years old. Sikhs follow the teachings of 10 human Gurus (religious teachers) who taught a **monotheistic** belief in one God and who emphasised a lifestyle of honesty and service to others (sewa).

Similarities between the Semitic religions are:

- All of these religions share a similar belief about what happens when a person dies.
- All three religions believe that when you die you are reborn or reincarnated as someone or something else.
- The thing that decides your reincarnation in your next life is your karma – the actions you performed during your life.

Belief in God

Belief in God
Upbringing
Answered prayer
Design argument/ creation of the world
Miracles

Lack of belief in God
Unanswered prayer
Upbringing
Science having more proof (The Big Bang/Evolution)
Evil and suffering

Miracles

Some people believe that miracles are evidence of God's existence because;

- the belief that events witnessed and described as miracles – i.e. as events not explicable by natural or scientific laws – indicate the intervention of the supernatural.
- The Bible talks about the miracles of Jesus (e.g. feeding the 5000)
- Many religions have miracles as part of their belief

Some people believe that miracles are not real because (David Hulme):

- There is not enough evidence
- Witnesses are uneducated
- Witnesses are unreliable
- Not all religions can be correct

Upbringing

If you live in a family who do/do not follow a particular religion, this may influence someone's decision to follow a religion themselves. It could be part of the family's tradition to participate in religious festivals and/or observance.

Aswered and unanswered prayer

Some people believe that they have prayed to God and He has answered their prayers either by directly speaking to them or by giving them a sign some other way. Other people pray to God and yet their prayers are left unanswered.

Science vs religion

The world was created by a big expolsion. There is no need for the idea of a God as creator of the world.
The earth is just the right distance from the sun to enable life to develop. Any closer (like Venus) and it would be too hot- everything would burn. Any further away (like Mars) and it would be too cold for life to develop. Like Goldilocks, we are 'just the right' distance away.

What is the Design Argument?

Some Christians believe that it is possible to prove the existence of God by observing the nature of the world we live in. The world shows signs of ORDER and things working to achieve a PURPOSE. This, they believe, is evidence of DESIGN. In other words, God is the DESIGNER of an ordered and purposeful world. William Paley supported this argument by way of ANALOGY. He drew a similarity between the world and an old-fashioned pocket watch. He argued that if you went for a walk and stumbled across a pocket watch in a field you would know that a skilful watchmaker must have designed it. Similarly, he believed that the world shows evidence of order and purpose which must have a designer. This designer must be God.

Problem: If the world is designed by an omnipotent God, then why is there so much evil and suffering in the world?

Why does evil and suffering exist

The existence of evil and suffering is a significant problem for religious people who have tried to understand and explain their presence. If someone is not religious, then evil is just part of our world and has to be accepted - there is nothing we can do about it. However, for religious people there are significant questions:

- Religions such as Christianity claim that God made everything. Does that mean He also made evil?
- Religion teaches that God is good, so why does God allow evil to exist?
- If God is powerful enough to create the world, why does He not stop evil and suffering? Is He not powerful enough?
- If God is all powerful, does that mean He does not love us enough to stop evil and suffering?
- If evil exists, does God really exist?

What are religious experiences

Religious experience, specific experience such as wonder at the infinity of the cosmos, the sense of awe and mystery in the presence of the sacred or holy, feeling of dependence on a divine power or an unseen order, the sense of guilt and anxiety accompanying belief in a divine judgment, or the feeling of peace that follows faith in divine forgiveness. Some thinkers also point to a religious aspect to the purpose of life and the destiny of the individual.

Scientific truth vs religious truth

Scientific truths focus on "what" and "how" questions. It relies on observation and testing of hypotheses. However, religious truths tend to focus on "why" questions. It relies on belief and information from Holy Books to support it. However, religious truths tend to focus on "why" questions. It relies on belief and information from Holy Books to support it.

Hinduism

Hinduism is over 4,000 years old, making it one of the world's oldest religions. It is made up of a variety of different religious beliefs and practices.

Hindu Gods/Goddesses

Central to Hinduism is the belief in a supreme God **Brahman**. Brahman is present everywhere and there is a part of Brahman in everyone. Brahman takes many forms. Especially three forms called the **Trimurti**.

- **Brahma** is the **creator** of the world and all creatures. He is usually shown with four heads.
- **Vishnu** is the **preserver** of the world. His role is to return to the earth in troubled times and restore the balance of good and evil. He has blue skin and four arms.
- **Shiva** is the **destroyer** of the universe. Shiva destroys the universe in order to re-create it. Shiva has blue skin, a third eye and carries a trident.

Hindus believe that life is a cycle of birth, death, and rebirth. They also believe that the next life depends on how the previous life was lived.

Hinduism is a very varied religion and not all Hindus believe and practice the same things. However, it is true to say that many Hindus are polytheistic which means that they believe in and worship a number of gods and goddesses. Hindus believe that these gods and goddesses perform important functions in their lives and in the world and so they spend time trying to please and influence them through acts of worship (called puja).

You can learn a lot about what Hindus believe about their gods and goddesses by analysing and interpreting Hindu iconography. Iconography is a word that means `symbolic religious art`. For thousands of years, Hindus have created art work about their gods and goddesses that reveals some of their key beliefs about them.

Key Terms

1. Atman	1. the word Hindus use for the soul
2. Samsara	2. the word Hindus use for the cycle of life and death
3. Karma	3. the word for actions and their consequences
4. Brahman	4. another word for God – you join with it when you achieve moksha
5. Moksha	5. `escape` or `freedom` from samsara
6. reincarnation	6. the idea that when you die you come back as something else

Sikhism

Sikhism is a monotheistic religion (belief in one God) that originated in India in the Punjab region. It is one of the youngest of the major religions having began around the end of the 15th Century and is the fifth largest organised religion in the world.

Guru

The term Guru comes from the Sanskrit guru, meaning teaching, guide or mentor. The traditions and philosophy of Sikhism were established by ten Gurus from 1469 to 1708. Each Guru added to and reinforced the message taught by the previous, resulting in the creation of the Sikh religion. Guru Nanak was the first Guru and appointed a disciple as a successor. Guru Gobind Singh was the final Guru in human form. Before his death, he decreed that the Guru Granth Sahib would be the final and perpetual Guru of the Sikhs.

Guru Nanak Founded - 1539	Guru Angad 1539-1552	Guru Amar Das 1552-1574	Guru Ram Das 1574-1581	Guru Arjan 1581-1606	Guru Har Gobind 1606-1644	Guru Har Rai 1644-1661	Guru Har Krishan 1661-1664	Guru Tegh Bahadur 1665-1675	Guru Gobind Singh 1675-1708	Guru Granth Sahib 1708 - onwards

The Five Ks

The Five Ks are five items that Guru Gobind Singh commanded Khalsa Sikhs to wear at all times. These aren't just symbols but are articles of faith.

