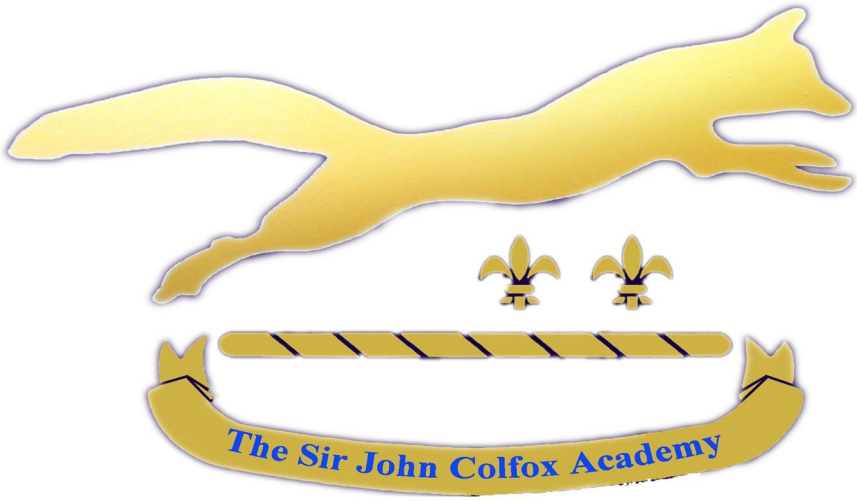
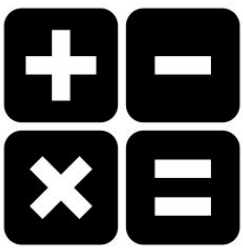
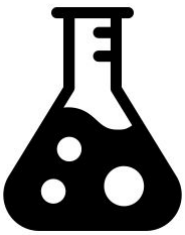
The Sir John Colfox Academy
Homework Booklet

Year 8
Autumn 2









Name: _____

Tutor Group: _____

Bring this booklet to school with you **every day**.

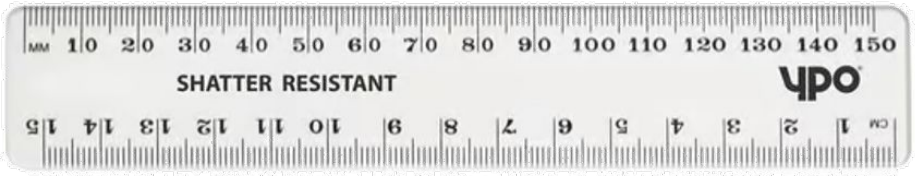
School Equipment













These items of equipment should be brought to school every day.

Principles of homework

Homework is an essential part of learning for all students at The Sir John Colfox Academy. It supports the teaching and learning that happens in the classroom, as well as helping to reinforce key learning from previous topics or years. It also helps to build routines and habits that will be needed for successful revision in Key Stage 4. We believe that meaningful homework is underpinned by the following principles.

- We value quality rather than quantity, so that a small number of things are done well.
- Homework is regular and specific, so that you know when to expect it and what to do.
- It is time limited, so that you are developing good study habits without being overwhelmed.
- It develops independent study habits and metacognitive skills so that students can work with increasing independence as they move through school and into adult life.

Homework expectations

T	**On Time**	Follow the homework schedule so that you know when each piece of homework will be checked by your teacher.
A	**Accurate**	Take care over your work. Use the correct spelling, punctuation and grammar. Be specific. Use subject specific vocabulary.
N	**Neat**	Present your work neatly. Write in pen and draw in pencil. Use a ruler if needed.
C	**Complete**	Make sure the task(s) or questions are finished in full. No blanks. No missed questions.

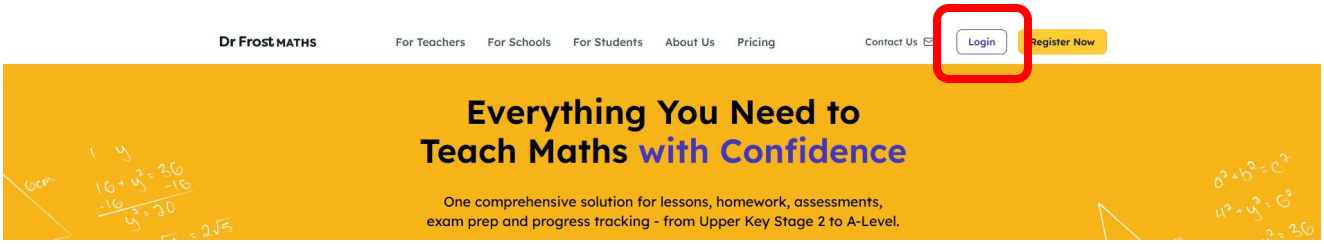
Support with homework

If you need help with your homework, you can:

