



Name:		

Form: \_\_\_\_\_

Knowledge Organiser
Autumn Term
2024/25
Year 8



# **Contents**

- 6. Tier 2 Vocabulary
- 8. English
- 24. Maths
- 30. Science
- 38. Religious Studies
- 42. History
- 46. Geography
- 50. Spanish
- 54. French

# A Knowledge Rich Curriculum at Great Sankey High School

Research around memory suggests that if knowledge is studied once and not revisited or revised, it is not stored in the long-term memory. This means that after one lesson, or revising for one test, the knowledge will not be retained unless it is studied again. To ensure that knowledge is embedded in the long term memory it must be revisited frequently. Ensuring knowledge is embedded aids understanding, and in turn makes future learning more successful. To quote Daniel Willingham's learning theory,

# "Thinking well requires factual knowledge that is stored in our long-term memory"

As part of home learning, students should be revising what they have been taught recently but also content they were taught previously. Therefore, as part of our strategy to embed learning over time we have developed knowledge organisers across years 7-11. These will provide key content and knowledge allowing students to pre-learn and relearn, a vital part of processing all the information required to be successful. This knowledge will form the backbone of assessments in school.

# How to use your knowledge organiser

Knowledge organisers will be used in subject lessons, homework activities and form time and therefore you need to bring your knowledge organiser to school every day.

Ensuring that knowledge is retained into your long-term memory and you are ready for tests takes work!



To encourage students to build good study habits, students will be assigned homework quizzes on a week A through the Google Classroom. Students will be expected to use revision strategies such as read, cover, write, check to learn key knowledge and will then complete the quizzes to demonstrate their learning. Completion of these quizzes is an essential homework activity and will be closely monitored by the pastoral team.

# Other methods that you may wish to try at home are listed below:

- Create mind maps.
- Create flashcards.
- Get sticky with your learning: write out key points from the KO as you read over it on post-it notes.
- Write your own basic recall quizzing questions around the keywords, definitions and key facts that you need to know. Test yourself with these questions and then leave it overnight to answer them the next day.
- Write your own challenging questions using the following command words explain, compare, evaluate. Then create a model answer for these questions.
- Put the key words from your KO into new sentences.
- Make mnemonics to remember the order of particular concepts.
- Draw a comic strip, storyboard or a timeline describing any series of events that have a chronological order.
- Write yourself or a partner some quiz questions. Quiz each other or swop your questions to see if you can answer each other's questions.
- Think about the big picture why is knowing specific information important to you/other people/society/companies/science/technology? The more links that you can make, the more meaningful you make your learning and the more likely it is that you will remember it. Think about the big picture are there any links in the content on your KO to anything that you have watched on TV, read about or heard in the news?
- Give yourself spelling tests.
- Definition tests.
- · Draw diagrams of key processes or theories.
- · Draw images and annotate/label them with extra information.
- · Create fact files.
- Create flowcharts for descriptions or explanations that have a chronological order.
- · Summarise in your own words each section.
- Get your parents/carers to test you.
- · Pick out key words and write definitions.
- · Pre-learning (read a section of your knowledge organiser prior to the lesson).
- Learn key quotes (if applicable). Consider what you may say about these quotes e.g. what the author is trying to make you think/feel, their choice of language, what can be inferred from it.
- Write a letter/blog/article to someone explaining a key idea or concept.
- Prepare to overcome any hurdles: write down any questions or any areas of the KO that you feel you need to speak to your teacher about.
- Use the guidance that may have been given with a specific KO to help you learn the information and use it.

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



# Portable Knowledge in STEM at KS3

STEM stands for Science, Technology, Engineering and Maths, and it is important that you can see connections between each of these subjects. In the real world there are very few challenges that only require one set of skills. For example, you wouldn't be able to design a new app, video game or computer program without an understanding of all of the STEM concepts. This section of the knowledge organiser will show you how different STEM subjects have things in common, including examples of how you might use them, and how some things may actually appear slightly different from one subject to the next. As Geography is a Natural Science we can include that too.

EXAMPLE	SCIENCE	TECHNOLOGY & ENGINEERING	MATHS	GEOGRAPHY
Tally chart	Can be used to record the number of pupils in different height ranges in biology.	_	Can be used to record the number of pupils with different eye colours or what their favourite colour, favourite animal or favourite subject is.	Can be used to used record the number of pedestrian or cars that pass a certain place.
Pie chart	Can be used to display the number of pupils with different eye colours in biology.	Can be used to display results of a tally chart.	Can be used to display the number of pupils who travel to school in different way.	Can be used to display the use of renewable and non-renewable energy resources.
Bar chart	Can be used to display the number of people with different blood groups in biology.	Can be used to display results of a tally chart.	Can be used to display the number of pupils with a different favourite sweet.	In geography the term histogram and bar chart are interchangeable and are used to display the percentage of
Histogram	This is similar to a bar chart but the bars touch each other and they represent continuous data that is grouped, for example number of pupils in different height ranges in biology.	х	Can be used to display number of pupils in different height ranges.	forest lost in a range of countries for example.
Line graph	Can be used to display the time taken for salt to dissolve at different temperatures in chemistry.	Can be used to represent trend data during research pieces.	In maths these are sometimes called scatter graphs or timeseries graphs. They can be used to display house prices or life expectancy.	Can be used to display temperatures of each month in different countries or rainfall in mm.
Line of best fit	In biology a line of best fit can be point to point, but in chemistry they are most often a straight line. In all 3 sciences they could be a curve depending on distribution of the points. For example the extension of a spring in physics.	х	In maths you might be asked to add a line of best fit to a scatter graph. It is always a straight line drawn with a ruler and can be used on graphs to show correlation between hours of revision and score in test or temperature and number of ice creams sold.	x

# Portable Knowledge in STEM at KS3



EXAMPLE	SCIENCE	TECHNOLOGY & ENGINEERING	MATHS	GEOGRAPHY
Range	Range around a mean can be used with data for heart rate after exercise in Biology, amount of hydrogen gas produced in a chemical reaction in Chemistry and number of times a ball bounces in Physics.	х	Range around a mean can be used with data for heights, goals scored in a football match. In maths this includes looking at a table for ungrouped and grouped data.	Range when looking at rainfall and temperature data for different locations. Used when using development indicators such as literacy rate, life expectancy etc.
Mean, Median and Mode	Mean, median and mode can be used to analyse any sets of data with a range of results.	x	Mean, median and mode can be used to analyse any sets of data with a range of results.	Mean, median and mode can be used to analyse any sets of data with a range of results.
Continuous data	This is where you have any value in your data. In science an example would be length.	x	This is where you have any value in your data. In maths an example would be length.	This is where you have any value in your data. An example would be mm of rainfall.
Discrete data	In science this is sometimes called discontinuous data. An example would be blood group or eye colour in Biology.	х	Sometimes called primary or secondary data. Examples include age, shoe size, result from rolling a dice or the number of pets people have.	х
Using co- ordinates	х	x	4 and 6 figure grid references are used when plotting in 4 quadrants and used in transformations.	Both 4 and 6 figure references are used across all topics in geography to locate places from a map.
Taking measurements that are accurate and precise	Accurate data is close to the true value and precise data gives similar results if you repeat the measurement. In science there are far too many examples to mention!	Used when marking out materials prior to cutting and quality during checking when manufacturing a component.	4 and 6 figure references used across all topics to locate places from a map.	Measurements and accuracy are really important when studying map skills, especially when looking at scale and distance.

# Tier 2 Vocabulary

Year 8 Term 1		Definition Sentence	Contextual Sentence
1	dominant	Having power and influence over others or overlooking others.	The ruins of the Abbey on the cliff top dominate the town.
2	sufficient	Enough or adequate.	Make sure you leave yourself sufficient time to complete your homework.
3	validity	The quality of being logically or factually sound/true.	You must consider the validity of your data.
4	comments	A verbal or written remark expressing an opinion or reaction.	Give your comments on the new school menu by Friday.
5	consent	Permission for something to happen or agreement to do something.	You must have the consent of someone at home to go on the trip.
6	considerable	Large in size, amount, or extent.	There was considerable damage to the town after the flood.
7	constant	Remaining the same over a period of time.	The king was under constant pressure to go to war.
8	contribution	A gift or payment to a fund or collection. The part played by a person or thing in bringing about a result or helping something to advance.	Bring your contribution to the bake sale in on Monday. His contribution to science was very important.
9	coordination	The organization of different elements so as to enable them to work together effectively.	Coordination is important when organising a theatre production.
10	core	The central part of something.	The Earth has a solid inner core.

11	corresponding	To have a close similarity; match or agree almost exactly.	The war and the corresponding fall in trade, have had a devastating effect on the country.
12	criteria	A standard by which something may be judged or decided.	She did not meet the selection criteria for the team.
13	deduction	The removal of something.	After the deduction of tax, there will be less money.
14	demonstrate	To give a practical exhibition and explanation of something.	He will demonstrate different acting techniques in the lesson.
15	document	A piece of written, printed, or electronic matter that provides information or that serves as an official record.	Magna Carta was signed in 1215 and is one of the most famous documents in the world.
16	emphasis	Special importance or value given to something.	Repetition gives emphasis to the words.
17	excluded	Denied access to a place, group, or privilege or kept something out of a place.	He was excluded from the rugby team this week.
18	framework	A supporting structure of a building, vehicle or object. A basic structure underlying a system, concept, or text.	The hut was built around a wooden framework. The book provides a general framework for understanding modern history.
19	illustrated	Including pictures or other graphical material. Serving as an example of something.	Many of the Roald Dahl books were illustrated by Quentin Blake. The concert illustrated how talented the musicians were.
20	immigration	Coming to live permanently in a different country.	The politician gave his views on immigration in the speech earlier.

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21	implies	Suggests.	The data implies that overall temperatures are gradually rising.
22	initial	Happening at the beginning. To mark or sign a document with one's initials in order to authorize or validate it.	The initial bell will ring at 8.25 am. Initial the back of your work before handing it in.
23	instance	An example or single occurrence of something.	For instance, you could use thin card or paper for your design.
24	interaction	Communication or direct involvement with someone or something.	You will need to study the interaction of the characters in the play.
25	justification	The action of showing something to be right or reasonable.	The main justification for banning mobile phones is that they are a distraction.
26	link	A relationship between two things or situations, especially where one affects the other or to make, form, or suggest a connection.	There is a link between the poet's childhood and the theme of the poem.
27	location	A particular place or position.	The location of the car park is behind the main building.
28	maximum	The greatest amount, the most.	The story must have a maximum of 500 words.
29	negative	A number less than zero. A word or statement that expresses denial, disagreement, or refusal.	You must be able to multiply negative numbers. The poem has a negative tone.
30	outcomes	The way a thing turns out; a consequence.	The outcome of the match may well be determined by the weather.
31	physical	Relating to the body as opposed to the mind.	The poem describes both the physical and the mental scars.

32	reaction	Something done, felt, or thought in response to a situation or event. A chemical process in which substances act on each other and are changed.	The music caused an emotional reaction. Sunlight activates a chemical reaction in the plant's leaves.
33	reliance	Dependence on or trust in someone or something.	A feature of this period in history was a reliance on child labour.
34	scheme	A large plan or arrangement for putting a particular idea into effect.	The irrigation scheme was a huge boost to local farmers.
35	sequence	A particular order in which things follow each other.	The content of your story should follow a logical sequence.
36	sex	Either of the two main categories (male and female) into which most living things are divided on the basis of their reproductive functions.	If they wish, parents can find out the sex of their baby before birth.
37	specified	Identified clearly.	Use the specified amounts of ingredients when baking.
38	task	A piece of work to be done.	Your homework task is to research a famous artist from the 20th century.
39	techniques	A way of carrying out a particular task.	Different cooking techniques include boiling, grilling, frying and baking.
40	technology	The use of scientific knowledge for practical purposes.	New technology has made video games even more realistic.
41	volume	The amount of space that a substance or object occupies. A quantity of loudness. A book forming part of a work or series.	Calculate the volume of the cube. Listening to music at high volume can damage your hearing. The story was published in two volumes.

# **Voices of War**

### What is WAR?

#### **NOUN**

- Armed fighting between two or more countries or groups, or a particular example of this
- Any situation in which there is strong competition between opposing sides or a great fight against something harmful

One of the sad truths of humanity is that there always seems to be a war going on somewhere. In 2015, Norwich University identified 43 limited or full-scale wars going on at that time.

In writing, we can explore the 'voices' of those linked to war through their perspective or the type of text they produce.

Narrative Perspective: soldier, civilians, journalists, historians, survivors

Form: poetry, article, letter, diary, biography, autobiography, novels

**Title:** The title of the poem is interesting because it could suggest...Alternatively, it could make the reader think about...

**Overview:** On the surface, the poem seems to be about...However on further reading, it could also be about...

Organisation: The poem opens with...

There is a shift in tone when...

The poem closes with...