Kesh	Uncut long hair and beard in the case of men that shows a sign of spiritual devotion as well as a respect for the perfection of G-d's creation.
Kangha	A small wooden comb used twice a day that is worn in the hair at all times and covered by a turban.
Kara	An iron bracelet that is circular to symbolise that G-d is never ending.
Kachera	A shalwar-undergarment with a tie knot worn by baptised Sikhs. They must not come below the knee and were originally made as part of a Sikh soldier's uniform.
Kirpan	A dagger or sword of any size and shape which symbolises a Sikh's duty to come to the defence of others in peril. It should be worn at all times and is often covered in a sheath. The single cutting edge may be sharp or blunt.

Key Terms

Khanda - This is the symbol of the Sikh faith.

Guru Granth Sahib - The Guru Granth Sahib is the holy scripture for Sikhs and is regarded as the living Guru.

Gurdwara - A place of assembly and worship for Sikhs. People from all faiths are welcome.

Khalsa - To be pure, clear and free from. It formulates an initiation ceremony and rules of conduct for Khalsa warriors. Upon initiation, male Khalsa Sikhs are given the title Singh and females Kaur.

Buddhism

Buddhism is a spiritual tradition that focuses on personal spiritual development and the attainment of a deep insight into the true nature of life.

Buddhists seek to reach a state of nirvana, following the path of the Buddha, Siddhartha Gautama, who went on a quest for Enlightenment around the sixth century BC. There is no belief in a personal God. Buddhists believe that nothing is fixed or permanent and that change is always possible. The path to Enlightenment is through the practice and development of morality, meditation and wisdom.

Buddhists believe that life is both endless and subject to impermanence, suffering and uncertainty. Existence is endless because individuals are reincarnated over and over again, experiencing suffering throughout many lives.

It is impermanent because no state, good or bad, lasts forever. Our mistaken belief that things can last is a chief cause of suffering.

Siddhartha Gautama (the Buddha) attained enlightenment but stayed on Earth to teach others.

The ideals at the heart of Buddhism are collectively known as the 'Three Jewels', or the 'Three Refuges'. These are the Buddha, the Dharma, and the Sangha. It is by making these the central principles of your life that you become a Buddhist.

The suggested his followers should live by the **Dhamma**, which is his teachings about this truth. Therefore the Sangha, the community of monks and nuns, was created to support each other in living according to the Dhamma.

The Three Jewels are:
- the **Buddha** himself (as a role model and inspiration)
- the **Dhamma** (the teachings of the Buddha)
- the **Sangha** (the community of monks and nuns)

Taking refuge means relying upon and looking to these things for guidance, support and protection. Buddhists see the Three Refuges as very valuable which is why they also refer to them as the **Three Jewels**.

Key Terms

1. **Impermanence-** Buddhists believe that life is impermanent. This means that life is always changing, nothing stays the same. Buddhists call this anicca.

One of the reasons why we suffer so much is that we often want things to stay the same. When they change, as they always do, it makes us suffer.

2. **The Middle Way-** Buddhists believe that when you live life in an extreme way, you are more likely to suffer. For example, having too much money or too little money can both bring problems. You need to try and find the `middle way` between extremes if you want to be happy.

3. **Karma and rebirth-** Buddhists believe that when you die, you will be reborn as something or someone else. It is your actions in this life, or your karma, that will shape your future rebirths. If you have lived a good life, showing kindness to others, you will be reborn in a positive way. However, if your actions have been unkind, you will bring about a rebirth where you will suffer a lot, perhaps as an animal or insect.

4. **No permanent soul-** Unlike other religions, Buddhists do not believe we have a permanent soul that survives when your body dies. Buddhists also believe that we do not have a permanent `self`: our identity is always changing, just like everything else in the universe is changing. We`re like an onion: you can keep peeling away layers, but you`ll find nothing in the middle! Buddhists call this anatta (`no self` or `no soul`).

5. **Training the mind-** Buddhists believe that most of our happiness depends on the state of our mind. The thoughts we have shape our experiences of the world. So Buddhists believe we need to spend time every day training our mind to be calm, content and peaceful.

6. **Samsara (the Wheel of Life)-** Buddhists believe that when you die, you will be reborn into one of 6 different places or realms. The cycle of life and death is called samsara.

Judaism

Judaism is the name of the religion, and its followers are known as Jews.

Judaism began around 4,000 years ago when the **Prophet Abraham** received a vision from G-d.

Jews believe that there is only one G-d, with whom they have a special agreement called a **covenant**.

The Star of David is the symbol of Judaism. David was a shepherd who became a king of ancient Israel. The Books of Samuel in the Jewish Bible tell how David killed the giant Goliath, with this symbol displayed on his shield. The Star of David is used in synagogues, Jewish tombstones and on the flag of the modern state of Israel.

Holy Texts

Jews believe that G-d dictated the Torah to Moses on Mount Sinai. They believe that the Torah shows how G-D wants Jews to live. It contains the first 5 books of the Bible. They believe that the Torah shows how G-d wants Jews to live. It contains 613 commandments and Jews refer to the ten best known of these as the ten 10 statements.

The synagogue

The synagogue is the Jewish place of worship, but is also used as a place to study, and often as a community centre as well.
Synagogue services can be led by a rabbi (a Jewish religious leader) or a member of the congregation.
Services are mainly in Hebrew (an ancient language still used by Jews today).

The Sabbath

Every week religious Jews observe the Sabbath, which begins at nightfall on Friday and lasts until nightfall on Saturday.

G-d commanded the Jewish People to observe the Sabbath and keep it holy as the fourth of the Ten Commandments. This is supposed to be a day of rest because G-d rested on the seventh day after creating the universe. Jews do no work during the Sabbath and will prepare meals the day before.

Food

Jews eat will not eat meat and dairy in the same meal, and nor will they eat pork or shellfish. As long as food abides by these diary requirements it is kosher and therefore Jews can eat it.

Holy Days

Passover is one of the most important religious festivals in the Jewish calendar. Jews celebrate the Feast of Passover to commemorate the children of Israel who were led out of slavery in Egypt by Moses. A special meal is eaten by the family.

Hanukkah is the Jewish festival of lights. It dates back to two centuries before the beginning of Christianity. This is when Jews light the Menorah to remember when they defeated the Maccabee army and their lamps stayed lit for eight days, even though there was only enough oil for one.

Tzedakah

The Hebrew word for charity is **tzedakah**, which actually means "justice" or "righteousness."