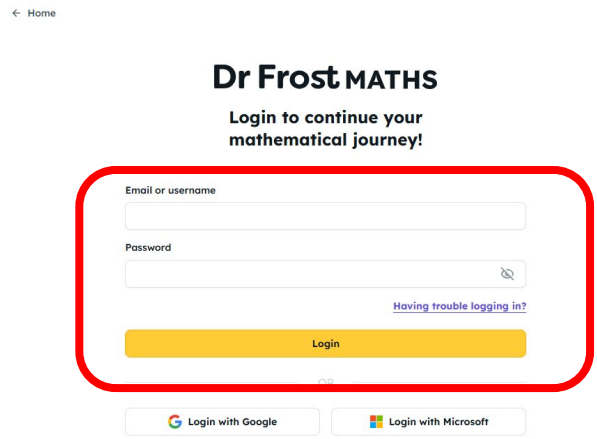
- ✔ Speak to your class teacher.
- ✔ Speak to your tutor.
- ✔ Come to homework club in the library until 4:30 every Monday to Thursday
- ✔ SEN Homework club runs in the SEN room until 4:30 every Monday to Thursday.

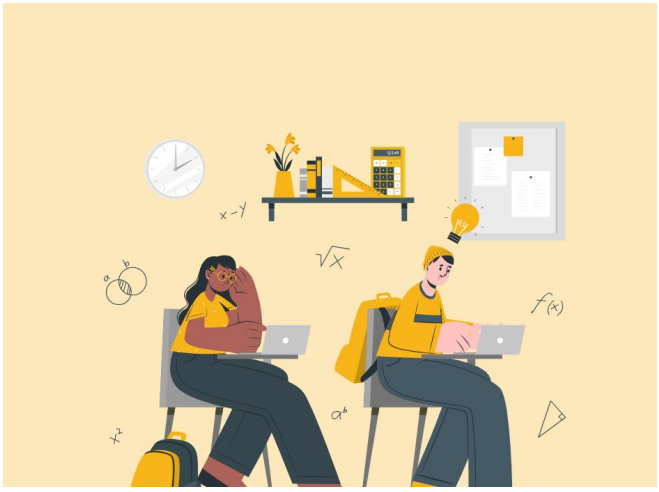
Dr Frost - Maths

Visit https://www.drfrost.org/ and click “Login” at the top of the page



Click “Log in with Google”





You then use your school email address and the password you use in the computer room e.g.

Username: 25Smitha@colfox.dorset.sch.uk

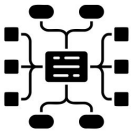
Password: Whatever you have changed it to. .

You may have already changed your username to be your Google email.

Your tasks will appear on the left-hand side of the screen.

Please see your class teacher if you have forgotten your login details.

Mind Maps



A mind map is a way of organising information using keywords, colours, pictures and branches. Start with the main topic in the centre of the page and draw lines outwards for different ideas or sub-topics. Add key facts, images and links between ideas. Mind maps help you see how information fits together and make it easier to remember. They are especially useful when revising a topic with lots of information. When creating a mind map, try to use short keywords instead of full sentences. This helps your brain focus on the most important information and makes revision quicker.

Flashcards



Flashcards are small cards used to test your memory. On one side, write a question, keyword or topic. On the other side, write the answer or explanation. Once you have made your cards, test yourself by looking at one side and trying to remember what is on the other. Flashcards are useful because they help you practise retrieving information from your memory, which strengthens learning. Keep reviewing cards regularly, especially the ones you find difficult. You can use flashcards for vocabulary, dates, formulas, definitions and key facts in almost any subject.

Dual Coding



Dual coding is a technique that combines words and pictures to help you learn. Instead of only reading notes, add diagrams, symbols, timelines, charts or simple drawings to represent the information. Using both visual and written information can make ideas easier to understand and remember. The pictures do not need to be artistic – simple sketches are often best. For example, you could draw something that represents a key idea – a smiley face for happy, a heart to represent love, etc . The aim is to help your brain make stronger connections between ideas by presenting information in more than one way.

Summarising



Summarising means reducing information to its most important points. After reading a text, write a short explanation using your own words. Focus on the key ideas rather than copying everything. A good summary is clear, accurate and much shorter than the original information. This technique helps you check your understanding and identify what is most important. You could summarise a chapter, lesson notes or a revision topic. If you can explain something simply, it is often a sign that you understand it well.

Look/Cover/Write/Check



“Look, Cover, Write, Check” is a simple method for learning facts, spellings, vocabulary and key information. First, look carefully at the information you want to learn. Next, cover it so you cannot see it. Then write it down from memory. Finally, check your answer against the original and correct any mistakes. Repeat the process until you can remember the information accurately. This technique works because it makes your brain actively recall information rather than just reading it. Regular practice can improve memory and help information stay in your long-term memory.

