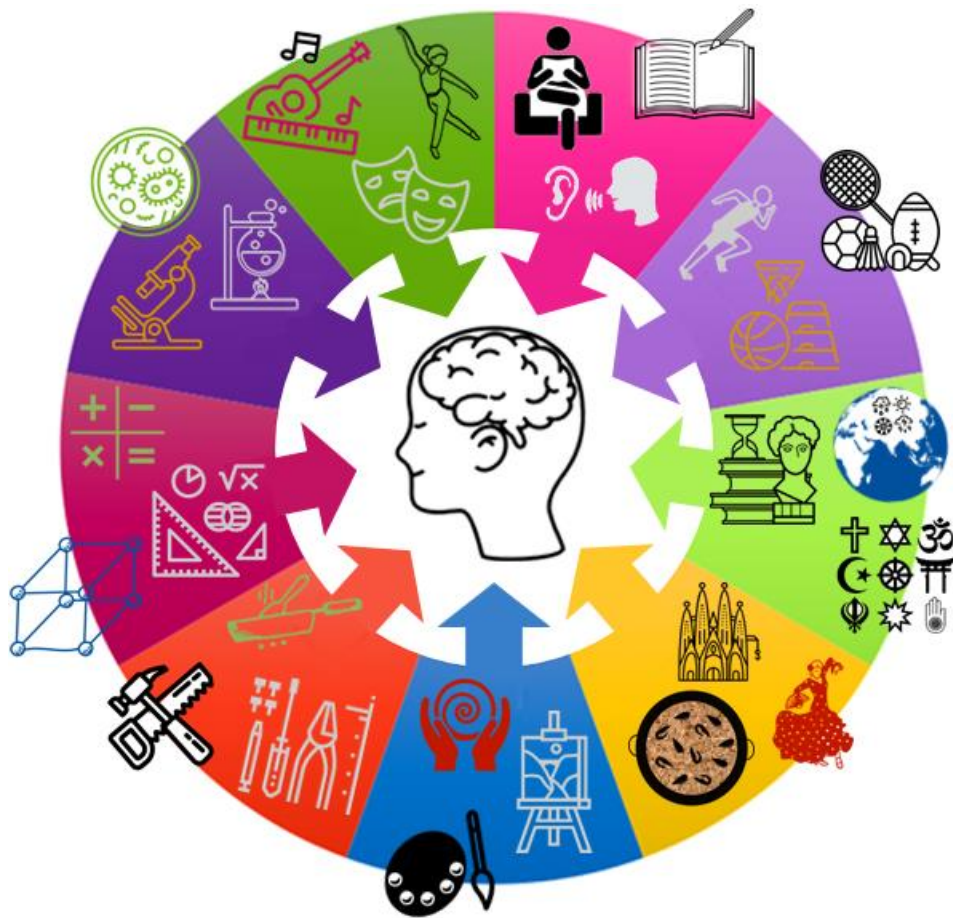


# Year 9 – Booster Knowledge Organisers

## Term 5



### Swindon Academy 2024-25

Name:	
Tutor Group:	
Tutor & Room:	

*"If you are not willing to learn, no one can help you.  
If you are determined to learn, no one can stop you."*

# Using your Knowledge Organiser and Quizzable Knowledge Organiser

## Knowledge Organisers

Year 7 Term 1 Science/Chemistry - Topic TOP Particles

**What are we learning this term:**

- Particle model
- Changes of state
- Mixtures
- Separating mixtures

**5 Key Words for this term:**

- Matter
- Particles
- Dissolution
- Mixing
- Freezing
- Condensation
- Solids
- Solvent
- Filtration

**A. What is particle theory?**  
The theory that all matter is made up of particles.

**A. Describe the properties of the three states of matter.**

solid	liquid	gas
• tight	• not tight	• not tight
• fixed shape	• no fixed shape	• no fixed shape
• fixed volume	• fixed volume	• no fixed volume

**B. What happens to the temperature of a substance when it changes state?**  
During the change of state, the temperature will stay the same until the change of state is complete.

**A. What is the law of conservation of mass?**  
The Law of Conservation of Mass states that mass cannot be created or destroyed.