✝ Christianity ✝

Christianity is the most popular religion in the world with over 2 billion adherents. 42 million Britons see themselves as nominally Christian, and there are 6 million who are actively practising. Christians believe that Jesus was the Messiah promised in the Old Testament.

- Christians believe that Jesus Christ is the Son of God.
- Christians believe that God sent his Son to earth to save humanity from the consequences of its sins.
- One of the most important concepts in Christianity is that of Jesus giving his life on the Cross (the Crucifixion) and rising from the dead on the third day (the Resurrection).
- Christians believe that there is only one God, but that there are three elements to this one God: (this is known as the Trinity)
  - God the Father
  - God the Son
  - The Holy Spirit
- Christians worship in churches.
- Their spiritual leaders are called priests or ministers.
- The Christian holy book is the Bible, and consists of the Old and New Testaments.
- Christian holy days such as Easter and Christmas are important.

God
Christians believe that there is only one God, whom they call Father as Jesus Christ taught them.
Jesus
Christians recognise **Jesus** as the Son of God who was sent to save mankind from death and sin.
Jesus Christ taught that he was Son of God. His teachings can be summarised, briefly as the love of God and love of one's neighbour.
Jesus said that he had come to fulfil God's law rather than teach it.

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FACT Something that is provable; something that actually exists; reality or truth.

opinion A statement or idea that tells how a person feels about something.

BELIEF An idea or conviction that someone accepts as true or real, that might not have proof.

Faith A strong or unshakeable belief in the truth of, or trustworthiness of a person, idea of thing, without proof.

People of faith (you might have learned about other people of faith in your class.)

William Wilberforce- helped to abolish the slave trade.
Nelson Mandela- He believed that everyone should be treated the same. He spent 27 years in prison. He was the first black President of South Africa.

Martin Luther King Jr-He lived in America over 60 years ago. He led the fight for equal rights for black people in America. He didn't believe in using violence to change things. He was famous for his powerful speeches.
Mahatma Ghandi-He lived in India 100 years ago. He fought against the British rule of his country. He believed in peaceful protest.

☪ Islam ☪

The word Islam means 'submission to the will of God'.
Islam is the second largest religion in the world with over 1 billion followers. Muslims believe that Islam was **revealed** over 1400 years ago in Mecca, Arabia.

- Followers of Islam are called Muslims.
- Muslims **believe** that there is only One God.
- The Arabic word for God is Allah.
- According to Muslims, God sent a number of prophets to mankind to teach them **how to live** according to His law.
- Jesus, Moses and Abraham are respected as prophets of God.
- They believe that the final Prophet was Muhammad.
- Muslims believe that Islam has always existed, but for practical purposes, date their religion from the time of the migration of Muhammad.
- Muslims base their laws on their holy book the **Qur'an**
- Muslims believe that there are five basic **Pillars of Islam**.
-

Islamophobia

This is when Muslims are the victims of attacks just because of their religion.

Why do some people think Muslims have become targets of religious prejudice and discrimination?

Some people have blamed all Muslims for terrorist attacks carried out by extreme groups who say they follow the religion of Islam.
But, many people say those terrorist groups have extreme beliefs of hatred and violence that have little to do with what most Muslims believe.
They say it is important not to blame a big group of people for what a small number of individuals have done.
Islamophobia can result in Muslims being targeted, whether in person or online. They can be badly treated, insulted or even physically hurt.
Many people think Islamophobia is created when a person doesn't properly understand what Muslims do or believe, and that the best way to combat it is to have a better understanding of Muslims and Islam.

•Five Pillars of Islam
•The Five Pillars of Islam are an important part of Muslim life. They are five things that a Muslim must do so they can live a good and responsible life. They include:

- The declaration of faith (Shahada)
- Praying five times a day (Salat)
- Giving money to charity (Zakah)
- Fasting during the month of Ramadan (Sawm)
- A pilgrimage to Makkah at least once in a lifetime (Hajj)

Year 7 RE Knowledge Organiser - Where in the world is Christianity?

Who was Jesus?

Jesus was born in **Bethlehem** to Mary and Joseph.
He was a Jew and had followers who were his disciples.
He was baptised by his cousin, John.
Jesus used **parables**- stories from life to tell people about God.
Jesus often broke the law to serve a greater good. He performed **miracles** to help people e.g. Healing a paralysed man/feeling the 5000.

Jesus had enemies in Jerusalem due to the power he seemed to have with people.
He was betrayed by Judas for 30 pieces of silver.
Jesus was **crucified** on a cross but was **resurrected** 3 days later.

Why is Jesus still remembered today?

The **Apostles' Creed** is a summary of what the Church teaches.
It teaches that Jesus is the **Son of God**.
Jesus is still influential in the lives of Christians today.
Jesus proved that we could have **eternal life** in Heaven with God.

Jesus left teachings on how to behave so that we could get into **Heaven**.

Jesus **sacrificed** himself to allow humans to have a relationship with God – so Christians today remember Jesus as a mark of **respect** for this sacrifice and to give thanks.

The Great Commission

After Jesus was resurrected, he met with his followers and gave them a very important **instruction**.
"Go and make **disciples of all nations**, baptising them in the name of the Father and of the Son and of the Holy Spirit, and teaching them to obey everything that I have commanded you".
After revealing the Great Commission, Jesus went up to (**ascended** to) Heaven.

Where can Christianity be found?

Christianity started in Jerusalem.
After his death, Jesus' **disciples spread Christianity** as far as they could.
St Paul was responsible for the main spread of Christianity around Europe.
Christianity is the **biggest religion** in the world and so believers can be found all over the globe!

How did Christianity reach the North of Britain?

St Aiden – born 590AD
Known for humility and kindness – he lived in Ireland but joined the **monastery in Iona**.
King Oswald of Northumbria requested a missionary from Iona to spread Christianity – Aiden was chosen.
He established a **monastery** on the Holy Island of **Lindisfarne** and taught the local people.
Many **converted** to Christianity.
Aiden trained and mentored other influential figures in spreading Christianity in the North.

What does Christianity look like around the world?

There are different 'types' of Christians that are known as **denominations**.
Most Christians have similar core beliefs but differ in how to practice the faith.
Before the 16th Century, **Catholicism** was the main form of Christianity in Western Europe.
Early 1500s, many people became unhappy with the way the Catholic church was run.
The most famous of these was a German monk called **Martin Luther**.
He protested against the church and so his followers became known as **'Protestants'.**

How safe is it to be a Christian around the world?