The poet uses rhyming couplets to draw the reader's attention to...

The poet uses blank verse suggesting...

Language: The use of imagery in the line..... suggests...

The writer's use of metaphor creates an image of....

The writer's verb/adjective/adverb/noun choice .... emphasises...

The use of the simile.... suggests...

**Speaker:** The poem is written from a first person/second person/third person perspective. This is significant because...

Language Technique	Definition
Alliteration	Repetition of the same letter at the start of two or more words.
Allusion	Reference to another literary work.
	Repetition or pattern of the same vowel sounds.
Connotation	Associated meaning of word.
Consonance	The partial or total identify of consonants in words whose main vowels differ.
Diction	Usually used to describe the level of formality that a speaker uses.
Extended metaphor	An extended metaphor is a version of metaphor that extends over the course of multiple lines or stanzas of prose or poetry.
Hyperbole	Exaggerated statement.
Metaphor	a metaphor is a figure of speech containing an implied comparison.
Onomatopoeia	A figure of speech where words are used to imitate sounds.
Oxymoron	Two terms that appear next to each other that contradict each other.
Pathetic fallacy	The use of weather to create mood or atmosphere.
Personification	the <u>act</u> of giving a <u>human quality</u> or <u>characteristic</u> to something which is not <u>human.</u>
Pun	a <u>humorous</u> use of a word or phrase that has several <u>meanings</u> or that <u>sounds</u> like another word.
Satire	The use of humour or irony to mock, ridicule or criticise.
Semantic field	Words related in meaning.
Simile	Comparing using like or as.
Sibilance	The repetition of an 's' sound in two or more words.
Tone	The implied attitude of a writer towards the subject and characters of a work.
Theme	The central idea of a literacy work.

Structure	Definition			
Anaphora	The repetition of the same word or phrase at the beginning of a line.			
Caesura	A piece of punctuation in the middle of a line creating a pause in rhythm.			
Enjambment	A line which continues, with no punctuation, into the line below.			
Foot	A metrical unit composed of stressed and unstressed syllables.			
Half – rhyme	An imperfect rhyme where the ending constantan sound of a word is the same as the other.			
Juxtaposition	Two or more contrasted ideas placed side by side.			
Meter	The measured pattern of rhythmic accents in poems.			
Parallelism	The similarity of structure in a pair or series of related words/ phrase/ clauses.			
Quatrian	A four-line stanza in a poem.			
Refrain	A phrase, line or group of lines which repeated throughout a poem.			
Repetition	A repeated word or phrase usually used to emphasise importance.			
Rhyming Couplet	Two consecutive lines of poetry that rhyme.			
Rhyme	Words that sound the same at the end.			
Stanza	Two or more lines of poetry that form the divisions of the poem.			
Form	Definition			
Ballad	A narrative poem written in four-line stanzas, characterised by swift action and narrated in a direct style.			
Blank Verse	Non-rhyming lines written in iambic pentameter.			
Dramatic Monologue	A literary form where the writer takes on the voice of a character and speaks through them.			
Elegy	An <i>elegy</i> is a sad poem, usually written to praise and express sorrow for someone who is dead.			
Epic	A long narrative poem that records the adventures of a hero.			
Free Verse	Poetry without a regular pattern of meter or rhyme.			
Lyric	A poem that expresses personal and emotional feelings.			
Ode	A poem written in praise or celebration of a person of a person, thing or event.			
Sonnet	A fourteen line poem in iambic pentameter with a regular rhyme scheme. There are two forms of sonnet: Shakespearean and Petrarchan.			
	Shakespearean and retraichan.			

#### When the Sky Falls by Phil Earle

#### What is historical fiction?

**Historical fiction** is a literary genre in which the plot takes place in a setting related to the past events, but is fictional. An essential element of historical fiction is that it is set in the past and pays attention to the manners, social conditions and other details of the period.

#### When the Sky Falls is inspired by a true story:

'As we sat, Pete told me a story about his dad during the Second War. Unable to fight because of poor health, his dad was part of poor health, his dad was part of Manchester's home guard and had been given a very specific job. Every time the air-raid siren sounded, his dad had to pick up a rifle and run to Manchester Zoo. Once there, he had to sit outside the lion's cage, his rifle trained on the animal. Why? Because if the bombers destroyed the cage and lion ran free, then his dad's mission was to shoot the animal before it went on the rampage.'

## **Key Characters:**

Joseph: The protagonist of the story. He is a twelve-year-old boy who has been evacuated to live with Mrs F from his grandmothers.

Mrs F: The owner of the zoo and the person who takes care of Joseph during his evacuation.

Adonis: A gorilla at Mrs F's zoo that forges an important relationship with Joseph.

#### **Historical Context:**

#### What is evacuation?

Evacuation means leaving a place. During WW2, many children living in big cities and towns were moved temporarily from their homes to places considered safer, usually out in the countryside. The risk was incredibly high in areas such as London or other cities on the south and east coasts of Britain. Children's evacuation in WW2 was designed to protect them from the risks of aerial bombing in these cities.

In the novel, Joseph is sent to live with Mrs F. However, Joseph is sent to live in the city 'where bombers rule the sky' instead of evacuation.

#### What was the Blitz?

The Blitz, from the German term 'Blitzrieg' meaning lightning war, was the sustained campaign of aerial bombing attacks on British towns and cities carried out by the Luftwaffe (German Air Force).

## What was the job of the Home Guard?

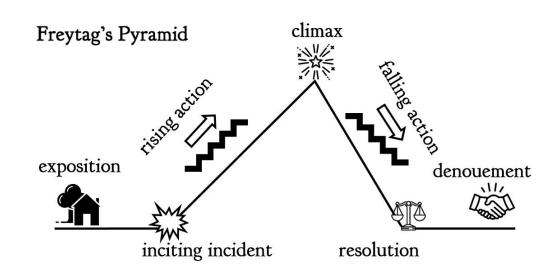
The story was inspired by the real-life experiences of one member of the home guard in Manchester during WW2.

The Home Guard defended key targets like factories, explosive stores, beaches and sea fronts. At night they patrolled fields in which the enemy gliders or paratroops might land. No one expected them to beat well-trained German soldiers. Their job was to slow them down until the army arrived.

In the story, Mrs F and Joseph have a difficult job to do protecting the city from the animals in the zoo during the war.

## **Themes**

- Friendship
- Death
- Loss
- Relationships
- Family
- Belonging
- Love
- Self-esteem
- Education
- Anger



Key Terminology	
Setting	The time and place in which the story takes place. Can include things like the weather, the historical period, the social structures and any other details about the surroundings.
Plot	The events and the organisation and sequencing of them that make up the story.
Theme	An underlying message or meaning conveyed by the story.
Protagonist	In Literature, the leading character or one of the major characters in a drama or narrative.
Antagonist	In Literature, the principal opponent in a drama or narrative. The word is from the Greek 'antagnistés' which means opponent or rival.
Narrative perspective	Narrative perspective or voice, is the perspective the story is told and what is told.
Foreshadowing	A warning or indication of a future event.
Characterisation	Characterisation is the way an author describes or shows what a character is like. It refers to the set of qualities that make someone, or something, different from others.
Symbolism	A literary device in which a writer uses one thing, such as a physical object, to represent something beyond the literal meaning.





# **Year 8 Mathematics Knowledge Organiser**

## Topic

Number - Ratio and Proportion

## Where does the word ratio come from?

From latin word ratio meaning "relation between two similar magnitudes in respect to quantity," measured by the number of times one contains the other is attested from 1650s.

# Sharing in a Ratio

- Add the parts
- Divide the amount by the total parts
- X Multiply by the parts
- Add the parts to check your answer

Alex and Ben were given a total of £240 They shared the money in the ratio 5:7. Work out how much money Ben received

- (+) 5 parts + 7 parts = 12 parts
- (÷)£240 ÷ 12 parts = £20 per part
- $\times$  5 parts x £20 = £100 7 parts  $\times$  £20 = £140
- £100 + £140 = £240
  - Ben = £140

# **Simplifying Ratios**

Identify and divide the parts in the ratio by the HCF

25:30

6:27



# Ratios of Different Units

Always convert to the same unit before simplifying

£3:50p300p: 50p

# **Recipes**

Prawn Cocktail - Feeds 5 people

500g of prawns 10 tsps of mayonnaise 5 tsps of tomato sauce 250g of lettuce

How much of each ingredient would I need for only 3 selgosq?



# Use the unitary method

3 people 1 person  $500a \div 5 = 100a$  $100q \times 3 = 300q$  $10 \text{ tsps} \div 5 = 2 \text{ tsps}$  $2 \text{ tsps } \times 3 = 6 \text{ tsps}$  $5 \text{ tsps} \div 5 = 1 \text{ tsp}$  $1 \operatorname{tsp} \times 3 = 3 \operatorname{tsps}$  $250q \div 5 = 50q$  $50q \times 3 = 150q$ 

# **Proportion**

# **Direct Proportion**

As A increases, B increases too As A decreases, B decreases too

9 pens cost 54p, how much would 12 pens cost?

1 pen =  $54p \div 9 = 6p$  $12 \text{ pens} = 6p \times 12 = 72p$ 

This is the unitary method - Calculating the value of a single unit first

# **Indirect Proportion**

As A increases, B decreases As A decreases, B increases

It takes 2 people 20 minutes to was a car, how long does it take 4 people

> Number Time of people (mins)

# Fractions, Decimals & Percentages

Fraction	1	1/2	1/3	1/4	1/5	1/6	1/8	1/10
<u>Decimal</u>	1.0	0.5	0.33	0.25	0.2	0.166	0.125	0.1
Percent	100%	50%	33.3%	25%	20%	16.6%	12.5%	10%



# **Year 8 Mathematics Knowledge Organiser**

## Topic

Statistics - Collect, Represent and Analyse Data

### What is the ONS?

The ONS is the UK's largest independent producer of official statistics and its recognised national statistical institute. They responsible for collecting and publishing statistics related to the economy, population and society at national, regional and local levels. They also conduct the census in England and Wales every 10 years

**Averages from Tables** 

# **Types of Data**

Data Type	Definition	Example
Primary	Data that is <b>collected by a researcher</b> (you) from first-hand sources.	Questionnaires, surveys, polls
Secondary	Data that has been <b>collected by someone else</b> in the past.	Books, online data, newspapers
Discrete	Data that can only take certain values. (Count)	Number of students in a class, number of sweets in a pack
Continuous	Data which can take any values, there are an infinite number of possible outcomes.  (Measure)	Weight, height, time

# Two - Way Tables

We use two-way tables visual representation of the possible relationships between two or more sets of categorical data.

		France	Germany	Spain	Total
	Female			9	34
	Male	15			
	Total		25	18	60

Can you fill in the missing spaces using problem-solving skills?

# **Questionnaires & Surveys**

## Should include:

- Short questions
- Non-biased questions
- Answer boxes that cover every possible answer

)	U	n	d	e	r	1	Į

What is wrong with this way of asking 24 - 34 someone's age?

34 - 45

# **Discrete Data**

Badges held by Scouts

Number of badges	Frequency
0	2
1	8
2	4
3	3
4	5
5	3

# **Grouped Data**

Time taken (mins)	Frequency
0 < m <u>&lt;</u> 10	3
10 < m ≤ 20	8
20 < m ≤ 30	11
30 < m ≤ 40	9
40 < m ≤ 50	9

First, find the midpoint of each group, and then follow the same rules as if it were discrete data!

Frequency	Midpoint (x)	fx
3	$\frac{0+10}{2} = 5$	3 × 5 = <b>15</b>
8	$\frac{10+20}{2}=15$	8 × 15 = <b>120</b>
11	$\frac{20+30}{2} = 25$	11 × 25 = <b>275</b>
9	$\frac{30+40}{2} = 35$	9 × 35 = <b>315</b>
9	$\frac{40+50}{2} = 45$	9 x 45 = <b>405</b>

Can you calculate the mean, mode and median of this grouped data?

### Mean

Add a frequency density 'fx' column

Number of badges	Frequency	fx
0	2	0 x 2 = 0
1	8	1 × 8 = 8
2	4	2 x 4 = 8
3	3	3 x 3 = 9
4	5	4 x 5 = 20
5	3	5 x 3 = 15

Mean = 'fx' total ÷ 'Frequency' total

fx total = 60 Frequency total = 25  $60 \div 25 = 2.4 \text{ badges}$ 

# Median

(Total Frequency + 1)  $\div$  2

25 scouts in total  $\rightarrow \frac{25+1}{2} = 13$ 

Number of badges	Frequency	
0	2	← First 2
1	8	← Up to 10 ← Up to 14
2 ←	<del>-</del> 4	← Up to 14
3	3	
4	5	
5	3	

13<sup>th</sup> scout has 2 badges

# Mode

Look for the highest frequency

Highest frequency = 8

Mode = 1 badge

to 10

to 14



# Year 8 Mathematics Knowledge Organiser

## Topic

**Geometry - Transformations** 

### Where does the word transformation come from?

Transformation from Old French *transformation* and directly from Church Latin *transformationem* meaning to "change of shape," noun of action from past-participle stem of *transformare* "change in shape, metamorphose"

# **Transformations**

Transformations sound like they are difficult. However, they are quite straightforward as long as you follow the basic rules.