Homework Timetable

Homework Timetable – Half Term 2			
Week beginning	**Maths**	**English**	**Science**
9th Nov	Dr Frost Task 1	Flashcards	Mind-map - Forces and motion Finish any gaps from last half-term's booklet.
	Due Weds 18th Nov	Due first lesson of w/c 16/11	Due first lesson of w/c 16/11
16th Nov	Dr Frost Task 2	Dual Coding	Mind-map - Forces and motion
	Due Weds 25th Nov	Due first lesson of w/c 23/11	Due first lesson of w/c 23/11
23rd Nov	Dr Frost Task 3	Summarising	Questions - Forces and motion
	Due Weds 2nd Dec	Due first lesson of w/c 30/11	Due first lesson of w/c 30/11
30th Nov	Dr Frost Task 4	Look, Cover, Write, Check	Mind-map - Particles
	Due Weds 9th Dec	Due first lesson of w/c 7/12	Due first lesson of w/c 7/12
7th Dec	Dr Frost Task 5	Mind-map	Questions - Particles
	Due Weds 16th Dec	Due first lesson of w/c 14/12	Due first lesson of w/c 14/12

Tick off each task to keep track of what you have done.

Maths

Two topics will be covered this half term:

- Topic 1: Fractions, decimals and Percentages.
- Topci 2: Angles

All the key facts here need to be learnt off by heart.

Non-Calc Fractions, Decimals & Percentages Key Facts A HIGHER

learn by heart

What is 23% as a fraction?	$\frac{23}{100}$
What is 23% as a decimal?	0.23
How do you convert a decimal a percentage?	Multiply it by 100
What is 0.1% as a decimal?	0.001
What is 0.01 as a percentage?	1%
What is 10% is a decimal?	0.1
What is 1 whole as a percentage?	100%
How can we change fractions to decimals?	Use short division
How can 0.7777... be written?	$0.\dot{7}$
What does $0.24\dot{5}$ look like?	0.245555...
What is $\frac{1}{3}$ as a decimal?	$0.\dot{3}$
What is $\frac{2}{3}$ as a decimal?	$0.\dot{6}$
What is $\frac{1}{6}$ as a decimal?	$0.1\dot{6}$
What is $\frac{5}{6}$ as a decimal?	$0.8\dot{3}$
What is $\frac{1}{9}$ as a decimal?	$0.\dot{1}$
What is $\frac{8}{9}$ as a decimal?	$0.\dot{8}$

Maths

Non - Calc Fractions, Decimals & Percentages Key Facts FOUNDATION

learn by heart

What is a **mixed number**?	A number of wholes and a fractional part
What is an **improper fraction**?	Numerator is larger than denominator
When adding or subtracting fractions...	make sure they have common denominators
Work out 1 - $\frac{3}{5}$	$\frac{5}{5} - \frac{3}{5} = \frac{\mathbf{2}}{\mathbf{5}}$
How are **fractions multiplied**?	Multiply numerators and denominators
Before multiplying fractions...	simplify or cancel any common factors
What are reciprocals?	Pairs of numbers that multiply to make 1
How do we divide by a fraction?	Multiply by its reciprocal
How do we **order decimals**?	Compare like with like place values
How many centimetres are there in 1 metre?	100
How many pence are there in a £1?	100
What do **equivalent fractions** have?	The same value but different denominators
What is a **percentage**?	A fraction out of 100
What is 23% as a fraction?	$\frac{23}{100}$
What is 23% as a decimal?	0.23
How do you convert a decimal to a percentage?	Multiply it by 100

Maths

Angles Key Facts A

CORE

learn by heart

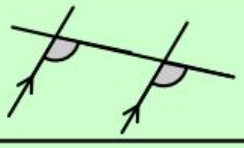
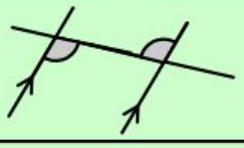
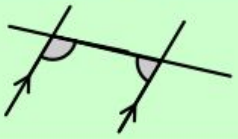
What is an angle?	A measure of turn
What is an **acute angle**?	Less than 90°
What is a **right angle**?	90°
What is an **obtuse angle**?	Between 90° and 180°
What is a **reflex angle**?	More than 180°
What is the angle in a full turn / around a point?	360°
What is the angle in a half turn?	180°
What is the angle in a $\frac{1}{4}$ turn?	90°
What is the angle in a $\frac{3}{4}$ turn?	270°
What is used to show that angles are equal?	Double arcs
Vertically opposite angles are formed when...	two straight lines cross and are equal
What is θ?	A Greek letter pronounced 'theta'
What is a protractor used for?	To measure angles
What is the 'cross hair' on a protractor?	The middle where the angle vertex is placed
What does angle $C\hat{O}D$ refer to?	The angle created between lines CO and OD
What do angles on a straight line do?	Add up to 180°