Persecution – Unfair or cruel treatment over a long period of time because of race, religion, or political beliefs.
Religious persecution is being treated unfairly or cruelly because of your religion.
Tertullian, a 2nd Century Christian writer said:
'The blood of martyrs is the seed of the church'
Matthew 5:10-12
Jesus said: Blessed are those who are persecuted because of righteousness, for theirs is the kingdom of heaven. Blessed are you when people insult you, persecute you and falsely say all kinds of evil against you because of me.

Year 7 RE Knowledge Organiser – Why do people believe that Jesus rose from the dead?

Jesus and Holy Week

Holy Week is the final week of Jesus' life on Earth, including his death and resurrection. Christians remember these events at Easter.

✞ **Palm Sunday**: The week begins with Jesus' triumphant entry into Jerusalem, where crowds lay palm branches at His feet, proclaiming Him as the King.

✞ **Maundy Thursday**: Jesus celebrates the Last Supper with His disciples. This is remembered today by Christians when they celebrate **Holy Communion**. Jesus also washes the disciples' feet, symbolising *servant leadership*. Jesus goes to the **Garden of Gethsemane** to pray and is **betrayed by Judas**

✞ **Good Friday**: Jesus is arrested, tried, and sentenced to death by crucifixion. Christians believe this is the ultimate sacrifice for humanity's sins.

✞ **Holy Saturday**: Jesus' body lies in the tomb, and His followers grieve.

✞ **Easter Sunday**: The resurrection of Jesus is celebrated. Christians believe He rose from the dead, conquering sin and death.

Beliefs about Jesus

Christians believe Jesus is both fully human and fully God, the Son of God, part of the Holy Trinity (Father, Son, and Holy Spirit).

✞ **Incarnation**: The belief that God became human in the person of Jesus Christ to experience life, suffering, and death for the salvation of humanity.

✞ **Messiah**: Jesus is believed to be the promised Messiah (the anointed one), fulfilling Old Testament prophecies. He came to establish God's Kingdom and offer salvation.

✞ **Saviour**: Christians believe Jesus' life, death, and resurrection are essential for humanity to come back to God (**atonement**). Through Jesus' sacrifice, sins are forgiven for those who believe in Him.

✞ **Teacher and Healer**: Jesus performed miracles and taught about love, forgiveness, repentance, and the coming Kingdom of God. His parables teach Christians how to live life as God wants.

The Resurrection

✞ Christians believe that Jesus rose from the dead on the third day after His crucifixion, defeating death and offering eternal life to believers.

✞ The resurrection symbolises victory over sin and death, and it shows that Jesus came to teach, set an example and that he has the power to save people. The resurrection confirms Jesus as the Son of God and is a promise of eternal life for those who follow Him. It also shows God's power and the truth of Jesus' teachings.

✞ The resurrection is recorded in all four **Gospels** (Matthew, Mark, Luke, and John), each with slightly different details but the core belief in Jesus' rising from the dead.

✞ **The Ascension**: After appearing to His disciples for 40 days, Jesus ascended to Heaven, promising to send the Holy Spirit to guide believers. (Remember: This is when Jesus gave his **Great Commission**.)

Evidence For the Resurrection

✞ **Witness Testimonies**: The Gospels record the testimony of witnesses who claimed to have seen Jesus alive after His death, including Mary Magdalene, the apostles, and over 500 others (1 Corinthians 15:6).

✞ **Empty Tomb**: The Gospels agree that Jesus' tomb was found empty on Easter Sunday.

✞ **Impact on the Disciples**: The disciples, who were fearful initially, became bold proclaimers of Jesus' resurrection, even facing persecution and death. This huge change suggests they truly believed in the resurrection.

Evidence Against the Resurrection

✞ **The Swoon Theory**: Some suggest that Jesus didn't actually die on the cross but only appeared to be dead, later recovering in the tomb. **BUT**...What about the seriousness of Jesus' wounds?

✞ **Theft Theory:** Some claim that Jesus' body was stolen from the tomb. **BUT**...What about the Roman guard and the sealed tomb? What about the disciples' who were willing to die for their belief in the resurrection?

✞ **Hallucination Theory**: Some say that the appearances of Jesus after His death were hallucinations or visions. **BUT**...What about the fact that all the Gospels describe many different people and many different sightings? Mass hallucination?

✞ **Legend Development**: Some argue that the resurrection story was invented and developed over time. **BUT**...What about the fact that the resurrection accounts were written quite soon after Jesus' death and there are lots of similarities between the different sources.

Year 7 RE Knowledge Organiser - Where do people go to find affirmation of faith?

What is pilgrimage?

A pilgrimage is a journey to a holy place, which can lead to a personal transformation, after which the pilgrim returns to their daily life.

A pilgrim is a traveller who is on a journey to a holy place. Typically, this is a physical journey (often on foot) to some place of special significance a person of a particular religious belief system.

Why do people go on pilgrimage?

- To feel closer to God
- To connect with their faith
- To understand more about their faith
- To show devotion/dedication
- To be part of a larger community of believers

Where do non-Christians go on pilgrimage?

Varanasi – Hindus believe it to be the home of Lord Shiva, and it is considered a sacred place where Hindus believe they can attain salvation if they die there.

Bodh Gaya – Buddhists find this place exceptionally significant because it's where Buddha attained enlightenment. This event marks the beginning of Buddhism.

Mecca – This is the holiest city in Islam because it's the birthplace of the Prophet Muhammad and the site of the Kaaba, the most sacred spot in Islam.

The Golden Temple – Sikhs find this special because it is the holiest and most revered gurdwara (Sikh temple) in the world. It is a symbol of Sikhism, known for its gilded architecture, the free community kitchen (Langar), and the sacred Amrit Sarovar (lake).

Where might Christians go on pilgrimage?

Lourdes – This place is particularly important to Catholics due to a series of visions of the Virgin Mary to a young girl, Bernadette Soubirous. Pilgrims visit Lourdes seeking healing, both spiritual and physical, and to connect with their faith. Miracles have been confirmed at Lourdes.

Jerusalem – The location of Jesus's death, burial, and resurrection, important events central to the Christian faith. The city is also where the early church was born, with the events of Pentecost taking place there.

Rome – Holds a significant place in Christianity, particularly for Catholics, due to its role as the historical centre of the Catholic Church and the final resting place of Saint Peter, the first Pope. Rome was the centre of Christianity and allowed the faith to spread around Europe.

How has conflict moulded pilgrimage?

Taizé - The Taizé community is an ecumenical monastic order with a strong devotion to peace and justice through prayer and meditation.
It was founded in 1940 by Roger Louis Schutz-Marsauche (known as 'Brother Roger'). The 90-year-old monk died in August 2005 after being stabbed during a prayer service.
Prayer and silence are at the heart of the Taizé experience. Young people from every corner of the globe are encouraged to live out the Christian gospel in a spirit of joy, simplicity and reconciliation.