## The Four Transformations you need to know

#### 1. Translation

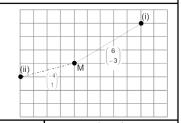
- Movement is a straight line
- · Described as a vector
- $\begin{pmatrix} 6 \\ -3 \end{pmatrix} \begin{pmatrix} \leftrightarrow \\ \updownarrow \end{pmatrix} \begin{pmatrix} + = \text{right}, = \text{left} \\ + = \text{up}, = \text{down} \end{pmatrix}$ 
  - This means 6 right, 3 down

#### Example

Translate the point M by the vectors







Translation	1 mark	
Translation	Stating it is a translation	

1 mark The vector

1 mark

Saying the line of reflection

#### 2. Reflection

Reflection

- Requires a line of reflection
- · Line of reflection is a given line
- Examples of lines y = x, x-axis, y-axis, x = a, y = b

**Example** Reflect the shaded triangle in the line y = x.

#### Notice

- What is meant by the line y = x.
- How each corresponding point on the object and the image is the same distance from the mirror line.
- · You can use tracing paper in your exam.

		What is the
		scale factor
A		from shape A
	В	to B?

1 mark

Stating it is a reflection

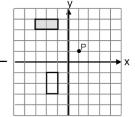
#### 3. Rotation

Rotations are described by

- Angle in degrees
- Direction (clockwise or anticlockwise)
- Centre of rotation (coordinate)

#### Example

Rotate the shaded shape 90° anticlockwise about the point P(1, 1).



#### Notes

- Use tracing paper if required.
- If using the paper trace the shape and the point of rotation.

	1 mark	1 mark	1 mark	
Rotation	Stating it is a rotation	Angle and Direction	Coordinate of centre of rotation	

#### 4. Enlargements

An enlargement is different to the other three because it changes the size of the image.

#### Example

Enlarge the shape by a scale factor of 3, centre P(1,1)

#### Notes

- The distance from the centre of enlargement to each point is multiplied by the scale factor.
- Most mistakes are made when you forget to enlarge the object from the centre of enlargement.

	1 mark	1 mark	1 mark
Enlargement	Stating it is an enlargement	Centre of Enlargement	Scale Factor

What would happen if the scale factor is.

a fraction less than 1? ... It becomes smaller!

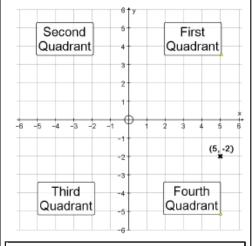
SF =  $1/2 \rightarrow$  The shape becomes half the size!

**SF** =  $1/4 \rightarrow$  The shape becomes a quarter of the size!

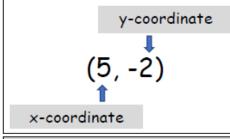
 $SF = 2/3 \rightarrow The shape becomes two thirds of the size!$ 

# **Coordinates**

# What does it look like on a set of axes?



Each part of the axes is split into quadrants, which are shown above



# How do I remember which coordinate is which?

x is across (get it?!)
y to the sky
x before y

Mathematics Command Words – Tier 2 Vocabulary						
Transformation	Reflect	Rotate	Translate	Enlarge		
A process that manipulates a	A type of transformation in	A type of transformation	A type of transformation that	A type of transformation that		
polygon or 2D object on a	which a shape is mirrored	where a shape is turned	moves a shape in a given	changes the size or position		
coordinate system. There are	across a line	around a fixed point in a	direction without changing	of a shape		
4 types; reflection, rotation		given direction	the size or orientation			
enlargement, translation						
Example Application	Example Application	Example Application	Example Application	Example Application		
Complete the <u>transformation</u> to reflect in the line y=x	Reflect shape B in the line y=6	Rotate Shape A 90 degrees anti clockwise about the point (0,0)	Translate Shape p by $\binom{7}{3}$	Enlarge shape C by scale factor 3 from the point (6,3)		
Describe the transformation	Estimate the mean	Ratio	Unitary Method	Bar Model		
To state the type of transformation shown along with the details for that specific transformation	Use midpoints to work out an estimate of the mean	A comparison of two or more numbers that indicates their sizes in relation to each other	To calculate the value of one unit or quantity first	A pictorial representation of a problem or concept		
Example Application	Example Application	Example Application	Example Application	Example Application		
<u>Describe</u> the transformation	From the grouped frequency	Share 120 in the ratio 6:4	12 pancakes cost £4.00.	Use a <b>bar model</b> to represent		
of shape P to Q	table find and estimate for		Using the unitary method	the ratio problem		
	the mean.		how much does 1 cost?			
Use the data to	What error hasmade ?	You may use to help you	Use the graph to	Show how could use the data to support her hypothesis		
You should use the given	Identify which part of the	A diagram or table has been	You should get your answer	Work with the given information		
information in your	method or calculation is	given that may be helpful in	from the graph rather than	to give calculations and/or		
calculation or reason	incorrect	organising your work, but you do not have to use it	from calculation	statistical measure that support the given hypotheses		
Example Application	Example Application	Example Application	Example Application	Example Application		

# Use the data to decide which class scored higher over all

# **Example Application** What error has Ben made in his calculations?

# **Example Application** You may use the graph above ...

# **Example Application** Use the graph to estimate the profit made on day 1

Mathematics Command Words – Tier 3 Vocabulary				
Line of reflection	Scale Factor	Vector	Clockwise	Anti- clockwise
The mirror line that a shape will be reflected over.	The is the measurement of how much a shape has been enlarged.	Vectors are used to describe translations.  The vector $\binom{5}{3}$ means 5 right and 3 up.	The direction in which the hand of a clock moves.	The opposite direction to the one in which the hands of a clock move.
Example Application	Example Application	Example Application	Example Application	Example Application
Reflect shape B in the <u>line of</u> reflection y=x	Enlarge shape Q by <u>scale</u> <u>factor</u> 5	Describe the translation of shape A to B using a <b>vector</b> .	Rotate the triangle 90 degrees clockwise.	Rotate the quadrilateral 90- degree <u>anti-clock</u> wise.
Origin	Degrees	Primary Data	Secondary Data	Time series graph
This is the point (0,0)	Is a measurement for angles.	Data collected for the first time for a specific purpose.	Data that has already been collected through a primary source.	A graph showing changes over a period of time.
Example Application	<b>Example Application</b>	Example Application	Example Application	Example Application
Enlarge shape C by a scale factor 3 from the <b>origin.</b>	Sector A on the pie chart is 179 <u>degrees.</u>	Is data collected from the internet <u>Primary</u> or Secondary?	Is data collected from the internet Primary or <u>Secondary</u> ?	Complete the <u>time series</u> graph from the information given.
State the class that contains the median	Modal Class	Frequency Diagram	Direct Proportion	Inverse Proportion
The class which holds the median value.	The class which hold the modal value.	A way of representing data from a frequency table.	When two variables are directly proportional, as one increases the other also increases at the same rate.	When one value increases and the other decreases.
Example Application	Example Application	Example Application	Example Application	Example Application
From the frequency table, find the class which contains the median.	From the frequency table, which is the <u>modal</u> class.	Draw a <u>frequency diagram</u> from the frequency table below.	The sales of ice cream and the temperature are <u>directly</u> <u>proportional</u> . True or false?	The speed of a car and the time a journey takes are inversely proportional. True or false?

$$P = \frac{m}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{m}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{m}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{p_1}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{p_2}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{p_1}{\sqrt{1 - \frac{1}{C}}}$$

$$P = \frac{p_2}{\sqrt{1 - \frac{1$$

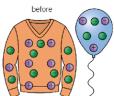
# P2 Chapter 1: Electricity and magnetism

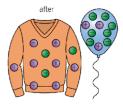


**Knowledge organiser** 

#### Charging up

Static electricity: by rubbing insulators together electrons are transferred, which gives the objects magnetic charges.





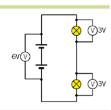
Like charges repel, and opposite charges attract. Charged objects have electric fields around them. These lines show how a positive charge will act.

### Series and parallel circuits

In a series circuit all of the components are connected in one loop. If one component or wire breaks, current stops flowing everywhere.

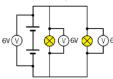
#### **Series circuits**

- contain only one loop
- · the current is the same everywhere
- the potential difference across each component adds up to the potential difference across the battery



#### **Parallel circuits**

- contain multiple branches
- · currents in all the branches add up to make the total current
- the potential difference across each component is the same as the potential difference across the battery



#### Resistance

The **resistance** is a measure of how easy it is to pass through a component.

conductors - low resistance

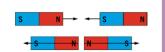
insulators - high resistance

Resistance is calculated by measuring the potential difference and the

The unit for resistance is the **ohm**  $(\Omega)$ .

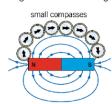
### **Magnets**

- · Magnets have north and south poles.
- Opposite poles attract, and the same poles repel:



#### Magnetic fields

- · A magnet has a field around it.
- . You can see the field around a bar magnet with a small compass or
- . If the lines are close together the field is stronger.



. The Earth has a magnetic field, which acts like a big bar magnet, with the south pole at the top of the planet.

#### Circuits and currents

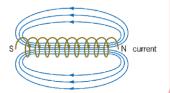
- · Current is the amount of charge flowing per second.
- It is measured with an ammeter (connected in series).
- The unit for current is the amp (A).

#### **Electromagnets**

- Electromagnets are only magnetic when they have a flow of current, so they can be
- . They are made by running a current through a coil of wire.
- They usually have an iron core in the middle of the coil, which makes them stronger.

You can make an electromagnet stronger by:

- · adding more turns of wire on the coil
- using more current.



## **Uses of electromagnets**

- · moving cars or other metal objects
- · sorting iron and steel from aluminium
- · making motors and speakers
- · making levitating trains, which travel much faster as there is no friction

#### How motors work

Applying a current to a coil of wire makes it electromagnetic.

> This causes a force between the coil of wire and the permanent magnet nearby, driving a motor.

#### **Potential difference**

- · Potential difference is the amount of energy transferred by the charges in the circuit.
- It is measured with a voltmeter (connected in parallel). The unit is the volt (V).

Year 8 Electricity and Magnetism		
Key word	Definition	Contextual sentence /example
ammeter	A device for measuring electric current in a circuit.	Ammeters are always connected in series.
amps	Units of measurement of electric current, symbol A.	A 3 amp fuse is commonly used in household appliances.
battery	Two or more electrical cells joined together.	The <b>battery</b> ran out because the torch was left on.
cell	A chemical store of energy, which provides the push that moves charge around a circuit.	In a cell an acid or alkali undergo chemical reactions.
conductor	A material that conducts charge or energy well, such as a metal or graphite.	Silver is a good conductor.
current	The flow of electrical charge (electrons) around a complete circuit per second.	Current is measured in Amperes or Amps.
electric charge	A property of a material or particle that can be positive or negative.	The proton has a positive electrical charge.
electrical field	A region where a charged material or particle experiences a force.	A charged Iron rod generates an electrical field.
electromagnet	A temporary magnet produced using an electric current.	Electromagnets are used in scrap yards.
insulator	A material that does not conduct electricity or transfer energy well.	Plastics make good <b>insulators</b> .
magnetic field	A region where there is a force on a magnet or magnetic material.	Iron filings can be used to show where a magnetic field is acting.
magnetic material	A material that is attracted to a magnet, such as iron, steel, nickel, or cobalt.	Plastics are not magnetic materials.
motor	A component or machine that spins when a current flows through it.	The average family home will have about 50 motors in it.
potential difference	A measure of the push of a cell or battery, or the energy that the cell or battery can supply.	Potential difference is measured in volts.
resistance	How difficult it is for current to flow through a component in a circuit.	Increasing the length of a wire will increase the resistance.
series	A circuit in which components are joined in a single loop.	In a series circuit the current is not divided at any point.
voltage	A measure of the strength of a cell or battery used to send a current around a circuit.	Most remote controls use 1.5 voltage cells.
voltmeter	A device for measuring voltage.	A voltmeter is always placed in parallel.
volts	Units of measurement of voltage, symbol V.	A voltmeter measures the <b>volts</b> across a component.



# Chapter 1: Health and lifestyle Knowledge organiser



#### Diet The digestive system mouth, where ood is chewed salivary glands add enzymes makes enzymes oesophagus (gullet) carries food gall bladder stores bile toma h churns food Bacteria live on bile travels to (physical digestion) fibre in your diet in small intestine and begins chemical digestion of proteins the large intestine small intestine where digested and make important food is absorb vitamins (e.g. into blood (stores faeces) vitamin K). (expels faeces) large intestine where water a minerals are absorbed into the blood

#### **Enzymes**

Enzymes are special proteins that can break large molecules of nutrients down into small molecules.