Maths

Angles Key Facts B

CORE

learn by heart

What is a transversal?	A line crossing 2 or more others
What are corresponding angles?	 Corresponding angles are **equal**
What are alternate angles?	 Corresponding angles are **equal**
What are co-interior angles?	 Co-interior angles **add up to 180°**
What does a scalene triangle have?	No equal angles or sides
What does an isosceles triangle have?	2 equal angles and 2 equal sides
What does an equilateral triangle have?	3 equal angles and 3 equal sides
What do angles in a triangle do?	Add up to 180°
What is a quadrilateral?	4 sided shape
What do angles in a quadrilateral do?	Add up to 360°
What does a kite have?	One pair of opposite equal angles
What is an arrowhead?	A kite with a reflex angle
In a rhombus and parallelogram.....	opposite angles are equal
In a trapezium, there are 2 pairs of.....	co-interior angles

Maths

Angles Key Facts A

SUPPORT

learn by heart

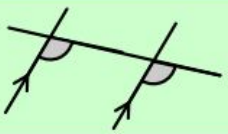
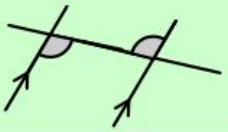
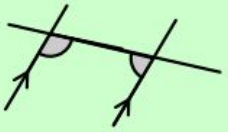
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What is the 'cross hair' on a protractor?	The middle where the angle vertex is placed
What is used to show that angles are equal?	Double arcs
What is θ?	A Greek letter pronounced 'theta'
What do angles on a straight line do?	Add up to 180°
Vertically opposite angles are formed when...	two straight lines cross and are equal
What do **adjacent angles** around a point do?	Add up to 360°

Maths

Angles Key Facts B

SUPPORT

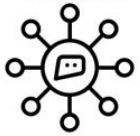
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In a rhombus and parallelogram.....	opposite angles are equal
In a trapezium, there are 2 pairs of.....	co-interior angles

Year 8 Knowledge Organiser: Societies & Genres

Society	people living together in a more or less ordered community
Genre	a style or category of art, music, or literature.

Dystopia	an imagined society which is frightening, undesirable
Utopia	ideal; paradise – opposite of dystopia
Allegory	work in which the characters and events represent certain ideas to morals, religion, or politics
Fable	a story, typically animals as characters, conveying a moral.
Post-apocalyptic	existing after a catastrophically destructive disaster
Surveillance	watching; observing; following
Dehumanised	deprive of human qualities or dignity
Oppression	prolonged cruel or unjust treatment
Propaganda	information, of a biased or misleading nature, used to promote a political cause or point of view.
Rebellion	the action or process of resisting authority
Ideology	a system of ideas and ideals
Dissent	opposition; rebellion
Inequality	unfairness; not equal
Censorship	ideas that people are allowed to express are limited; prevents books, films etc. from being available
Authoritarian	enforcing strict obedience to authority at the expense of

Forms of Government and leadership	**Democracy**	**Socialism**
	 Government by the people : majority rule	 Public ownership of resources and means of production
Theocracy  A system in which priests rule in the name of God or a god.	Oligarchy  A small group of people hold most or all political power	Aristocracy  Power is held by the nobility (highest classes)
Monarchy  A state that has a monarch- King, Queen, Emperor etc.	Totalitarianism  Asserts total control over the lives of its citizens.	Communism  Government and philosophy; goal to form a society where everything is shared. The government owns and controls everything.
Colonialism  Acquiring full or partial political control over another country, occupying with settlers	Military Dictatorship  The military has control over political authority, and the dictator is often a high-ranked military officer.	Tyranny  Cruel and oppressive government or rule.

What type of Government is described in the text you are reading?	Types of Societies	What type of society is described in the text you are reading?