Jerusalem - Israel and the Palestinians both claim Jerusalem as their capital.
Israel, which already controlled West Jerusalem, occupied East Jerusalem in the 1967 war and later declared the entire city its permanent capital. It says Jerusalem cannot be divided.

The Palestinians claim East Jerusalem as the capital of a future Palestinian state.
Most of the population of East Jerusalem is Palestinian, only a small minority of whom have chosen to become Israeli citizens.
Holy sites in Jerusalem are at the centre of the Palestinian-Israeli conflict. The most sacred site - known to Muslims as Al Aqsa Mosque compound and to Jews as Temple Mount - lies in East Jerusalem.
The UN and most international opinion consider East Jerusalem to be Palestinian land occupied by Israel.

Year 7 RE Knowledge Organiser - What happens when faith and courage collide?

Key Terms

- Martyr - a person who is killed because of their religious or other beliefs.
- A courageous advocate is someone who supports, champions and speaks up for a cause that is important and meaningful to them.
- Courage is needed to persevere and stand up for something or someone you believe in, to make a difference.

When **faith** and **courage** collide, it often leads to transformative action in the face of fear, injustice, or adversity. Faith provides the inner conviction or belief in a higher purpose or moral truth, while courage is the strength to act on that belief despite risks or challenges. Together, they inspire people to stand firm, challenge situations, and drive meaningful change—even when the outcome is uncertain or dangerous.
This collision is seen in the lives of figures like Martin Luther King Jr., who combined deep faith with moral courage to lead nonviolent movements for justice. The result is often both personal sacrifice and societal progress.

What makes a person truly heroic?

- Brave and courageous
- Resilient – never gives up
- Selfless – puts others first
- Has a positive impact on the world
- Makes sacrifices – gives things up
- Fights for justice and equality
- Inspirational in words and actions
- Stands up for people who need help
-

St Lawrence

Born: 225 AD, Hispania
Died: 10 August 258 AD, Rome, Italy
Religion : Christian
Full name: Lawrence
Feast Day: 10 August
Cause of death: Roasted alive on a griddle
Buried: Basilica of Saint Lawrence outside the Walls, Rome, Italy
Patron Saint of : Rome, Rotterdam, Huesca, Saint Lawrence, Gozo, Birgu, Canada, Sri Lanka, Comedians, Librarians, Chefs

Known for: Saint Lawrence or Laurence was one of the seven deacons of the city of Rome, Italy, under Pope Sixtus II who were martyred in the persecution of the Christians that the Roman Emperor Valerian ordered in 258. In 258 AD, during the persecution of Christians under Emperor Valerian, Pope Sixtus II and other clergy were executed. As one of the seven deacons of Rome, Lawrence was ordered to hand over the Church's treasures. Instead, he distributed the wealth to the poor and presented them to the Roman authorities as the true treasures of the Church.
Angered by his defiance, the authorities sentenced Lawrence to a gruesome death.
St. Lawrence is remembered as a symbol of faith, courage, and charity, and is honored as one of the most valued Roman martyrs.

Wang Zhiming

Born1907, Wuding County, Chuxiong Yi Autonomous Prefecture, China
Died December 29, 1973
December 29, 1973, Wang was executed in a stadium in front of more than 10,000 people. The largely Christian crowd was not cowed into submission by the spectacle, but rather many rushed to stand where they were berated by the prosecuting officials
Religion: Christian
Cause of death: Firing Squad
Occupation: Pastor, teacher
Home town: Wuding, and he was ordained in 1951 at the age of 44. During the 1950s Wang was one of six Miao Christian leaders who accommodated some of the demands of the new government. He refused to participate in denunciation meetings held to humiliate landlords, saying, "My hands have baptized many converts, and should not be used for sinfulness". The Cultural Revolution, Wang was declared a counter-revolutionary.

Edith Cavell

Born: 4 December 1865, Swardeston
Died: 12 October 1915, Tir national
Cause of Death: Execution by firing squad
Buried: Norwich Cathedral, Norwich
Memorial day: 12th October
Full name: Edith Louisa Cavell
Religion: Christian
Nationality: British
Education: Norwich High School for Girls
Occupation: Nurse

Known for: was a British nurse. She is celebrated for saving the lives of soldiers from both sides without discrimination and in helping some 200 Allied soldiers escape from German-occupied Belgium in the First World War. Every year the 'Cavell Nurses' founded by her lay wreaths at her memorials in London, Norwich and Belgium.
Quote: 'patriotism is not enough'.

St Margaret Clitherow

Born: 1556, York
Died: 25 March 1586, York (aged 20)
Feast day: 30 August
Religion: Christian
Executed: by being crushed to death,
Nationality: English
Occupation: wife and mother
Nickname : 'the Pearl of York'
Canonized: 25 October 1970, Rome by Pope Paul VI
Patron Saint of : Businessperson, Catholic Women's League, Latin Mass Society of England and Wales, Martyr

Known for: Saint Margaret Clitherow is an English saint and martyr of the Roman Catholic Church, Margaret was arrested and called before the York assizes for the crime of harbouring Roman Catholic priests. She refused to plead, thereby preventing a trial that would entail her children being made to testify, and being subjected to torture. Although pregnant with her fourth child, she was executed in the Toll Booth at Ouse Bridge, by being crushed to death, the standard inducement to force a plea.

Malala Yousafzai

Born: July 12, 1997 in Mingora, in the Swat Valley of Pakistan.
Religion: Islam
Nationality: Pakistani
Occupation: Activist, author, and Nobel Peace Prize laureate

Known for: Advocating for girls' education and surviving a Taliban assassination attempt in 2012. She became the youngest-ever Nobel Peace Prize winner in 2014.
In 2007 the Taliban invaded the Swat Valley. The Taliban is a group that believes in strict Islamic law. They began closing schools for girls. They did not allow women to participate in society in general. The Taliban invasion brought much violence to the region, so Yousafzai and her family fled. However, they returned when the violence eased. In October 2012, the Taliban punished her for speaking up for the rights of girls to be educated. A masked gunman boarded her school bus on her way home from school and shot her. After initially being treated for her injuries in Pakistan, Malala was then flown to hospital in Birmingham. She was discharged from hospital in January 2013 and stayed in the UK with her family. She went on to further her education at Oxford University.

Mahatma Gandhi

Born: October 2, 1869
Religion: Hinduism
Nationality: Indian
Occupation: Lawyer, political leader, and social reformer

Known for: Leading India's nonviolent independence movement against British rule and promoting peaceful civil disobedience.
He lived during the British Empire's Rule over India. He was a political and spiritual leader from India. Even though he was a Hindu, he was influenced by Jesus' teachings. He had a big influence on Martin Luther King, the US reformer. The first big protest that Gandhi led in India against the British rulers was about passbooks. Indian people were forced to carry passbooks so that British soldiers could check on them at any time. Gandhi felt that this was wrong because it meant Indian people were not free in their own country.