Enzymes are known as biological catalysts - they speed up digestion without being used up.

There are three main types of enzyme involved in digestion:

		Type of enzyme		
	carbohydrase	carbohydrase protease lipase		
digests	carbohydrates (e.g., starch)	protein amino acids	lipids  fatty acids and glycerol	
	sugars			

#### **Nutrients**

Nutrient	Role in your body
carbohydrates	main source of energy
lipids	fats and oils provide energy
proteins	growth and repair of cells and tissues
vitamins and minerals	essential in small amounts to keep you healthy
water	needed in all cells and body fluids
fibre	provides bulk to food to keep it moving through the gut (not actually a nutrient)

#### Starch

Add a few drops of iodine solution to the food solution. Result: If the solution turns blueblack, the food contains starch.

#### Lipids

Add a few drops of ethanol to the food solution, shake it, and leave for one minute. Then pour the ethanol into a test tube of water.

Result: If the solution turns cloudy, the food contains lipids.

#### **Food tests**

#### Sugar

Add a few drops of Benedict's solution and heat the solution in a water bath.

Result: If the solution turns orange-red, the food contains sugar.

#### Protein

Add a few drops of copper sulfate solution and sodium hydroxide solution.

Result: If the solution turns purple, the food contains protein.

#### Effects of an unhealthy diet

A **balanced diet** is when you have the right proportions of the food groups to keep you healthy.

Eating an unbalanced diet can lead you to be:

#### underweight

Increased risk of:

- poor immune system
- lack of energy lack of vitamins and minerals.

#### overweight Increased risk of:

· heart disease

- stroke
- diabetes
- some cancers.

#### vitamin and mineral deficient

Vitamin A deficiency can lead to night blindness.

Vitamin D deficiency can lead to rickets.

## Effects of lifestyle on health

#### **Drugs**

illness

Drugs are any chemicals that affect the way your brain and body work.

#### Medical drugs Recreational drugs · used in medicine taken for enjoyment/to relax/stay benefit your health if used correctly awake normally have no health benefits used to treat symptoms or cure

some have side effects

examples include: painkillers, antibiotics, and cough mixture · many can be harmful

 many are illegal examples include: alcohol, caffeine, heroine, cocaine, tobacco

#### Alcohol

Alcohol is a depressant because it slows down your body's reactions. Drinking large amounts of alcohol over a long time can cause:

- stomach ulcers
   heart disease
   reduced fertility
- brain damage
   liver damage (cirrhosis)

Drinking during pregnancy increases the risk of:

- · miscarriage · stillbirth · premature birth
- low birth weight babies
   Fetal Alcohol Syndrome (FAS)

#### **Smoking**

Cigarette smoke is full of harmful chemicals including:

tar - clogs the lining of the lungs and alveoli, contains cancer-causing chemicals

nicotine - an addictive stimulant

carbon monoxide - stops blood from carrying oxygen.

Smoking can cause many different diseases, including:

- heart disease
   emphysema
   respiratory infections
- strokes
   lung cancer

Smoking during pregnancy increases the risk of miscarriage and low birth weight babies, and can also affect the fetus' development.

Addiction - When your body becomes used to the chemical changes caused by a drug and you need to take the drug to feel normal. When a person who is addicted to a drug tries to stop taking it, they may

suffer from sickness, nausea, stomach cramps, headaches, anxiety, and sweating. These are called withdrawal symptoms.

Year 8 Unit- Health and Lifestyle		
Key word	Definition	Contextual sentence / example
addiction	A need to keep taking a drug in order to feel normal.	Nicotine addiction causes the smoker to continue to smoke.
balanced diet	Eating food containing the right nutrients in the correct amounts.	The athlete stayed healthy by keeping to a balanced diet.
bile	Substance that breaks fat into small droplets.	Bile is produced in the liver.
carbohydrase	Enzyme that breaks down carbohydrates into sugar molecules.	Carbohydrase are the enzymes which break down pasta.
carbohydrate	Nutrient that provides energy.	Pasta is a good source of carbohydrate.
deficiency	A lack of minerals, that causes poor growth	Vitamin C deficiency can cause skin problems.
digestion	Process where large molecules are broken down into small molecules.	Digestion starts in the mouth.
digestive system	Group of organs that work together to break down food.	The teeth and saliva are at the start of the digestive system.
drug	Chemical substance that affects the way your body works.	Alcohol is a recreational drug.
enzyme	Special protein that can break large molecules into small molecules.	Carbohydrase is an enzyme that breaks down carbohydrates.
fibre	Provides bulk to food to keep it moving through the digestive system.	Oats and barley are good sources of fibre.
lipids	Nutrients that provide a store of energy	Cream, milk and cheese are high in lipids.
malnourishment	Eating the wrong amount or the wrong types of food.	The famine caused malnourishment in the village.
medicinal drug	A drug that has a medical benefit to your health.	Paracetamol is a medicinal drug to help with pain relief.
mineral	An essential nutrient needed in small amounts to keep you healthy.	The mineral calcium is used for strong teeth and bones.
protein	Nutrient used for growth and repair	Meat and fish are high in protein.
recreational drug	Drug that is taken for enjoyment	Alcohol is a recreational drug.
small intestine	Organ where small digested molecules are absorbed into the bloodstream.	The small intestine when stretched out is about 20 feet long.
villi	Tiny projections in the small intestine wall that increase the area of absorption	14 units of alcohol is the recommended weekly limit.
vitamin	Essential nutrients needed in small amounts to keep you healthy	Fruit and vegetables are a good source of vitamin C.



# **Chapter 1: The Periodic Table**



# Knowledge organiser

The Periodic Table displays the names and symbols of all the elements we have discovered which are organised by their chemical properties and their physical properties

#### **Physical properties**

The **physical properties** of an element describe how a substance behaves generally.

(E.g., **conductor** of electricity, dense, conductor of heat, shiny, **malleable**, sonorous, high melting and boiling points)

### **Chemical properties**

The **chemical properties** of an element describe how a substance behaves in terms of its chemical reactions. For example, how reactive it is, what other substances it reacts with, and the products it forms in reactions.

metals are to the left of the red line

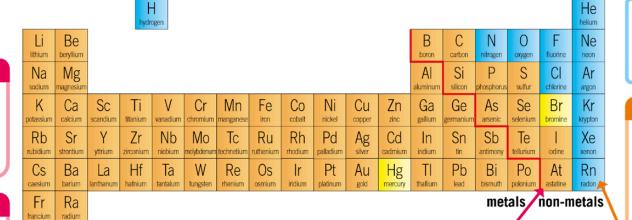
non-metals are on the right

#### Metals

- normally good conductors of heat and electricity
- · shiny when cut
- malleable
- dense and sonorous
- · most have high melting points

# Group 1

- called the alkali metals
- like all other metals but are very reactive
- · react vigorously (strongly) with water
- get more reactive as you go down the group
- lower melting points than most other metals
- melting points decrease down the group
- always produce a metal hydroxide and hydrogen gas when reacted with water



gases at room temprature

This version of the Periodic Table does not include every discovered element.

solids

## Group 7

liquids

- called the halogens
- · generally very reactive
- generally the opposite of Group 1
- · melting point increases down the group while reactivity decreases.
- take part in displacement reactions, where an element from higher up the group takes the place of one from lower down the group in a compound.

For example: potassium iodide + chlorine → potassium chloride + iodine

- columns are called groups
- rows are called periods

Elements in a group normally have similar properties, meaning chemists can predict properties of elements based on their group.

#### Non-metals

- often have properties the opposite of metals
- low boiling points, so are gases at room temperature
- poor conductors of electricity and heat
- dull in appearance
- low density
- · brittle and not sonorous

#### Group 0

- called the noble gases
- very unreactive
- low boiling points, so are gases at room temperature
- like the halogens, their boiling points increase down the group

Year 8 Unit Periodic Table		
Key word	Definition	Contextual sentence / example
acid rain	Rain that has a non-metal dissolved in it.	Acid rain has a pH of about 4.
chemical property	How a substance behaves in its chemical reactions.	All Group 1 metals share many chemical properties.
density	The mass of a material in a certain volume.	Gold has a high <b>density</b> .
displace	A more reactive metal (or non-metal) displaces – or pushes out – a less reactive metal from its compound.	Fluorine will displace any other Halogen.
displacement reaction	In a displacement reaction, a more reactive metal displaces – or pushes out – a less reactive metal from its compound.	A colour change is observed during a Halogen displacement reaction.
group	A vertical column of the Periodic Table. The elements in a group have similar properties.	Group 7 is the only group with solid, liquid and gaseous elements in it.
Group 0	Group 0 is on the right of the Periodic Table. Group 0 elements include helium, neon, argon, and krypton.	<b>Group 0</b> elements were the last to be discovered of all the elements in the periodic table.
Group 1	The elements in the left column of the Periodic Table, including lithium, sodium, and potassium.	All <b>Group 1</b> metals react with water.
Group 7	Group 7 is the second from the right of the Periodic Table. Group 7 elements include fluorine, chlorine, bromine, and iodine.	The Halogens, Group 7, are all toxic.
halogen	Another name for the Group 7 elements.	Fluorine is the most reactive <b>Halogen</b> .
metal	Elements on the left of the stepped line of the Periodic Table. Most elements are metals. They are good conductors of energy and electricity.	Mercury is the only liquid metal at room temperature.
noble gases	Another name for the Group 0 elements.	Helium is the lightest Noble Gas.
non-metal	Elements on the right of the stepped line of the Periodic Table. They are poor conductors of energy and electricity.	Even though it is a solid and conducts electricity, Carbon is a <b>non-metal</b> .
period	A horizontal row of the Periodic Table. There are trends in the properties of the elements across a period.	Hydrogen and Helium are the only elements in the first <b>Period</b> .
physical property	A property of a material that you can observe or measure.	Electrical conductivity is a <b>physical property</b> all metals share.
reactive	A substance is reactive if it reacts vigorously with substances such as dilute acids and water.	Group 1 metals are very reactive.
unreactive	Elements that take part in few chemical reactions are unreactive.	Noble gases like Argon are very unreactive

# Chapter 2: Separation techniques Knowledge organiser



#### What are mixtures?

Mixtures are different substances found together, but not chemically bonded. This means the different substances can be separated from each other.

In a **compound**, different substances are chemically bonded together, while in a mixture they are not.

The substances that make up a mixture keep their own properties and are easy to separate.

You can change the amounts of the substances in a mixture.

You can tell the difference between a pure substance and an impure substance - a pure substance has a single, sharp melting point, while an impure substance (a mixture) has a range of temperatures for its melting point.

#### **Solutions**

Solutions are a type of mixture made of two parts:

- 1 Solvent: the liquid that makes up most of the solution.
- 2 Solute: the substance that is added to the solvent and dissolves into it.

The solute usually starts as a solid, and its particles break away from each other and move into the solvent.

#### Solubility

The solubility of a solute means how much solute can dissolve in a certain volume of solvent.

- · Different solutes have different solubilities in different solvents.
- · Increasing the temperature often increases the solubility.
- · Soluble substances can dissolve, insoluble substances cannot.

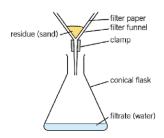
Saturated: when so much solute has been added to the solvent that no more can dissolve, we say the mixture is saturated.

# How can we separate mixtures?

#### **Filtration**

A method to separate a mixture of an undissolved solid and a liquid.

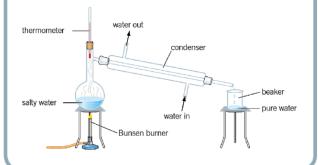
- 1 Filter paper has extremely small holes in it.
- 2 Particles in a liquid or solution are so tiny that they can fit through the holes.
- 3 Larger particles of the solid are too big to fit through the holes and are held back by the paper.
- · Residue: solids left behind in the filter paper.
- Filtrate: the liquid that passes through the filter paper.



#### **Distillation**

A method that separates a solute and a solvent while keeping the solvent.

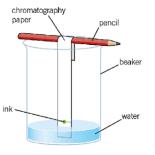
- 1 The solution is boiled so the solvent turns in to a gas.
- 2 The gas is then cooled down in a condenser, where it turns back into a liquid and can be collected.



#### Chromatography

A method used to separate mixtures that are soluble in the same solvent.

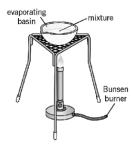
- 1 A mixture like ink is placed on a piece of paper, which is placed in a solvent.
- 2 As the solvent moves up the paper it separates all the different constituents (parts) of the ink, producing a chromatogram.



#### Evaporation

A method to separate a solute and a solvent, keeping the solute.

- 1 The solution is heated then left in an evaporating basin until all the solvent evaporates.
- 2 The solute is left behind as a solid.