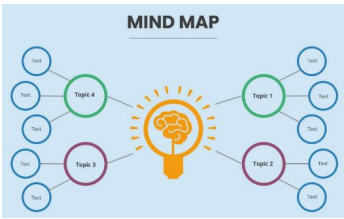
Hunting & Gathering	• Survive by hunting animals, fishing, and gathering plants. • Vast majority of these societies existed in the past; only a few (perhaps a million people total) living today on the verge of extinction. • Most were nomadic and primarily tribal. • Work in hunting and gathering societies was divided equally among members.
Pastoral	• Animals for food and transportation. • Sometime nomadic, sometimes not; able to produce a surplus of goods – allows the society to remain in a single place for longer periods of time. • Allow those who are not domesticating animals to engage in 'other' activities; traders, healers, spiritual leaders, craftspeople etc.
Horticultural	• Rely on cultivating fruits, vegetables, and plants. • First appeared in different parts of the planet about the same time as pastoral societies. • Had to be mobile – move where the food was.
Feudal	• From the 9th to 15th centuries, feudalism was a form of society based on ownership of land. • *Vassals* were bound to cultivating their lord's land. • In exchange for protection, the lords exploited the peasants into providing food, crops, and other services to the owner of the land. • Often multigenerational; the families of peasants may have cultivated their lord's land for generations.
Agricultural	• Cultivate crops (especially grains like wheat, rice, corn, and barley) over a large area. • Increases in food supplies led to larger populations; resulted in towns that became centres of trade supporting various rulers, educators, craftspeople, merchants, and religious leaders who did not have to worry about locating nourishment. • Wider difference in social layers appeared. For example, women previously had higher social status because they shared labour more equally with men but as food stores improved, women took on lesser roles. • A system of rulers with high social status also appeared.
Industrial	• Based on using machines to produce goods; during the 18th century began the Industrial Revolution. • Great wealth was attained by the few who owned factories, and the "masses" found jobs working in the factories. • Factories became the centre of work and large cities emerged as places to find jobs in factories. • Social power moved into the hands of business elites and governmental officials, leading to struggles between industrialists and workers.
Post-industrial	• Technological revolution - creating a society based on information, knowledge, and the selling of services. • Although factories will always exist, the key to wealth and power seems to lie in the ability to generate, store, manipulate, and sell info • Increased levels of education and training, consumerism, availability of goods, and social mobility.

Week 1: Mindmap

CORE task: Turn the following section of your Knowledge Organiser into a mind map below.

Forms of Government and leadership	**Democracy** Government by the people : majority rule	**Socialism** Public ownership of resources and means of production
Theocracy A system in which priests rule in the name of God or a god.	**Oligarchy** A small group of people hold most or all political power	**Aristocracy** Power is held by the nobility (highest classes)
Monarchy A state that has a monarch- King, Queen, Emperor etc.	**Totalitarianism** Asserts total control over the lives of its citizens.	**Communism** Government and philosophy; goal to form a society where everything is shared. The government owns and controls everything.
Colonialism Acquiring full or partial political control over another country, occupying with settlers	**Military Dictatorship** The military has control over political authority, and the dictator is often a high-ranked military officer.	**Tyranny** Cruel and oppressive government or rule.

- Think carefully about how to organise the information (bigger version on your KO).
- Can you make any connections between the types of Governments?



EXTENSION : Can you research and find any examples of these types of Government (fiction or real)?

Week 2: Flashcards

- Flashcards are a creative and colourful way to support long-term learning.
- Simply create with questions on side and answers on the other side. You can colour code for specific topics and quiz yourself or others
- Post-it notes can also be useful for key words and timelines

CORE task: Create 12 flashcards – 1 for each of the following words that are on the Knowledge Organiser. Use the given definitions below.

Get card from your teacher if you need. A flashcard should be no smaller than a quarter of A4 (if making your own).

Extension: Add an example sentence to the definition side of your card.

Dystopia	an imagined society which is frightening, undesirable
Utopia	ideal; paradise – opposite of dystopia
Allegory	work in which the characters and events represent certain ideas to morals, religion, or politics
Fable	a story, typically animals as characters, conveying a moral.
Post-apocalyptic	existing after a catastrophically destructive disaster
Surveillance	watching; observing; following
Dehumanised	deprive of human qualities or dignity
Oppression	prolonged cruel or unjust treatment
Propaganda	information, of a biased or misleading nature, used to promote a political cause or point of view.
Rebellion	the action or process of resisting authority
Ideology	a system of ideas and ideals
Dissent	opposition; rebellion
Inequality	unfairness; not equal
Censorship	ideas that people are allowed to express are limited; prevents books, films etc. from being available
Authoritarian	enforcing strict obedience to authority at the expense of

- Have the key word on one side – clearly written – quite big!
- Have the definition on the other side – clearly written.
- Practise using them!

Week 3: Dual Coding

- Dual coding is the process of combining verbal materials with visual materials.
- There are many ways to visually represent material, such as with infographics, timelines, cartoon strips, diagrams, and images.
- When you have the same information in two formats-words and visuals-it gives you two ways of remembering the information later on. Combining these visuals with words is an effective way to study.

CORE task: Go back to your flashcards from last week. Add (at least 1) image to the key word side (dual code) that will help prompt you for the definition of that word.

EXTENSION task: Write a question under your word and image that could only be answered using this word.