Martin Luther King Jnr

Born: January 15, 1929
Religion: Christianity (Baptist)
Nationality: American
Occupation: Minister and civil rights leader

Known for: Leading the American civil rights movement, advocating nonviolent protest against racial segregation, and delivering the famous "I Have a Dream" speech.
He was an American Church Minister. He was a public speaker and activist, who took action to bring about change. He was a leader in the African-American Civil-Rights Movement. He became one of the most prominent voices in the fight against racial segregation and injustice in the United States. King rose to national prominence during the Montgomery Bus Boycott (1955–56), which began after Rosa Parks was arrested for refusing to give up her bus seat to a white man. He led numerous peaceful protests and marches, including the 1963 March on Washington, where he delivered his iconic "I Have a Dream" speech. His efforts contributed significantly to the passage of the Civil Rights Act of 1964 and the Voting Rights Act of 1965. King was awarded the Nobel Peace Prize in 1964.

SPANISH

Knowledge Organiser

KNOWLEDGE ORGANISER SPANISH LP1

Saludos Greetings

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

¿Qué tipo de persona eres? What sort of person are you?

Soy...	I am...	**listo/a**	clever
divertido/a	amusing, funny, fun	**serio/a**	serious
estupendo/a	brilliant	**simpático/a**	nice, kind
fenomenal	fantastic	**sincero/a**	sincere
generoso/a	generous	**tímido/a**	shy
genial	great	**tonto/a**	silly
guay	cool	**tranquilo/a**	quiet, calm

Adjectives describe nouns. There are three main groups of adjectives:

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

Their endings change to agree with the noun, like this:

singular		plural	
masculine	feminine	masculine	feminine
sincero verde azul	sincera verde azul	sinceros verdes azules	sinceras verdes azules

Regular verbs follow a pattern.

hablar	to speak	**vivir**	to live
hablo	I speak	**vivo**	I live
hablas	you speak	**vives**	you live
habla	he/she speaks	**vive**	he/she lives

In Spanish, the words for 'a' change according to whether the noun is masculine or feminine.

masculine	un perro	a dog
feminine	una tortuga	a tortoise

The Spanish word for 'the' also changes according to the gender of the noun and whether it is singular or plural.

	singular	plural
masculine	el conejo (the rabbit)	los conejos (the rabbits)
feminine	la cobaya (the guinea pig)	las cobayas (the guinea pigs)

SKILLS

Using intensifiers

Use intensifiers to make sentences more interesting.

- **muy** very
- **un poco** a bit
- **bastante** quite

Mi pasión My passion

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

¿Tienes hermanos? Do you have any brothers or sisters?

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

Some verbs are irregular. They don't follow a pattern. Here are two that you will meet a lot.

ser	to be	**tener**	to have
soy	I am	**tengo**	I have
eres	you are	**tienes**	you have
es	he/she is	**tiene**	he/she has

To make a sentence or a question negative, put **no** before the verb.

No tengo veinte años.	I am **not** 20 years old.
Mi hermano **no** vive en Madrid.	My brother does **not** live in Madrid.

SKILLS

Using connectives

You can make your sentences more interesting by using connectives:

- **y** and
- **también** also, too
- **pero** but

¿Cuántos años tienes? How old are you?

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

¿Tienes mascotas? Do you have pets?

Tengo…	I have…
una cobaya	a guinea pig
un conejo	a rabbit
un gato	a cat
un perro	a dog
un pez	a fish
un ratón	a mouse
una serpiente	a snake
No tengo mascotas.	I don't have any pets.
¿Cómo es?	What is it like?
¿Cómo son?	What are they like?

Los colores Colours

blanco/a	white
amarillo/a	yellow
negro/a	black
rojo/a	red
verde	green
gris	grey
marrón	brown
azul	blue
rosa	pink
naranja	orange

Los números 1 – 31 Numbers 1 – 31

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

Palabras muy frecuentes High-frequency words

bastante	quite
no	no/not
mi/mis	my
muy	very
pero	but
también	also, too
tu/tus	your
un poco	a bit
y	and
a la derecha	on the right
a la izquierda	on the left
en el centro	in the centre/middle
hay	there is/there are
un chico	a boy
una chica	a girl
creo que	I think that

YEAR 7 SPANISH KNOWLEDGE ORGANISER LP2

¿Qué te gusta hacer? What do you like to do?

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

¿Qué haces en tu tiempo libre? What do you do in your spare time?

bailo	I dance	**monto en bici**	I ride my bike
canto karaoke	I sing karaoke	**saco fotos**	I take photos
hablo con mis amigos	I talk with my friends	**toco la guitarra**	I play the guitar

Gramática

There are three types of verbs: **-ar**, **-er** and **-ir**. The biggest group is **-ar** verbs. Once you know the pattern, you can apply the rules to new **-ar** verbs.

hablar to speak

(yo)	**hablo**	I speak
(tú)	**hablas**	you speak
(él/ella)	**habla**	he/she speaks
(nosotros)	**hablamos**	we speak
(vosotros)	**habláis**	you (plural) speak
(ellos)	**hablan**	they speak

SKILLS

Making sentences more interesting

To make your sentences longer and more interesting, include:

- connectives (e.g. **y, cuando**)
- intensifiers (e.g. **muy**)
- reasons (e.g. **porque es...**)
- expressions of frequency (e.g. **todos los días**).

Expresiones de frecuencia Expressions of frequency

a veces	sometimes	**nunca**	never
de vez en cuando	from time to time	**todos los días**	every day

Los días de la semana The days of the week

lunes	Monday	**domingo**	Sunday
martes	Tuesday	**los lunes**	on Mondays, every Monday
miércoles	Wednesday		
jueves	Thursday	**los martes**	on Tuesdays, every Tuesday
viernes	Friday		
sábado	Saturday		

¿Qué deportes haces? What sports do you do?

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

Gramática

Hacer (to do) is an important irregular verb. The **c** changes to **g** in the 'I' form. Learn it by heart.

hago	I do
haces	you do
hace	he/she does
hacemos	we do
hacéis	you (plural) do
hacen	they do

Jugar (to play) is a stem-changing verb. Some people call these 'boot' verbs.

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

¿Qué tiempo hace? What's the weather like?

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

Algunas preguntas Some questions

¿Qué…?	What/Which…?
¿Cuándo…?	When…?
¿Dónde…?	Where…?
¿Cómo…?	How/What…?
¿Cuántos…?	How many…?