Year 8 Unit Separation Technique		
Key word	Definition	Contextual sentence / example
chromatogram	An image obtained from chromatography.	The chromatogram showed three mixtures.
chromatography	A technique to separate mixtures of liquids that are soluble in the same solvent.	The dyes in ink can be separated using chromatography.
dissolve	The mixing of a substance (the solute) with a liquid (the solvent) to make a solution.	Some compounds like salt will dissolve in water.
distillation	A technique that uses evaporation and condensation to obtain a solvent from a solution.	Water and Ethanol can be separated by distillation.
filtering	A way of separating pieces of solid that are mixed with a liquid or solution by pouring through filter paper.	Sand can be removed from seas water by filtering.
filtrate	The liquid or solution that collects in the container after the mixture has passed through the filter paper.	The filtrate only contains soluble substances and the solvent.
impure	A substance is impure if it has different substances mixed with it.	Air is impure, it's a mixture of different gases.
insoluble	A substance that cannot dissolve in a certain solvent is insoluble in that solvent.	Sand doesn't dissolve in water, it is insoluble.
mixture	A mixture is made up of substances that are not chemically joined together.	Ink is a mixture of different coloured dyes.
pure	A substance is pure if it has no other substances mixed with it.	Chromatography can be used to determine a substance is pure.
residue	The solid that collects in the filter paper.	When you pour sea water through filter paper, the sand is the residue.
saturated solution	A solution in which no more solute can dissolve.	If you continue to add salt to a beaker of water you will eventually make a saturated solution.
solubility	The solubility of a substance is the mass that dissolves in 100 g of water.	The solubility of a solute can be increased by raising the temperature of the solvent.
solute	The solid or gas that dissolves in a liquid.	Carbon Dioxide is a solute in Coca-Cola.
solution	A mixture of a liquid with a solid or a gas. All parts of the mixture are the same.	When you add salt to water and you make a solution of salty water.
solvent	The liquid in which a solid or gas dissolves.	Water is a useful solvent for making solutions.

# Half Term Two Who inspires me?

- 1. What does it mean to be inspirational?
- 2. How did Emmeline Pankhurst change the world?
- 3. How did Mahatma Ghandi change the world?
- 4. How did Martin Luther King change the world?
- 5. Who was Oscar Romero?
- 6. Who is Greta Thunberg?
- 7. Review and assessment

# 1. What does it mean to be inspirational?

An inspirational person is somebody who motivates others mentally or emotionally to be a better person and to make the world a better place. An inspirational person might show qualities such as courage, selflessness, honesty and perseverance. There are many famous inspirational people who have changed the world such as Emmeline Pankhurst, Mahatma Ghandi, Martin Luther King, Rosa Parkes, Oscar Romero and Greta Thunberg who we will study in this unit. However, you do not have to be famous to be inspirational. You will have inspirational people within your own family, friends and communities!



# 2. How did Emmeline Pankhurst change the world?

Emmeline Pankhurst is one of the most influential people of the 20th century. She was a British woman who fought for women's right to vote and was one of the leaders of the Suffragette movement. Emmeline Pankhurst was born on 14 July 1858 in Moss Side, Manchester.

As she grew older, Emmeline noticed that women were treated differently to men. At this time, women were regarded as inferior to men, both physically and intellectually. Consequently, they weren't allowed to vote, own property, have important jobs (such as doctors or lawyers) and their education was deemed to be insignificant compared to men's. Emmeline wanted to help change that. In 1903 she, along with her daughters Sylvia and Christabel, founded the Women's Social and Political Union (WSPU). The aim of the WSPU was to gain equal voting rights for women and they held many protests to try and achieve it.

When the World War 1 ended in 1918, the Representation of the People Act was introduced, giving women over the age of 30 who owned property, the right to vote. In 14 June 1928, Emmeline died just a few weeks before a law was passed giving all women over 21 years of age the right to vote. Emmeline is regarded as a strong-willed and courageous woman who stood up for her beliefs and changed the lives of British women forever.

# 3. How did Mahatma Ghandi changed the world?

Mahatma Gandhi was born 1869 in India into a Hindu middle-class family. He was originally called Mohandas. Ghandi was given the title Mahatma (great soul) which is sometimes used as his first name. Gandhi is one of the most famous leaders and champions for justice in the world. His principles and firm belief in non-violence have been followed by many other important civil rights leaders including Martin Luther King Jr. When India was a colony of Great Britain, Gandhi used nonviolent methods to protest against British rule. India finally won its independence in 1947. Ghandi changed the history of India for not only its governing but also to stop the oppression of some of the lower classes of citizens. He tried to make peace between Muslim's and Hindu's but was ultimately assassinated by a Hindu extremist in 1948. 3 million people took part in Gandhi's funeral. He continues to inspire people today to act against injustice.

# 4. How did Martin Luther King change the world?

Martin Luther King Junior was born on 15 Jan 1929, the son of a Baptist preacher, when segregation between black and white people was in place in the Southern States of America. When in 1955 Rosa Parks was arrested after refusing to give up her seat for a white passenger, the local black community chose to boycott the bus service and they asked King to lead the campaign.

His speech spurned people on to fight segregation but caught the attention of more sinister forces – Dr Martin Luther King Jr's family received threatening calls and their house was bombed. Despite the violence he was threatened with, he believed in non-violent resistance and refused to react with hate. He organised a march to highlight the need for a Civil Rights Act, to end segregation, and some 250,000 people attended. Here he spoke his famous 'I Have a Dream' speech which called for racial harmony.

In 1964, he got what he was campaigning for - The Civil Rights Act ended segregation in public places, banned employment discrimination and the voting act that followed allowed Black people to exercise their legal right to vote. On the 4th of April 1968 Martin Luther King was in Memphis. As he stood on his hotel room balcony he was assassinated.

# 5. Who was Oscar Romero?

Romero was born on 15th August 1917 in El Salvador. He was ordained a priest in 1942 in Rome and was made Archbishop of San Salvador in 1977. A few weeks after Romero was appointed as archbishop, Romero began to speak out on behalf of the landless peasants living in poverty. Many of the people of San Salvador suffered terribly at this time and Romero spoke out against the government. Romero witnessed violations of human rights, murders, disappearances and torture – all carried out by the government During Mass he talked about persecution - reading out lists of names of the 'disappeared' people. In 1980 he was shot while leading Mass in his cathedral. His funeral was attended by more than 250,000 mourners from across the world.

# 6. Greta Thunberg

Greta Thunberg is an environmental activist. She was born in Stockholm, Sweden, in 2003. When she was eight, she started learning about climate change. The more she learned, the more baffled she became as to why so little was being done about it. In August 2018, Greta decided to take action. Instead of going to school, she made a large sign that read 'SCHOOL STRIKE FOR CLIMATE', and calmly sat down outside the Swedish parliament. Her aim was to make politicians take notice and act to stop global warming. Greta has inspired many people across the world to protest against climate change. In March 2019, climate campaigners across the world, and inspired by Greta, came together to co-ordinate the first Global Strike for Climate. It was huge – over 1.6 million people from 125 countries took part!

Key Term	Definition	Contextual Sentence
Inspirational	Somebody who motivates others mentally or emotionally to be a better person and to make the world a better place.	Many people believe Martin Luther King is an inspirational person.
Ahmisa	An ancient Indian principle of non- violence.	Mahatma Ghandi believed in ahmisa.
Justice	Upholding what is fair and right.	Oscar Romero campaigned for justice in San Salvador.
Oppression	When a person or group of people who have power use it in a way that is not fair, unjust or cruel.	Emmeline Pankhurst worked to stop the oppression of women.
Independence	Freedom from the control or influence of others.	India won independence in 1947.
Suffragette	A female advocate of the right of women to vote.	Emmeline Pankhurst was a suffragette.
Gender equality	Women and men, and girls and boys, enjoy the same rights, resources, opportunities and protections.	The Equality Act of 2010 ensures there is gender equality.
Segregation	The practice of separating people according to groups, especially racial groups.	Martin Luther King protested to end racial segregation.
Protest	A complaint or objection against an idea, an act, or a way of doing things.	Martin Luther King used peaceful protest.
Boycott	An organised refusal to have any dealings with a person, country, or business.	Martin Luther King organised a bus boycott after the arrest of Rosa Parks.
Prejudice	An unfair and unreasonable opinion or feeling formed without enough thought or knowledge.	Prejudice often leads to discrimination.
Discrimination	When a person is treated unfairly or badly because the person is one of a particular group.	Martin Luther King campaigned to stop discrimination.
Persecution	The mistreatment (bad treatment) of an individual or group by another group.	People sometimes suffer persecution for their beliefs.
Climate change	Significant and long-lasting change in the Earth's climate and weather.	Greta Thunberg protests about climate change.

# **Half Term Two**

# What are the key beliefs in Hinduism?

- 1. Who are the Gods and Goddesses in Hinduism?
- 2. What do Hindus believe about life after death?
- 3. How do Hindus worship?
- 4. What are important festivals in Hinduism?
- 5. What are important pilgrimage sites in Hinduism?
- 6. What does it mean to be a part of the Hindu community in Britain today?
- 7. Review and Assessment

# 1. Who are the Gods and Goddesses in Hinduism?

In Hinduism there is one supreme spirit known as Brahman. However, Brahman takes on many forms that some Hindus worship as gods and goddesses in their own right. Some believe there are 33 million different gods and goddesses. There are three important Gods that together make up the trimurti, these are:

- Brahma who is the creator God
- Vishnu who is the preserver God
- Shiva who is the destroyer God

# 2. What do Hindus believe about life after death?

Hindus believe in reincarnation. Most Hindus believe that humans are in a cycle of death and rebirth called samsara. When a person dies their atman (the little bit of Brahman inside them) is reborn into a different body. Hindus believe in karma or 'intentional action'. Many believe good or bad actions in life leading to positive or negative merit, determines the atman's rebirth. Some Hindus believe that humans may be reborn in animal form, and that rebirth from human to animal form only occurs if an atman has repeatedly failed to learn lessons in human form. Living life according to teachings in the scriptures will eventually lead to moksha. Some Hindu scriptures describe moksha as the atman becoming absorbed with Brahman, from where each atman is said to originate.

# 3. How do Hindus worship?



A Hindu temple is called a mandir, but most Hindus have a

shrine at home where they perform personal and family worship. Worship in Hinduism is called puja. The rules for puja are laid down in the Hindu holy books. It involves making an offering to an image or picture of one of the gods or goddesses. An image is called a murti, which means form. A murti is intended to help people worship as it shows a quality of Brahman. A puja tray has six key features that helps a Hindu worship:

- 1. A bell-this is rung at the beginning of worship to let the Gods know worship is about to begin.
- 2. A dish containing sandal wood- this is used to mark the worshipper's forehead as a symbol of his or her devotion.
- 3. Food offerings- offerings of food such as nuts, fruit, rice, and sweets are placed on the shrine. These are symbolic exchanges of love between the worshiper and God.
- 4. A pot containing holy water- this is used for cleaning and purification.
- 5. An incense stick- this is used to cleanse and purify the air.
- 6. Diva lamp- this is used to bring light to the shrine and as a symbol of God's presence.

# 4. What are important festivals in Hinduism?

Diwali is one of the biggest festivals celebrated by the Hindu community. Diwali celebrates the story of the Hindu Gods, Rama and Sita. In the story, Rama is sent away to a far-off country by his father. Rama leaves with his wife Sita, but Sita gets kidnapped by a wicked demon called Ravana. The monkey God, Hanuman, helps Rama save Sita and kill Ravana so they can finally return home. This story is about good overcoming evil. Lamps were lit to guide Rama and Sita home. This is why most Hindus light diya lamps during Diwali today. Hindus also celebrate Diwali to honour the goddess Lakshmi, the Hindu goddess of fortune. Most Hindus believe that if the house is clean and there are diya lamps to light the way, then she will visit their homes bringing good fortune for the coming year.

Today Hindus celebrate light overcoming darkness during Diwali. Many Hindus celebrate at home and in the mandir by giving presents to each other, sharing meals, singing, dancing, and going to firework displays. Many Hindus thank Lakshmi for everything they have by giving money and food to the poor.

# 5. What are important pilgrimage sites?

A pilgrimage is a special journey to a place of religious significance. The main pilgrimage sites in Hinduism are:

- 1. The River Ganges-This river is situated in India. Many stories from Hindu scripture feature this river. Some Hindus believed that it flowed from heaven to purify humans. There are various locations along the River Ganges which can attract millions of pilgrims. Many Hindus believe water from anywhere on the River Ganges is purifying and holy.
- 2. Varanasi- This is an ancient city on the banks of the River Ganges. It is one of the most sacred sites in India because it is believed to have been the home of Lord Shiva. Some Hindus believe if they die at Varanasi, they might be able to achieve Moksha sooner.