**B. What are the different changes of state?**

Change of State	Direction
Melting	change of state from solid to liquid
Freezing	change of state from liquid to solid
Evaporation	change of state from liquid to gas
Condensation	change of state from gas to liquid

**C. What is the difference between a pure and an impure substance?**

Pure	Impure
A material that is made up of only one type of particle.	A material that is made up of more than one type of particle.

Knowledge Organisers contain the essential knowledge that you **MUST** know in order to be successful this year and in all subsequent years.

They will help you learn, revise and retain what you have learnt in lessons in order to move the knowledge from your short-term memory to long-term memory.

## Quizzable Knowledge Organisers

**A. What is particle theory?**

**A. What is the law of conservation of mass?**

**A. Describe the arrangement and movement of particles in the three states of matter.**

Solid	Liquid	Gas

**B. What are the different changes of state?**

Change of State	Direction
Melting	
Freezing	
Evaporation	
Condensation	

**C. What is the difference between a pure and an impure substance?**

Pure	Impure

solid      liquid      gas

These are designed to help you quiz yourself on the essential Knowledge.

Use them to test yourself or get someone else to test you, until you are confident you can recall the information from memory.

## Expectations for Prep and for using your Knowledge Organisers

- Complete all prep work set in your subject prep book.
- Bring your prep book to every lesson and ensure that you have completed all work by the deadline.
- Take pride in your prep book – keep it neat and tidy.
- Present work in your prep book to the same standard you are expected to do in class.
- Ensure that your use of SPAG is accurate.
- Write in blue or black pen and sketch in pencil.
- Ensure every piece of work has a title and date.
- Use a ruler for straight lines.
- If you are unsure about the prep, speak to your teacher.
- Review your prep work in green pen using the mark scheme.

### Top Tip

Don't write on your Quizzable Knowledge Organisers! Quiz yourself by writing the missing words in your prep book. That way you can quiz yourself again and again!

# How do I complete Knowledge Organiser Prep?

## Step 1

Check Epraise and identify what words /definitions/facts you have been asked to learn. Find the Knowledge Organiser you need to use.

The screenshot shows the epraise.com website interface. On the left is a 'Planner' with a grid for tasks. On the right is a 'New! Year 10 Knowledge Organiser: What is Particle Theory?' document. The document includes sections for 'What is particle theory?', 'Describe the arrangement and movement of particles in the three states of matter', and 'What is the law of conservation of mass?'. It also features diagrams of particle arrangements for solid, liquid, and gas states, and a phase change diagram.

## Step 2

Write today's date and the title from your Knowledge Organiser in your Prep Book.

This screenshot shows a printed version of the knowledge organiser from Step 1. Handwritten in blue ink are the date '29th May 2020' and the title 'Particle theory'. The page includes the same text and diagrams as the digital version, such as the definition of particle theory, descriptions of solid, liquid, and gas states, and the law of conservation of mass.

## Step 3

Write out the keywords/definitions/facts from your Knowledge Organiser in FULL.

Handwritten notes on lined paper. At the top, the date '29th May 2020' is written. Below it, the title 'Properties of the states of matter' is underlined. The notes define particle theory as 'all matter is made of particles'. It then describes the three states: 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other. Particles can slide past each other and move around.', and 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy'.

## Step 4

Read the keywords/definitions/facts out loud to yourself again and again and write the keywords/definitions/facts at least 3 times.

Handwritten notes on lined paper repeating the definitions from Step 3. Each definition is written three times: 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other. Particles can slide past each other and move around.', and 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy'.

## Step 5

Open your quizzable Knowledge Organiser. Write the missing words from your quizzable Knowledge organiser in your prep book.

This screenshot shows a 'quizzable' version of the knowledge organiser. It has a similar layout to the previous one but with some text boxes for answers. Handwritten in blue ink are the answers: 'Self quizzing' for 'What are the different changes of state?', 'Arrangement/movement of matter' for 'Describe the arrangement and movement of particles in the three states of matter', and 'Solid = regular pattern particles vibrate in fixed position', 'Liquid =', and 'Gas =' for the state descriptions.

## Step 6

Check your answers using your Knowledge Organiser. Repeat Steps 3 to 5 with any questions you got wrong until you are confident.