Palabras muy frecuentes High-frequency words

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

YEAR 7 SPANISH KNOWLEDGE ORGANISER LP3

¿Qué estudias? What do you study?

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

You say:
geografía **y** ciencias.
But to make the pronunciation easier, **y** changes to **e** before the sounds **i-** and **hi-**:
geografía **e** inglés
geografía **e** informática
geografía **e** historia

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

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

Opiniones Opinions

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

Hay = there is/there are.
After **No hay**… you don't need the article **un/una/unos/unas**.
No hay piscina.
There isn't a swimming pool.

Los profesores Teachers

El profesor/La profesora es…	The teacher is…	**raro/a**	odd
paciente	patient	**severo/a**	strict

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

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

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

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

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

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

Gramática

-er verbs and **-ir** verbs follow these patterns:

comer	to eat	**escribir**	to write
como	I eat	**escribo**	I write
comes	you eat	**escribes**	you write
come	he/she eats	**escribe**	he/she writes
comemos	we eat	**escribimos**	we write
coméis	you (plural) eat	**escribís**	you (plural) write
comen	they eat	**escriben**	they write

primero	first
luego	then
normalmente	normally
a veces	sometimes

Palabras muy frecuentes High-frequency words

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

YEAR 7 SPANISH KNOWLEDGE ORGANISER LP4

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

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

Gramática

The words for 'my' and 'your' are different depending on whether the noun is singular or plural.

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

mi padre my father
mis hermanas my sisters

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Los números 20 – 100 Numbers 20 – 100

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

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

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

Gramática

Tener and **ser** are very useful irregular verbs.
Learn how to use them to talk about yourself and other people.

tener	to have			**ser**	to be		
tengo	I have	**tenemos**	we have	**soy**	I am	**somos**	we are
tienes	you have	**tenéis**	you (plural) have	**eres**	you are	**sois**	you (plural) are
tiene	he/she has	**tienen**	they have	**es**	he/she is	**son**	they are

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

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

¿Cómo es? What is he/she like?

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

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

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

¿Dónde está? Where is it?

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

Gramática

When you are talking about location (where something is), you use the verb **estar** for 'to be.' This verb is irregular.

estoy	I am
estás	you are
está	he/she/it is
estamos	we are
estáis	you (plural) are
están	they are

¿Dónde está?
Where is it?

Está en el campo.
It's in the countryside.

Palabras muy frecuentes High-frequency words

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

YEAR 7 SPANISH KNOWLEDGE ORGANISER LP5

¿Qué hay en tu ciudad? What is there in your town?

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

¿Te gusta vivir en...? Do you like living in...?

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

¿Qué hora es? What time is it?

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

Gramática

The verb **ir** (to go) is an important irregular verb.

ir	to go
voy	I go
vas	you go
va	he/she goes
vamos	we go
vais	you (plural) go
van	they go

Voy al parque.
I go to the park.

¿Vas de compras?
Do you go shopping?

¿Qué haces en la ciudad? What do you do in town?

Salgo con mis amigos.	I go out with my friends.
Voy...	I go...
al cine	to the cinema
al parque	to the park
a la bolera	to the bowling alley
a la cafetería	to the cafeteria
a la playa	to the beach
de compras	shopping
de paseo	for a walk
No hago nada.	I do nothing.

En la cafetería In the café

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

¿Qué vas a hacer? What are you going to do?

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

¿Cuándo? When?

este fin de semana	this weekend
el sábado por la mañana	on Saturday morning
el domingo por la tarde	on Sunday afternoon/ evening
primero	first
luego	then
finalmente	finally
a las tres de la tarde	at three o'clock in the afternoon
(un poco) más tarde	(a little) later

Gramática

Querer (to want) is a stem-changing verb.
Some people call these 'boot' verbs.

querer	to want		
quiero	I want	**queremos**	we want
quieres	you want	**queréis**	you (plural) want
quiere	he/she wants	**quieren**	they want

Palabras muy frecuentes

aquí	here
a ver	let's see
con	with
hasta	until
más	more
si	if

References

1	2											3	4	5	6	7	0
							1 **H** hydrogen 1										4 **He** helium 2
7 **Li** lithium 3	9 **Be** beryllium 4											11 **B** boron 5	12 **C** carbon 6	14 **N** nitrogen 7	16 **O** oxygen 8	19 **F** fluorine 9	20 **Ne** neon 10
23 **Na** sodium 11	24 **Mg** magnesium 12											27 **Al** aluminium 13	28 **Si** silicon 14	31 **P** phosphorus 15	32 **S** sulfur 16	35.5 **Cl** chlorine 17	40 **Ar** argon 18
39 **K** potassium 19	40 **Ca** calcium 20	45 **Sc** scandium 21	48 **Ti** titanium 22	51 **V** vanadium 23	52 **Cr** chromium 24	55 **Mn** manganese 25	56 **Fe** iron 26	59 **Co** cobalt 27	59 **Ni** nickel 28	63.5 **Cu** copper 29	65 **Zn** zinc 30	70 **Ga** gallium 31	73 **Ge** germanium 32	75 **As** arsenic 33	79 **Se** selenium 34	80 **Br** bromine 35	84 **Kr** krypton 36
85 **Rb** rubidium 37	88 **Sr** strontium 38	89 **Y** yttrium 39	91 **Zr** zirconium 40	93 **Nb** niobium 41	96 **Mo** molybdenum 42	[98] **Tc** technetium 43	101 **Ru** ruthenium 44	103 **Rh** rhodium 45	106 **Pd** palladium 46	108 **Ag** silver 47	112 **Cd** cadmium 48	115 **In** indium 49	119 **Sn** tin 50	122 **Sb** antimony 51	128 **Te** tellurium 52	127 **I** iodine 53	131 **Xe** xenon 54
133 **Cs** caesium 55	137 **Ba** barium 56	139 **La*** lanthanum 57	178 **Hf** hafnium 72	181 **Ta** tantalum 73	184 **W** tungsten 74	186 **Re** rhenium 75	190 **Os** osmium 76	192 **Ir** iridium 77	195 **Pt** platinum 78	197 **Au** gold 79	201 **Hg** mercury 80	204 **Tl** thallium 81	207 **Pb** lead 82	209 **Bi** bismuth 83	[209] **Po** polonium 84	[210] **At** astatine 85	[222] **Rn** radon 86
[223] **Fr** francium 87	[226] **Ra** radium 88	[227] **Ac*** actinium 89	[261] **Rf** rutherfordium 104	[262] **Db** dubnium 105	[266] **Sg** seaborgium 106	[264] **Bh** bohrium 107	[277] **Hs** hassium 108	[268] **Mt** meitnerium 109	[271] **Ds** darmstadtium 110	[272] **Rg** roentgenium 111	[285] **Cn** copernicium 112	[286] **Uut** ununtrium 113	[289] **Fl** flerovium 114	[289] **Uup** ununpentium 115	[293] **Lv** livermorium 116	[294] **Uus** ununseptium 117	[294] **Uuo** ununoctium 118

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

* The Lanthanides (atomic numbers 58 – 71) and the Actinides (atomic numbers 90 – 103) have been omitted.