# 6. What does it mean to be part of the Hindu community in Britain?

According to the 2011 census Hinduism is the third biggest religion in Britain today. There are over 161 mandirs in Britain today. In Britain Diwali is widely celebrated and London has held a Diwali celebration in Trafalgar Square since 2001 which is open to all and is attended by about 35,000 people.

Hindus believe in ahimsa. This is the belief that no living thing should be harmed. This applies to both humans and animals. Hindus also believe all living things have souls, which is why many committed Hindus living in Britain today are often vegetarians. This belief also encourages many Hindus to be part of environmental charities. The belief in karma motivates many Hindus to be part of charities that help the poor e.g. Sewa UK.

Key Terms	Definition	Contextual Sentence
Brahman	The universal supreme spirit that controls everything.	Brahman can appear in the form of many different Gods.
Vishnu	The preserver God.	Vishnu protects the earth from being destroyed.
Shiva	The destroyer God.	Shiva is the third god in the Hindu trimurti.
Brahma	The creator God.	Brahma is the first God in the Hindu trimurti.
Rama	The seventh avatar of the Hindu god Vishnu.	Rama is a key part of the Diwali story.
Sita	The wife of Rama, an avatar of the God Vishnu.	Sita is abducted by the demon king Ravana.
Ganesh	The elephant-headed god in Hinduism. He is the son of Shiva and Parvat.	Ganesh is the remover of obstacles.
Lakshmi	Lakshmi is the goddess of money and good luck in Hinduism.	Lakshmi is the wife of the Hindu God Vishnu.
Trimurti	The Trimurti are three Hindu gods; Brahma; Vishnu; Shiva. Brahma.	Trimurti means having three forms.
Sanskrit	Ancient Hindu language.	Sanskrit is a language of ancient India with a 3,500-year history.
Samsara	The cycle of life, death, and reincarnation.	Samsara is governed by the law of karma.
Atman	A part of Brahman in everyone.	The atman moves to a different body.
Karma	Actions which affect rebirth.	Giving to charity would bring good karma.
Reincarnation	Belief that a soul is reborn in another body.	Reincarnation is a belief in life after death.
Moksha	The end of the rebirth cycle.	Moksha is the liberation from the cycle of samsara.
Mandir	The place Hindus go to worship.	A Mandir has statues of many Hindu Gods.
Shrine	A holy place.	Most Hindu homes have a shrine.



# Topic: Life in Tudor England.

# How similar was life in Tudor England to today?

# Why did the monarchy face so many challenges in the 15 – 1600s

Key events	Key events		
1567	Thomas Harman wrote a book on sturdy beggars. At the end of the Tudor period, poverty was on the rise, and so was crime. Some of these criminals were 'sturdy beggars' who tricked people into giving them money. There were 23 types of sturdy beggar!		
1576	An actor called James Burbage built the first successful, purpose built theatre in Shoreditch, north-east London. He made a fortune and other theatres followed, such as the Globe and the Swan.		
1588	It is in this year that Shakespeare started writing plays.		
1601	Elizabeth I introduced the first ever law that was designed to help the poor. It was called the Poor Law, and it didn't change until the 1800s. Relief was provided for those who needed it, but sturdy beggars were punished.		

Key concepts	
Class	Society was very structured in the Tudor period and there were different classes of people. Your class largely depended on wealth. The nobility were at the top of the social scale, whilst paupers were at the bottom.
Whitsun	This was a religious holiday in May, when there were lots of entertainments and feasting.
Justice of the Peace	An official who was selected to keep law and order in the local area. This role was created in the Medieval period.

Key words / terms	
Gentleman	A wealthy person, of a high ranking social position.
Labourer	An ordinary unskilled worker.
Merchant	Someone who made their money from selling goods or trade.
Yeoman	Farmers who owned or rented their land, and employed workers.
Pauper	The poorest people in society, who relied on charity.
Grammar school	A school that taught Latin and Greek grammar to the sons of wealthy people. Some free places were offered to poor boys.
Blood sports	A sport that involved the hunting or wounding of animals.
Strolling players	A group of actors that travelled the country performing.
Pottage	A vegetable stew that was the main food of poor people.
Vagabonds	These were poor people who travelled the country either looking for work or begging. They were also known as sturdy beggars, who tricked people into giving them money.
Constable	Each town or village would have a constable who was responsible for law and order.
House of Correction	This was a method of punishment introduced in the Elizabethan period, for poor people who refused to work.

#### 4- The Reign of Elizabeth I

#### 4.1- Marriage candidates

Robert Dudley - Dudley, the Earl of Leicester, was an ambitious, good looking courtier. Elizabeth spent a lot of time with him and people thought they were in love, but there was a big problem: he was already married. When his wife was found dead there was a scandal and rumours circulated. This led Elizabeth to withdraw from Dudley as her reputation and position as queen were threatened.

King Philip of Spain - In the 1560s, King Philip proposed to Elizabeth. He was a Catholic who had been married to Mary, Elizabeth's sister. MPs were not in favour of this alliance for fear of causing religious unsettlement and creating a foreign influence in government. Elizabeth cautiously rejected this offer.

**Archduke Charles** - In 1567 Elizabeth considered marrying Archduke Charles of Austria but his Catholic faith meant there were the same religious differences as with King Philip of Spain, and in the end there was no match.

Francis Duke of Alencon - Marriage negotiations went on for nearly a decade with Francis, who was heir to the French throne. There were many political advantages to be gained from this alliance, for example influence over French policy in the Netherlands, and Elizabeth used this to her advantage. However, Francis died in 1584 and after that Elizabeth was destined to be alone









#### 4.2- The Middle Way

Elizabeth I was brought up a Protestant. She realised that religion had caused a lot of problems for England. She tried to find a 'middle way' that both Catholics and Protestants could accept:

She called herself 'Supreme Governor', not 'head' of the Church of England.
Church services and the Bible were in English.

Many elements of Catholic services were allowed, including bishops, ordained priests, church decorations, music and colourful robes.

The English prayer book was brought back, but a Latin edition was also printed.

The new prayer book said that Christ was 'really present' in the bread and the wine in the Communion service. This was halfway between Catholic and Protestant beliefs.

There was no question, however, that people could believe what they wanted. The Act of Uniformity (1559) stated that everybody had to attend the Church of England and use the Book of Common Prayer.

She punished the Puritans and any Catholics who refused to go to Church of England services.

These people were called recusants.

The key to the 'middle way' was that the monarch was responsible for the faith of the state. For Elizabeth, the success of the 'middle way' would be a means to extend her control over the country.

#### Did Elizabeth change her 'middle way' policy?

Towards the end of her reign, however:

The Pope excommunicated Elizabeth in 1570.

There were plots and rebellions against Elizabeth led by Catholics. The leaders of these were executed

Catholic priests who conducted secret services for Catholics were tortured and executed. Elizabeth executed as many Catholics as Mary burned Protestants.

By the end of Elizabeth's reign, England was firmly a Protestant country.

#### The "Virgin Queen"

Elizabeth emphasised her "Virgin Queen" image portraying herself as a monarch who put the stability and security of England before her personal happiness. She would not marry anyone who might jeopardise England's position

#### 4.3-Timeline of Elizabeth

September 7, 1533: Elizabeth born at Greenwich Palace

May 9, 1536: Ann Boleyn beheaded February 3, 1542: Catherine Howard beheaded

January 1547: ·Henry VIII dies July 6, 1553: ·The sixteen-year-old Edward VI dies after a six-year reign; Mary I takes the throne.

1554: ·Sir Thomas Wyat the Younger's Rebellion November 17, 1558: ·Mary I dies, Elizabeth succeeds

January 15, 1559: ·Elizabeth's coronation ceremony

1559: ·Elizabeth's Protestant/Catholic religious settlement

1561: •The French king Francis II dies, and Mary Queen of Scots returns to Scotland.

1568: ·Elizabeth imprisons Mary Queen of Scots

1570: Pope Pius V issues an interdict against Elizabeth

1571: Ridolfi Plot to overthrow Elizabeth and replace her with Mary Queen of Scots

1571: -Elizabeth names William Cecil Lord Treasurer and gives him the new title of Lord Burleigh. She brings in Francis

Walsingham to replace him as Secretary of State. 1575: ·Leicester entertains Elizabeth at Kenilworth Castle 1580: Pope Gregory XIII announces that killing Elizabeth is

ot a sin

1582: Duke de Guise Plot on Elizabeth's life

1583: ·Marriage negotiations with the Duke de Alencon

1579: ·Leicester secretly marries Lettice Knollys, Elizabeth's

1579: ·Elizabeth's marriage negotiations with the French

1584: ·William the Silent assassinated

1584: Bond of Association enacted

King's brother (Anjou) dissolve

1585: Act for the Preservation of the Queen's Safety passed

1586: Babington Plot to overthrow Elizabeth and replace her with Mary Queen of Scots

February 8, 1587: ·Mary Queen of Scots executed April 1587: ·Drake's surprise attack on Spanish fleet at

July 1588: Philip of Spain launches the Spanish Armada

1588: Earl of Leicester (Sir Robert Dudley) dies

1590: death of Francis Walsingham

1598: ·Lord Burleigh (William Cecil) dies

February 25, 1601: Robery Devereaux, Earl of Essex, executed

March 24. 1603: ·death of Queen Elizabeth

4.4- Key Words	Definition	Contextual Sentence
Suitor	A man who pursues a relationship with a particular woman, with a view to marriage.	Elizabeth decided to marry non of her potential suitors.
Excommunicat e	Officially exclude (someone) from participation services of the Christian Church.	Elizabeth had annoyed the papacy to the point where she became excommunicated.
Interdict	Forbid.	The Pope issued an interdict to Elizabeth to stop supporting foreign protestants.
Assassination	To attempt to kill someone.	Elizabeth lived her life with significant threats of being a victim of assassination.

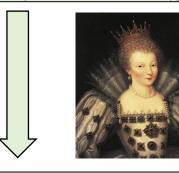
#### 5- Threats to Elizabeth I

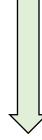
#### 5.1- Mary, Queen of Scots

Mary, Queen of Scots was Elizabeth's cousin (not to be confused with Mary I, who was Elizabeth's sister).

Mary's life had been filled with dramatic events. She had become Queen of Scotland in 1542 when she was just six days old. Her first two husbands died and she was implicated in the second one's murder. She was forced to abdicate and was imprisoned. She managed to escape and fled to England where she sought refuge from Elizabeth in 1568.

Mary's threat to Elizabeth suddenly became more immediate now that she was in the country. In the short term, Elizabeth allowed Mary to live in Carlisle Castle as a closely guarded 'guest'.







Mary, Queen of Scots was a threat to Elizabeth's rule because she had two claims to the English throne:

Many people believed Elizabeth to be illegitimate and so felt she had no right to be on the throne. (Her father, Henry VIII, had divorced his first wife. Catholics didn't recognise divorce and so viewed his second marriage to Elizabeth's mother as illegal.) Elizabeth had converted England's official religion to Protestantism, leaving many Catholics disgruntled. Mary was a Catholic and many viewed her as their figurehead and a rightful replacement to the throne



#### Mary is executed

Mary was put on trial, found guilty of treason and was executed on 8 February 1587 at Fotheringhay Castle. The executioner held up her severed head and shouted "God save the Queen".

#### 5.2- The Spanish Armada

In the late 16th century, Spain was the most powerful empire in the known world. Spain's king, Philip II, ruled much of the New World and much of western Europe. England was helping Spain's Dutch rebels and English ships, under the command of Sir Francis Drake, to attack Spain's treasure fleet as they returned from the Caribbean.

Worst of all, England was now a Protestant nation. When Elizabeth I executed the Catholic Mary Queen of Scots in 1587, Philip was personally angered and, wanting England for himself, decided to invade.

#### The plan

Philip's plan was that an armada of 130 ships would sail to the Netherlands, pick up 30,000 Spanish troops and invade England. However, the Armada was delayed by an English attack on Cadiz harbour in 1587 where Drake made off with gold treasures and destroyed over 100 Spanish ships.

#### The battle

In 1588, Philip's Armada finally set sail. When the Armada anchored at Calais, the English used fireships to scatter the Spanish fleet and then attack it at the Battle of Gravelines in July 1588. The Armada was forced to abandon its invasion attempt and was destroyed by storms, which Philip I called the Protestant Wind, whilst trying to sail home round the north of Scotland.

#### What did the battle represent?

The conflict with the Spanish Armada represented the height of the long struggle between Protestant England and Catholic Spain. Until recently, both English and Spanish historians believed that the Armada was the time when Spain's fortunes changed and England became great. Modern historians. however, think that the failure of the Armada - though a setback – was not the death-blow to Philip it was made out to be at the time although they agree that it did 'make' Elizabeth into a formidable queen.