Week 4: Summarising

- Summarise your topic in a few words.
- Using your own words means you process the information, which improves your understanding and your memory. Keep the notes brief to act as prompts. The aim is to create your summary from memory; do not use notes to help you.

Core Task: Summarise what the following societies are like in 25 words or less.

- Use information from the Knowledge Organiser but do not copy! Summarise!

Extension: Draw out how you visualise each of these societies..

Agricultural

Word count:___

Industrial

Word count:___

Feudal

Word count:___

Hunting & Gathering

Word count:___

Week 5: Look, cover, write, check

CORE task: Learn how to spell the key vocabulary from the Knowledge Organiser – using the look, cover, write check system. Do this THREE TIMES THIS WEEK (in the booklet) and then there will be a spelling test in class.

EXTENSION task: Write 10 sentences (1 sentence per word) applying that word to what you have been learning this term.

Look and Say		***Write – without looking!***	***Check! Did you get it right?***
Surveillance			
Dehumanised			
Oppression			
Propaganda			
Rebellion	***Now cover up look and say column!***		
Ideology			
Dissent			
Inequality			
Censorship			
Authoritarian			

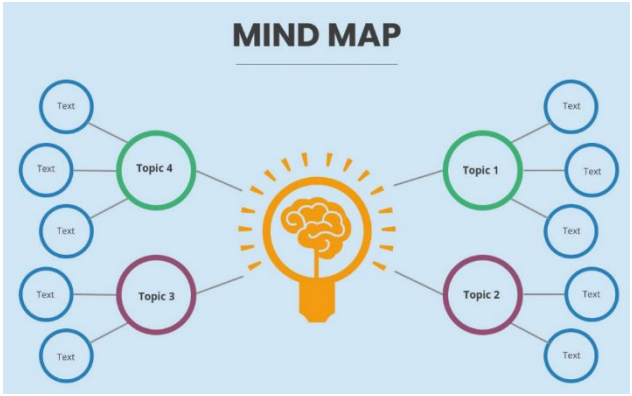
Look and Say		*Write – without looking!*	*Check! Did you get it right?*
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Dehumanised			
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Propaganda			
Rebellion	*Now cover up look and say column!*		
Ideology			
Dissent			
Inequality			
Censorship			
Authoritarian			

Look and Say		*Write – without looking!*	*Check! Did you get it right?*
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Dehumanised			
Oppression			
Propaganda			
Rebellion	*Now cover up look and say column!*		
Ideology			
Dissent			
Inequality			
Censorship			
Authoritarian			

Week 6: Mind map, dual code, summarising

Core task: Create a mind map that showcases the WHOLE Knowledge Organiser.

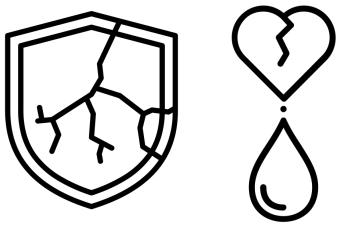
Use colour, dual coding, summarising and all the skills you have learned this half term.





- Dual coding is the process of combining verbal materials with visual materials.
- There are many ways to visually represent material, such as with infographics, timelines, cartoon strips, diagrams, and images.

- Summarise your topic in a few words.
- Using your own words means you process the information, which improves your understanding and your memory. Keep the notes brief to act as prompts. The aim is to create your summary from memory; do not use notes to help you.



Your showcase mind map: Societies

Seen by teacher?

Science



Science helps us explain how the world around us works.

So, when you learn science, you learn explanations (or theories) of why things happen in nature. For example, you learn about how forces can explain why things move or how ideas about atoms help us explain what happens when in a chemical reaction.

But before you can understand these scientific explanations (or theories), you need to understand the key ideas. For example, you need to know that a force is a push or a pull or a bit about what atoms look like.

The homework in science reminds you of the key ideas you need to understand to learn the explanations you are studying in science this term. You will have been taught these topics before. So, this is a recap.

To do this, your science teachers expect you to:

1. Complete the mind-map for the topic using the handout you have been given (1st and 2nd week). The branches you have been given are just a starting point. You are free to add lots more detail. But remember, don't become a human photocopier! You need to summarise or select the information you want to add.