Relative atomic masses for **Cu** and **Cl** have not been rounded to the nearest whole number.

Shetland

Orkney

North Atlantic Ocean

Outer Hebrides

Northwest Highlands

Grampian Mts.

Ben Nevis

Glasgow

Edinburgh

SCOTLAND

Southern Upland

North Sea

Tyne

Newcastle

Pennines

Middlesbrough

NORTHERN IRELAND

Belfast

Scafell Pike

Snaefell

Ouse

Leeds

Kingston upon Hull

Irish Sea

Manchester

Liverpool

Sheffield

Trent

IRELAND

Snowdon

Stoke

Nottingham

Cambrian Mts.

Severn

Leicester

Birmingham

Great Ouse

Wye

WALES

ENGLAND

Thames

Southend-on-Sea

Cardiff

Bristol

Reading

London

Celtic Sea

Southampton

Brighton

Bournemouth

English Channel

WORLD MAP

W 0° E

Prime Meridian

N

ARCTIC OCEAN

Greenland (Denmark)

Zemlya Frantsa-Iosifa

Oktyabr'skoy Revolyutsil

Svalbard (Norway)

Novaya Zemlya

Kara Sea

Laptev Sea

Kotelny Island

East Siberian Sea

Wrangel Island

Beaufort Sea

Baffin Bay

Jan Mayen (Norway)

Norwegian Sea

Barents Sea

Arctic Circle

Alaska (USA)

Canada

Hudson Bay

Labrador Sea

Gulf of Alaska

Iceland

Faroe Islands (Denmark)

Finland

Sweden

Norway

Russia

Bering Sea

Sea of Okhotsk

United Kingdom

Ireland

North Sea

Denmark

Estonia

Latvia

Lithuania

Belarus

Poland

Ukraine

Black Sea

Caspian Sea

Aral Sea

Kazakhstan

Mongolia

France

Germany

Romania

Georgia

Azerbaijan

Uzbekistan

Kyrgyzstan

Tajikistan

Turkmenistan

San Marino

Monaco

Andorra

Spain

Vatican City

Italy

Portugal

Bulgaria

Greece

Turkey

Armenia

Mediterranean Sea

NORTH PACIFIC OCEAN

NORTH ATLANTIC OCEAN

United States of America

Bermuda (U.K.)

Haiti

Dominican Rep.

Bahamas

Puerto Rico

St. Kitts And Nevis

Antigua and Barbuda

Dominica

St. Lucia

Barbados

Trinidadn& Tobago

Suriname

French Guiana (FR)

Guyana

Mexico

Gulf of Mexico

Cuba

Jamaica

Belize

Guatemala

Honduras

El. Salvador

Nicaragua

Costa Rica

Caribbean Sea

Grenada

Venezuela

Colombia

Ecuador

Galapagos (Ecuador)

Peru

Brazil

Bolivia

Paraguay

Chile

Uruguay

Argentina

Tropic of Cancer

Hawaii Islands (U.S.)

Kiribati

Equator

0°

French Polynesia

Tropic of Capricorn

Easter I. (Chile)

SOUTH PACIFIC OCEAN

SOUTH ATLANTIC OCEAN

Falkland Islands (U.K.)

South Georgia (U.K.)

South Sandwich (U.K.)

Canary Islands (Spain)

Morocco

Tunisia

Malta

Algeria

Libya

Western Sahara

Mauritania

Mali

Niger

Chad

Sudan

Egypt

Israel

Syria

Iraq

Iran

Jordan

Kuwait

Bahrain

Qatar

Saudi Arabia

U.A.E.

Oman

Yemen

Afghanistan

Pakistan

Red Sea

Arabian Sea

Cape Verde

Senegal

Gambia

Sierra Leone

Liberia

Ivory Coast

Burkina Faso

Nigeria

Central African Rep.

Eritrea

Djibouti

Ethiopia

Somalia

South Sudan

Gabon

Congo

Uganda

Kenya

Dem. Rep. Congo

Tanzania

Burundi

Ascension (U.K.)

São Tomé and Príncipe

Angola

Zambia

Zimbabwe

Namibia

Botswana

Mozambique

Swaziland

Lesotho

South Africa

Trindade (Brazil)

St Helena (U.K.)

Comoros

Seychelles

Mayotte

Madagascar

Mauritius

Reunion

INDIAN OCEAN

India

Nepal

Bhutan

Bangladesh

Myanmar (Burma)

Laos

Thailand

Vietnam

Bay of Bengal

Andaman Is.

Sri Lanka

Maldives

Singapore

Malaysia

Brunei

Indonesia

Java

Sumatra

Cocos Is. (Aus.)

Christmas Is. (Aus.)

East Timor

Papua New Guinea

Australia

Great Australian Bight

Coral Sea

Tasman Sea

Tasmania

New Zealand

North Island

South Island

Philippines

Philippine Sea

Guam

Northern Mariana Islands

Palau

Federated States of Micronesia

Marshall Islands

Nauru

Kiribati

Tuvalu

Walis & Fatuna

Soloman Islands

Vanuatu

Fiji

Samoa

Tonga

New Caledonia (France)

North Korea

South Korea

East China Sea

Sea of Japan (East Sea)

Japan

Taiwan

China

PACIFIC OCEAN

1. Netherlands
2. Belgium
3. Luxembourg
4. Switzerland
5. Slovenia
6. Croatia
7. Bosnia and Herzegovina
8. Czech Republic
9. Slovakia
10. Austria
11. Hungary
12. Serbia
13. Moldova
14. Macedonia
15. Albania
16. Cyprus
17. Lebanon
18. Guinea-Bissau
19. Guinea
20. Ghana
21. Togo
22. Benin
23. Cameroon
24. Equatorial Guinea
25. Rwanda
26. Cambodia
27. Panama
28. Malawi
29. Liechtenstein
30. Montenegro
31. Kosovo
32. Palestinian Territories
33. St. Vincent and the Grenadines

1260Km 0 1260 2520 3780 5040Km

SOUTHERN OCEAN

ANTARCTICA

Antarctic Circle

Weddell Sea

W 0° E