5.3- Key Words	<b>Definition</b>	Contextual Sentence
Martyr	A person who is killed because of their religious or other beliefs.	By killing Mary, Queen of Scots, Elizabeth had made her a martyr.
Treason	The crime of betraying one's country, especially by attempting to kill or overthrow the sovereign or government.	By trying to kill Elizabeth, the rebels were committing treason.
Executioner	An official who carries out a sentence of death on a condemned person.	Mary wore red as she walked towards the executioner.
New World	The New World is one of the names used for the majority of Earth's Western Hemisphere, specifically the Americas.	The New World offered a place of opportunity and financial gains.

#### 6.1- James I summary

James was king of Scotland until 1603, when he became the first Stuart king of England as well, creating the kingdom of Great Britain.

James was born on 19 June 1566 in Edinburgh Castle. His mother was Mary, Queen of Scots and his father her second husband, Lord Darnley. Darnley was murdered in February 1567. In July Mary was forced to abdicate in favour of her infant son. James's tutor, the historian and poet George Buchanan, was a positive influence and James was a capable scholar. A succession of regents ruled the kingdom until 1576, when James became nominal ruler, although he did not actually take control until 1581. He proved to be a shrewd ruler who effectively controlled the various religious and political factions in Scotland.

In 1586, James and Elizabeth I became allies under the Treaty of Berwick. When his mother was executed by Elizabeth the following year, James did not protest too vociferously - he hoped to be named as Elizabeth's successor. In 1589, James married Anne of Denmark. Three of their seven children survived into adulthood.

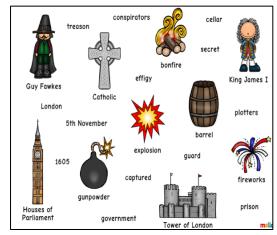
In March 1603, Elizabeth died and James became king of England and Ireland in a remarkably smooth transition of power. After 1603 he only visited Scotland once, in 1617.

One of James's great contributions to England was the Authorised King James's Version of the bible (1611) which was to become the standard text for more than 250 years. But he disappointed the Puritans who hoped he would introduce some of the more radical religious ideas of the Scottish church, and the Catholics, who anticipated more lenient treatment. In 1605, a Catholic plot to blow up king and parliament was uncovered. James's firm belief in the divine right of kings, and constant need for money, also brought him into conflict repeatedly with parliament.

Abroad, James attempted to encourage European peace. In 1604, he ended the longrunning war with Spain and tried to arrange a marriage between his son and the Spanish Infant. He married his daughter Elizabeth to the elector of the palatinate, Frederick, who was the leader of the German Protestants.

James's eldest son Henry died in 1612 and his wife Anne in 1619. James himself died on 27 March 1625 and was succeeded by his second son, Charles









#### 6.2- The Gunpowder Plot

On the face of it, the Gunpowder Plot was an attempt by a group of Catholics to blow up the king and the Houses of Parliament, this being the place where all of the country's laws are made. In October 1605, one of the plotters gave the game away whilst trying to warn a relative, who was an MP. On 4 November Guy Fawkes was caught redhanded with the gunpowder just before the king was due to open Parliament.

You could compare to modern terrorist atrocities. The plotters had no chance of persuading the English Catholics to rebel, and were hoping that – if they destroyed the government – the King of Spain might step in and take over.

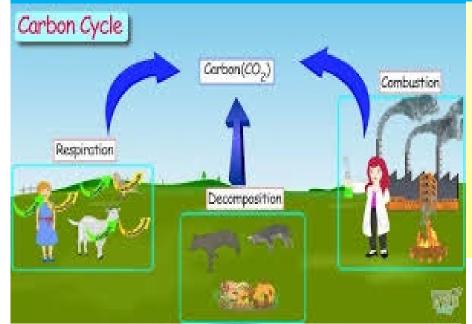
Alternatively, you could see the plot as an example of a government tricking its citizens and influencing public opinion – an example of a government abusing its power.

#### The execution of Guy Fawkes



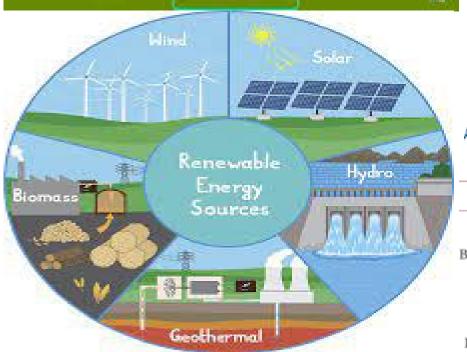
6.3- Key Words	Definition	Contextual Sentence
Effigy	A sculpture or model of a person.	It has become a tradition on the 5 <sup>th</sup> November, to burn an effigy of Guy Fawkes.
Government	The group of people with the authority to govern a country or state.	The government of James I were wary of the threat posed by the Catholics.
Conspirators	A person who takes part in a conspiracy.	The conspirators were led by Robert Catesby in the gunpowder plot.
Union	The action of joining together or the fact of being joined together, especially in a political context.	The union between England and Scotland arose because of James I succession to the English throne.

# Year 8 Geography Knowledge Organiser – Carbon, Water and Energy





# Fossil Fuel Impacts Include:





Ocean Extreme Acidification Weather

Sea Level Rise

Plastic Pollution

Air Pollution

Water Pollution

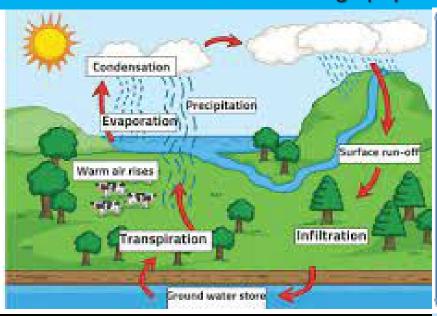
Oil Health

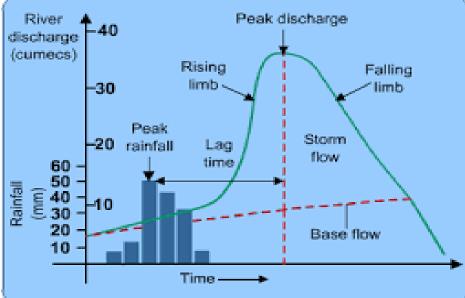
Spills Issues

# Renewable Energy

Advantages	Disadvantages	
Easily Regenerated [2]	Weather Dependency [7]	
Boost Economic Growth [3]	High Installation Cost [8]	
Easily Available [4]	Noise caused by Wind Energy [9]	
Support Environment [5]	Fluctuation problem (Solar) [10]	
Low Maintenance Cost [6]	Intermittency Issue (Wind) [11]	

### Year 8 Geography Knowledge Organiser – Carbon, Water and Energy





# **FIVE TYPES OF DROUGHT**

METEOROLOGICAL drought refers to an extended period of dry weather patterns.



HYDROLOGICAL drought refers to low water supply in our rivers, lakes, aquifers, and other reservoirs that often follows meteorological drought.



AGRICULTURAL drought occurs when a water shortage significantly damages or destroys agricultural crops.

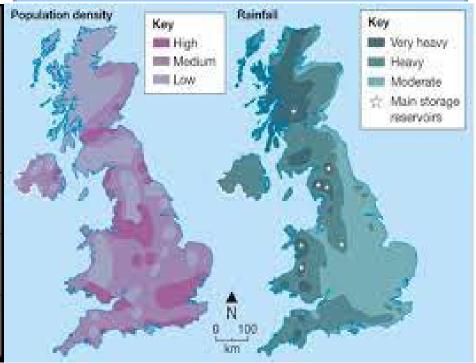


ECOLOGICAL drought is the most recently defined type of drought and refers to widespread ecological damage caused by the lack of soil moisture.



SOCIOECONOMIC drought refers to when a water shortage affects the supply and demand of drought commodities, such as water, food grains, and fish.





# Year 8 Geography Knowledge Organiser – Vocabulary

Key Term	Definition	Contextual Sentence
Carbon Cycle	The process that moves carbon between plants, animals and the atmosphere.	The biological carbon cycle is comparatively quick.
Renewable Energy	energy that comes from a source that won't run out.	The cost of solar, wind, and other forms of renewable energy is getting cheaper
Fossil Fuel	Originate from plants and animals. Example: Coal, Oil and Gas.	Natural gas is a fossil fuel.
Wind energy	A form of renewable energy that uses wind power to generate electricity.	In the past decade, wind power has become the most popular renewable source.
Water Cycle	Shows the continuous movement of water within the Earth and atmosphere.	Precipitation is the most obvious stage of the water cycle.
Storm hydrograph	Shows the change in river flow from the start of a storm until the end.	Storm hydrographs' shape depends on physical features of drainage basins.
Drought	Long period of dry weather that occur anywhere in the World.	The drought is worst in the central African states.
Flood	An overflow of water on to dry land.	A flood covered the whole area.



# Spanish: Knowledge Organiser Year 8 Term 1 Claro Book 1 Unit 5: En mi ciudad

Eg Voy a bailar en una discoteca = I'm going to dance in a club

5.1 De paseo po	or mi ciudad	5.2 Por eso	voy allí	5.3 ¡Sigue todo ı	ecto!	5.4 Planes para	el fin de
hay un lugar un banco una biblioteca una calle una catedral un cine una estación de un estadio un hospital un hotel una iglesia un instituto una mezquita un museo un parque una plaza de tor un restaurante un supermercad una tienda de ro bonito/a histórico/a	there is/are place bank library street cathedral cinema tren train station stadium hospital hotel church school mosque museum park os bullring restaurant o supermarket pa clothes shop pretty historic	apoyar comprar estudiar ir leer observar pasear ver viajar visitar las ruinas el sitio único/a	to support to buy to study to go to read to observe to walk to see, watch to travel to visit ruins site, place unique		thank you very  you're welcome to cross to go past to take take to turn turn the first the second the third on the right on the left go straight on at the end direction, address square traffic light	bailar en la discot	to sing in the choir weekend weekend to go to a to swim in the set to practise judo to go out with it's going to be n de arte
tranquilo/a	quiet, peaceful						
	e verb to go – ir		We go / are goin		Vamaa		
I go/ am going	Voy		We go / are going		Vamos Vais		
You go/ are goin			You go/ are going		Vais		
He/she/it goes/ i	s going <i>Va</i>		They go/ are goir	ng	Van		

#### Unit of work 5:Key language in context

#### Saying what is and isn't in a city:

Saying where we and others are going and what we are going to do using 'ir' in the PRESENT tense:

En mi ciudad hay una estación de tren En mi ciudad hay tres supermercados En mi ciudad hay un instituto **grande** No hay estadio

Voy al parque para jugar al futból Mi amigo está en Barcelona para visitar a su amigo

¿Por dónde se va a la discoteca? ¿Por dónde se va al parque? Sigue todo recto Toma la primera a la derecha Toma la segunda a la izquierda Tuerce a la deredcha Tuerce a la izquierda

Saying where we and others are going to do at the weekend using 'ir' in the FUTURE tense:

¿Qué vas a hacer este fin de semana? Este finde voy a ir de compras Este finde vamos a nadar en el mar

- In my city there is a train station
- *In my city there are* three supermarkets
- In my city there is a **big** school
- There isn't a stadium
- I am going to the park to play football
- My friend is in Barcelona to visit his friend
- How do I get to the club?
- How do I get to the park?
- Go straight ahead
- Take the first on the right
- Take the second on the left
- **Turn** riaht
- Turn left
- What are you going to do this weekend?
- This weekend I'm going to go shopping
- This weekend we are going to swim in the sea

Claro Book 2 Unit 1: Dieta y salud

1.1 ¡Qué ha	mbre! I'm so hungry!	1.2 ¡Ñam ñam!	Yum, Y	Yum!		e bravas por fa	vor! One br	avas please!
Desayunar	to have breakfast	Mi plato favorito es	My fav	ouite dish is	De primer/ Se	egundo plato	first/second o	course
Comer	to eat	Cebolla	onion		de postre		dessert	
merendar	to snack	Champiñón	mushr	oom	Quiero		l want	
ceno	to have dinner	Guisantes	peas		gambas al aji	llo	garlic prawns	3
beber	to drink	Pimiento	peppe	r	helado		ice cream	
tomar	to have/take	Plátano	banan	а	paella		paella	
fruta	fruit	Refresco	fizzy fr	ink	pollo		chicken	
verduras	vegetables	Delicioso/a	delicio	us	arroz con lecl	he	rice pudding	
carne	meat	asqueroso/a	disgus	sting	Tengo hambr	re/ sed	I am hungry/	thirsty
sopa	soup	sabroso/a	tasty		tortilla españo	ola	Spanish ome	elette
cereales	cereal	insípido/a	bland		pulpo		octopus	
la bebida	drink	salado/a	salty		calamares		squid	
Cola Cao	Chocoalte drink	amargo/a	bitter		patatas brava	is	spicy potatoe	es
té	tea	dulce	sweet		pan con paté		bread and pa	até
zumo	juice	picante	spicy		gazpacho		cold soup	
agua	wáter				pastel		cake	
arroz	rice	1.4 Mi dieta sana	My hea	Ithy diet	natillas con g	alletas	custard and I	oiscuits
pasta	pasta	dos/ tres/ porciones of	•	-	la cuenta		the Bill	
pescado	fish	2/3 portions daily/ pe		ai did				
marisco	seafood	mucho/a/os/as	day	a alot of/ lots of	Gramática:	Key verbs for	eating and	drinking
salmón	salmon	sano		healthy	Comer	to eat	Beber	to drink
pollo	chicken	demasiado/a/os/as		too much/ many	Com <b>o</b>	I eat	Beb <b>o</b>	I drink
tomates	tomatoes	malsano		unhealthy	Comes	You eat	Beb <b>es</b>	You drink
un bocadillo	a sándwich	es ideal		it is ideal	Com <b>e</b>	He/she eats	Beb <b>e</b>	He/she
patatas fritas	chips	contiene/n		it/ they contain	drinks			
salchichas	sausages	recomendable		recomended	Comemos	We eat	Beb <b>emos</b>	We drink
tostadas	toast	grasa		fat				
queso	cheese	importante		important	Coméis	You eat (plural	) Beb <b>éis</b>	You drink
ensalada	salad	proteína		protein	Comen	They eat	Beb <b>en</b>	They drink
yogur	yogurt	esencial		essential				
la cantina	canteen	sal		salt				
vegetariano/a	vegetarian	aconsejable		advisable				