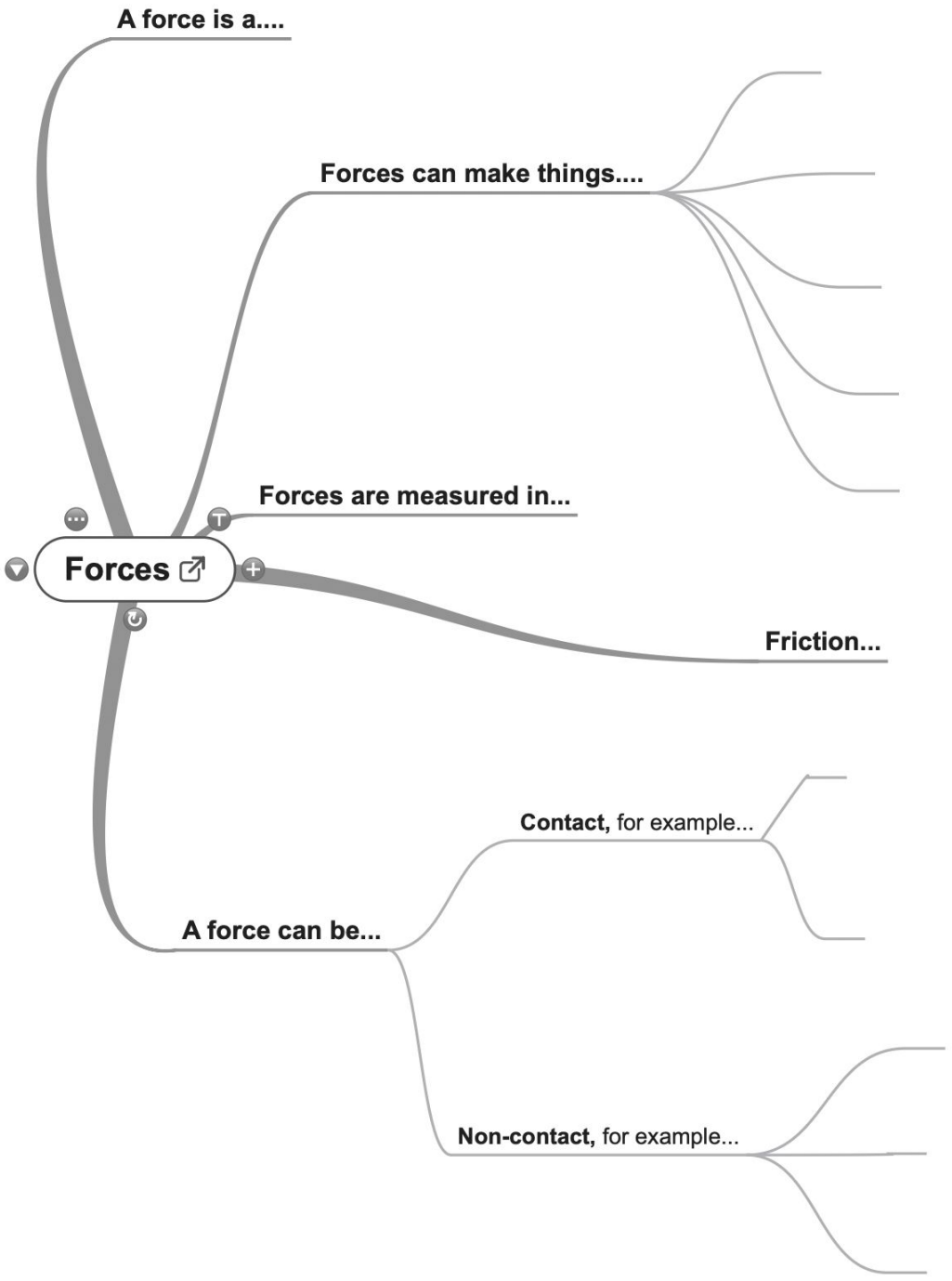
2. Check your understanding of this topic by answering the 'Check your understanding' questions (3rd week).

There are two topics each half-term.

This half-term they are:

1. Forces and motion.
2. Particles

Science
Forces and motion | mind-map



Science
Forces and motion | Check your understanding



What is a force?	Name 4 things that forces can do to objects.

Magnetic forces are **non-contact forces.** What does this mean? Hitting a ball with a bat is a **contact forces.** What does this mean?	For each of these forces, write down whether they are contact or non-contact forces. 1.Friction is.. 2.Gravity is… 3.Static electric forces are… 4.Air resistance is…

Read the paragraph below that has been written about forces.

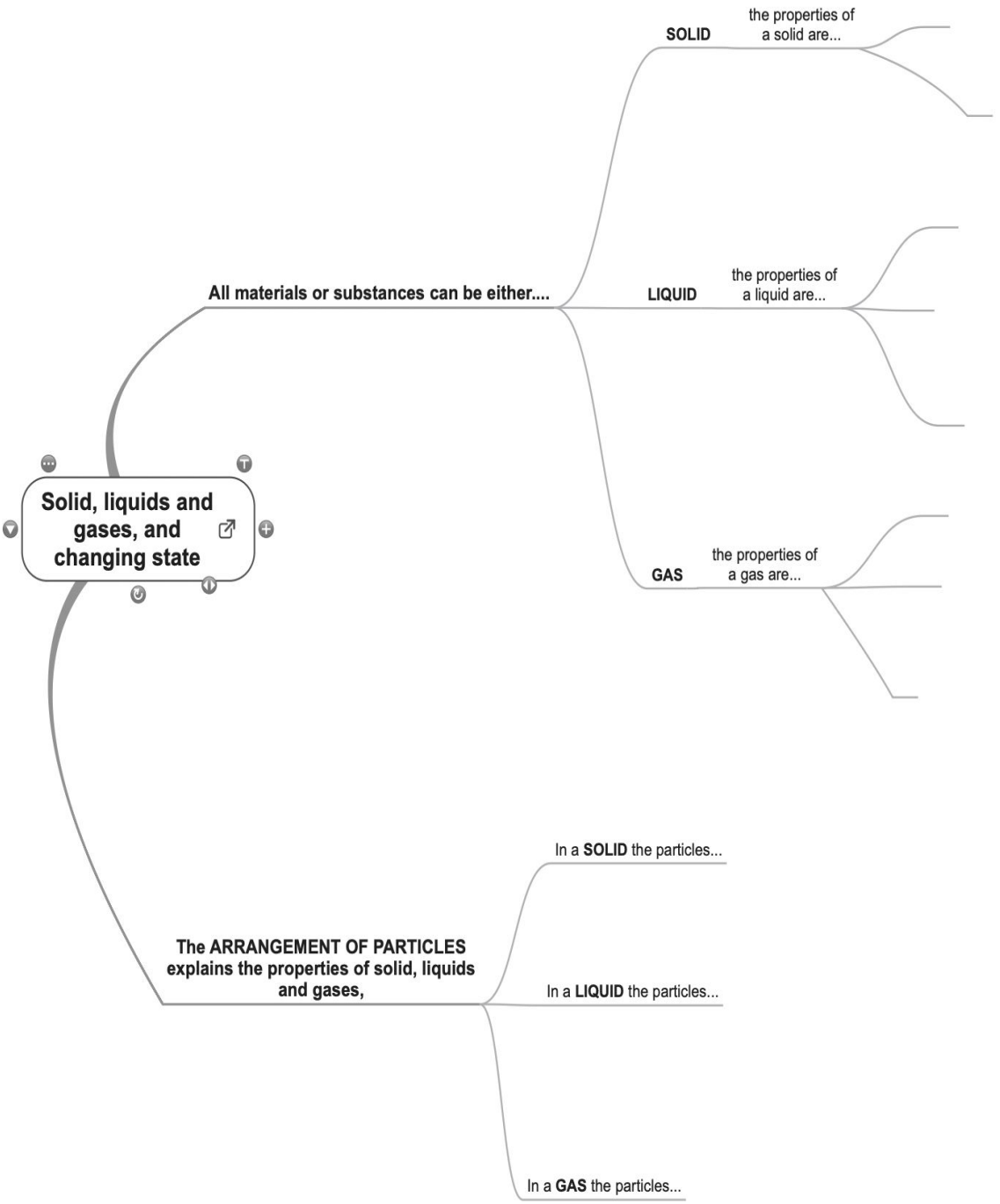
There are mistakes.

Correct these.

Forces only act on their own and they always act in a certain direction. Forces can change the way something moves. For example, to start something moving you need a push or a pull force that is smaller than and resisting forces, like friction.

If you push a toy car across a floor with a carpet, it will slow down and stop much more quickly than if you push it across a polished wooden floor. Why is this?	What are forces measured in?

Science
Particles | Mind map



Science
Particles | Check your understanding

<table>
<tr><td>Draw a diagram to show how the particle are arranged in a solid.</td><td>Draw a diagram to show how the particle are arranged in a liquid.</td><td>Draw a diagram to show how the particle are arranged in a gas.</td></tr>
<tr><td colspan="3">Read the paragraph below. It has been written about the properties of solid, liquids and gases and how we use ideas about particles to explain these properties.

There are mistakes.

Correct these.

Solids will keep the same shape because there are very strong forces of attraction between the particles. They also cannot the compressed (squashed). This is because the particles are far apart. The particles do not move.
Liquids can flow because there are only weak forces between the particles. Like solids, a liquid can be compressed. This is because the particles are very close together.
In a gas the particles are close together and move about a lot. This is because there are no forces of attraction between the particles. Gases are also easy to squash because the particles are close together.</td></tr>
<tr><td colspan="2">Sand, salt and sugar are solids. But they can be ‘poured’ into different containers. So, it seems like they flow like liquids. But they are definitely solids! Why does seem like these materials can flow?</td><td>What happens to the forces of attraction between water particles when ice melts?</td></tr>
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