#### Unit of work 5:Key language in context

Saying what we eat and drink at different mealtimes and how often: Para el desayuno como cereales y bebo café
Para el almuerzo como pizza y bebo zumo de piña
Para la cena como pescado con arroz y bebo limonada
Normalmente desayuno tostadas y bebo té
A veces ceno carne con patatas fritas
Siempre meriendo fruta
Siempre ceno a las seis

Giving opinions on food and drink and forming negative

expressions:

Me gusta el queso
No me gusta el arroz
Nunca como marisco
No me gustan nada los champiñones
No bebo ni zumo ni leche
No como nada

Describing our favourite meal/dish:

Mi plato favorito es la paella La comida Mexicana es picante

Ordering food in a restaurant:

¿Qué va a tomar?

De primer plato quiero pan con paté ¿Y de postre?

De postre quiero pastel de chocolate

Discussing what makes a healthy diet:

Es importante comer fruta porque contiene nutrientes Es esencial beber mucha agua Es recommendable comer pocos caramelos - For breakfast I eat cereals and I drink coffee

- For lunch I eat pizza and I drink pineapple juice

- For dinner I eat fish with rice and I drink lemonade

- Normally I have for breakfast toast and I drink tea

- Sometimes I have for dinner meat with chips

- I always snack on fruit

- I always have dinner at six

- I like cheese

- I don't like rice

- I never eat seafood

- I don't like mushrooms at all - I drink neither juice nor milk

- I eat nothing/ I don't eat anything at all

- My favourite dish is paella

- Mexican food is spicy

- What are you going to have?

- For starter/ for first course I want bread with pate

- And for dessert?

- For dessert I want chocolate cake

- It's important to eat fruit because it contains nutrients.

- It's essential to drink a lot of water

- It's recommended to eat not a lot of sweets

# 8.2 Sports d'été ou sports d'hiver? Summer and winter sports

les sports d'été/d'hiver	summer/winter sports
les sports extrêmes	extreme sports
je fais du/de la/de l'	l do/play
je joue au/à la/aux	I play (+ ball game)
la motoneige	(the) snowmobile
la plongée	(the) scuba diving
le patin à glace	(the) ice skating
le parapente	(the) <i>paragliding</i>
la randonnée	hiking
le saut à l'élastique	(the) bungee jumping
le ski	(the) skiing
le ski acrobatique	(the) freestyle skiing
le snowboard	(the) snowboarding
Le canyoning	(the) canyoneering
Le quad	(the) quad-biking
Le canoë-kayak	(the) canoeing

et été	this summer
cet hiver	this winter
depuis	since/for
donc	so
mais	but
ou	or
parce que	because
pendant	during
tous les lundis	every Monday

# 8.3 Centre aéré ou stage sportif? *Active holidays and summer camps*

un atelier	workshop
la balle aux prisonniers	dodgeball
un centre aéré	after school
une chasse/course	treasure hunt
les claquettes	tap dancing
une colonie de vacances	summer camp
la course d'orientation	orienteering
un feu de camp	a camp fire
un(e) moniteur(trice)	instructor
un stage (sportif)	short (sports)
le tir à l'arc	archery

### Useful words and phrases

j'ai commencé	l started
j'ai fait	l did
j'ai joué	l played
je m'entraîne	I train
je ne peux pas faire	I cannot do
je suis allé(e)	I went
je voudrais/j'aimerais	I would like
bouger	to move/to be active
un championnat	championship
une équipe	team
essayer	to try
fatigant	tiring
un joueur	player
une médaille	medal
un tournoi	tournament

#### 8.1 Tu aimes le sport? Do you like sport?

Quels sports tu préfèr	res? What sports do you prefer?
je préfère	l prefer
c'est ma passion	I'm passionate about it
les boules	(the) bowls
la danse	(the) dance, ballet
l'équitation	(the) horse-riding
l'escalade	(the) rock climbing
le hand(ball)	(the) <i>handball</i>
la natation	(the) <i>swimming</i>
la pétanque	(the) petanque
la planche à voile	(the) windsurfing
le roller	(the) rollerskating
le skate	(the) skateboarding
le surf	(the) <i>surfing</i>
le vélo	(the) cycling
la voile	(the) <i>sailing</i>
le VTT	(the) mountain biking
l'athlétisme	(the) athletics
le hockey sur glace	(the) ice-hockey
le foot	(the) football
le basket	(the) basketball

### Unit of work 1: key language in context

Say which sports you play or do:	Je joue <b>au</b> tennis et au football. Je fais <b>du</b> VTT et du skate.	I play tennis and football. I do mountain-biking and skate-boarding.
	Je ne fais pas <b>de</b> sport.	I don't do any sport.
Say how often you practise sport:	Je fais <b>de la</b> natation trois fois par semaine. Je joue <b>au</b> basket une fois par mois.	I do (go) swimming 3 times a week. I play basketball once a month.
	Je joue <b>au</b> foot tous les week-ends.	I paly football every weekend.
Say which sports someone else	Mon frère joue <b>au</b> hockey sur glace.	My brother plays ice-hockey.
does:	Mon amie fait <b>de la</b> voile.	My friend dooes(goes) sailing.
Give your opinion about sports:	J'adore/ j'aime/ je n'aime pas/ je déteste le sport. J'ai horreur de l'athlétisme.	I love/ like/ don't like/ hate sport.
	Le tennis est super et passionnant!	I can't stand athletics.
	Le VTT est fatigant et nul!	Tennis is great and exciting!
		Mountain-biking is tiring and rubbish!
Talk about summer and winter	J'aime faire <b>du</b> ski acrobatique. C'est cool!	I doing freestyle skiing. It's cool!
sports and say what I like to play/do:	Je préfère faire <b>du</b> canoë- kayak en été. J'adore ça!	I prefer canoeing in summer. I love it!
Say which sports you would like to do:	Je voudrais faire <b>du</b> quad.	I would like to do quad biking.
to do.	J'aimerais faire <b>de la</b> motoneige.	I would like to do snowmobile.
	On voudrait jouer <b>à la</b> pétanque.	We would like to play petanque.
Say which activities I have done:	L'année dernière, j'ai fait un stage de hockey sur glace.	Last year I did an ice-hockey course.
	J'ai joué <b>à la</b> balle aux prisonniers.	I played dodgeball.
	On est allés à la plage et on a joué <b>au</b> volleyball.	We went to the beach and we played volleyball.

#### **Unit of work 2: Destination vacances**

### Recall : les pays – the countries

England	L'Angleterre
Scotland	L'Écosse
Wales	Le Pays de Galles
Ireland	L'Irlande
Northern Ireland	L'Irlande du Nord
France	La France
Spain	L'Espagne
Germany	L'Allemagne
Italy	L'Italie
Portugal	Le Portugal

To go	aller
l go	Je vais
You go	Tu vas
He/ she/ it goes	II/ elle va
We go	Nous allons
You (all) go	Vous allez
They go	lls/ ells vont

### **Le transport** - transport

1. je vais	I go
2. en avion	by plane
3. en voiture	by car
4. en car/ bus	by coach/ bus
5. en bateau	by boat
6. en train	by train
7. en vélo	by bike

### Quel temps fait-il ? – What's the weather like ?

II fait chaud	it's hot
il fait froid	it's cold
il y a/ il fait du soleil	it's sunny
il y a du brouillard	it's foggy
il y a des orages	it's stormy
il y a du vent	it's windy
il pleut	it rains/ is raining
il neige	it snows/ is snowing

#### 7.1 Je vais en vacances going on holiday

Où vas-tu en vacances?	Where do you go on holiday?
à la campagne	in/to the countryside
à la mer/au bord de la me	er by/to the seaside
à la montagne	in/to the mountains
chez mes grands-parents	s at my grandparents' hous
en ville	in town
une auberge de jeunesse	e a youth hostel
un bateau de croisière	a cruise ship
un camping	a campsite
un gîte	holiday cottage
un hôtel	a hotel
une villa	a villa
se baigner/nager	to swim
choisir	to choose
dormir	to stay overnight
faire des randonnées	to go hiking
faire du vélo	to go cycling
finir	to end, finish
voyager	to travel

#### 7.3 Mes vacances de rêves Dream holidays

Quelles sont tes vacance de rêve?	es What is your dream holiday?
explorer des planètes	to explore planets
faire une croisière	to go on a cruise
faire un safari	to go on a safari
faire du trekking	to go trekking
me détendre sur une île	to relax on an island
dans la forêt tropicale	in a tropical rainforest
dans l'espace	in space
dans une cabane dans	in a forest cabin
aux Caraïbes	in the Caribbean
aux États-Unis	in the USA
aux Seychelles	in the Seychelles
en Afrique	in Africa
un vaisseau spatial	spaceship

#### Sequencing words

d'habitude	usually	
hier	yesterday	
(tout) d'abord	first of all	
puis	then	
ensuite	then	
après	after	
pour finir	finally	

# **7.4 Un tour du monde** *World tour (activities in the past)*

Qu'est-ce que tu as fait?	What did you do?
j'ai acheté	I bought
j'ai bu	I drank
j'ai fait	I did
j'ai joué	I played
j'ai mangé	I ate
j'ai trouvé	I found j'ai
visité	I visited
j'ai voyagé	I travelled
j'ai vu	l saw
je suis allé(e)	I went
je suis rentré(e)	I came back home
c'était	it was
un musée	a museum
un parc	a park
une glace	an ice-cream
des souvenirs	souvenirs
une carte postale	a postcard
du coca	a Coca Cola

### Unit of work 2: key language in context

Say where you go on holiday: Je vais à la montagne. I go to the mountains.	
Je vais à la mer.  I go to the sea-side.	
J' aime aller à la plage.  I like to go to the beach	
J'aimerais aller à la campagne.  I would like to go to the	e countryside.
Say where you stay:  Je vais à l'hôtel.  I go to a hotel.	
Je vais dans une villa.  // go to a villa.	
On va chez mes grands-parents. We go to my grandpar	rents' house.
Je dors dans une auberge de jeunesse.  I sleep/stay in a youth	hostel.
Je fais du camping.  I go camping.	
Use prepositions of place Je vais en France/ Espagne/ Grèce/ Italie(fem.) I'm going to France, Spagne/ Grèce/ Italie(fem.)	pain, Greece, Italy
correctly: On va au Maroc/ Canada (masc.) We're going to Morocc	co, Canada
Je vais <b>aux</b> Etats-Unis/ Caraïbes ( <b>plural</b> )  I'm going to the USA, (	Caribbean
On va à Paris/ Londres/ Madrid/ New York(cities) We're going to Paris, L	ondon, Madrid, New
York	
Talk about dream holidays:Je voudrais faire un safari en Afrique dans une tente.I'd like to go on safari in the safari en Afrique dans une tente.	in Africa in a tent.
J'aimerais explorer les planètes dans l'espace dans un vaisseau spatial.  I'd like to explore the properties planètes dans l'espace dans un vaisseau spatial.	lanets in space in a
Talk about activities you'd like J'aimerais me détendre sur la plage. I'd like to relax on a be	each.
to do:  Je voudrais aller dans un hôtel de luxe.  I'd like to go to a luxury	y hotel.
Je voudrais faire de longues randonnées dans la fôret.  I'd like to do long hikes	
Say what you did on holiday:  J'ai visité la tour Eiffel.  I visited the Eiffel towe	er.
J'ai fait une promenade.  I went on a walk.	
Je suis allé(e) à Covent Garden.  I went to Covent Garde	en.
J'ai acheté des souvenirs.  I bought souvenirs.	
Say what it was like: C'était It was	
	s/amazing/ a great day