Handwritten notes on lined paper, similar to Step 3 but with corrections. The definitions are written with checkmarks and some corrections. For example, 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy' has a checkmark and the word 'far apart' is written above 'are'. The liquid definition also has a checkmark and 'are still touching each other' is written above 'are still touching each other'.

Make sure you bring in your completed Prep notes to demonstrate that you have completed your prep.

# 'Romeo and Juliet': T Knowledge Organiser

Plot breakdown	
<b>P</b>	<b>The Prologue</b> outlines the main conflict in the play and warns the audience of the tragic fate of Romeo and Juliet.
<b>1.1</b>	The Montagues and Capulets fight in the streets of Verona. Prince Escalus swears that any further fighting will be punished by death.
<b>1.2</b>	Paris asks Lord Capulet about marrying his daughter Juliet. Capulet tells Paris to wait as she is too young.
<b>1.3</b>	Lady Capulet advises Juliet to agree to marry Paris.
<b>1.5</b>	At the Capulet's masked ball, Romeo sees Juliet and falls in love with her. They talk, kiss, and fall in love. As they depart, they learn they are from feuding families.
<b>2.2</b>	In the balcony scene, Romeo and Juliet fall deeper in love. They agree to get married.
<b>2.3</b>	Romeo asks Friar Lawrence to marry him and Juliet. Lawrence agrees, thinking it will unite the warring families.
<b>2.6</b>	Friar Lawrence marries Romeo and Juliet.
<b>3.1</b>	Montagues and Capulets fight in the streets. Tybalt kills Mercutio; Romeo kills Tybalt. Prince Escalus decides to banish Romeo from Verona.
<b>3.4</b>	Lord Capulet tells Paris that he can marry Juliet in three days' time.
<b>3.5</b>	After their wedding night, Romeo leaves Juliet for the last time. They have a vision of the other's death. After Romeo leaves, Lord Capulet orders Juliet to marry Paris, threatening to disown her if she disobeys.
<b>4.1</b>	Friar Lawrence comes up with a plan: Juliet must pretend to be dead and then escape Verona with Romeo. She agrees to the plan.
<b>5.3</b>	Romeo does not learn of Friar Lawrence's plan. He sneaks back into Verona and visits Juliet's tomb. He thinks she is dead, and kills himself with poison. Moments later, Juliet wakes up. She finds Romeo's body and kills herself with his dagger. The two families agree to end their feud.
The Big Ideas:	
<b>Role of women:</b> Juliet is powerless to make her own decisions. She is ruled by her father who eventually decides to marry her off to a powerful man. She breaks the status quo when she defies her father and makes her own decisions.	
<b>Evolution of Juliet's character:</b> Juliet is a stereotypical Renaissance daughter at the outset, she is loyal and submissive. She becomes empowered and independent through her romance with Romeo. She becomes a tragic hero by acting in pursuit of her own desires.	
<b>Tragedy:</b> A Shakespearean tragedy is the story of one or two heroes of 'high-status,' such as Kings or Lords. They act in pursuit of one desire. The story leads up to and includes the death of the hero as a result of their actions.	
<b>Fate and destiny:</b> Fate is the idea that the events of someone's life are not in their control. The <i>star-crossed</i> lovers suggests they were fated for tragedy. This leads to many questions: Is the tragic ending inevitable? Do they act independently?	

Characters	Vocabulary: Key words
<b>Romeo (Montague)</b> Young man. Falls in love with Juliet. Kills himself at the end of the play. <i>"Did my heart love till now? forswear it, sight! For I ne'er saw true beauty till this night!"</i> ; <i>"Thus with a kiss I die"</i>	<b>tragic</b> – describes something as being very sad, or as part of a tragedy.
<b>Juliet (Capulet)</b> 13-year old girl. Falls in love with Romeo. Kills herself at the end of the play. <i>"Wherefore art thou Romeo? Deny thy father and refuse thy name!"</i> ; <i>"O happy dagger, This is thy sheath; there rust, and let me die"</i>	<b>submissive</b> - ready to obey or conform to the authority or will of others
<b>Lord Capulet (Capulet)</b> Head of the Capulet family. Juliet's father. Orders her to marry his friend, Paris. <i>"She will be ruled In all respects by me"</i>	<b>narcissistic</b> – self-obsessed
<b>Paris (no family)</b> Nobleman of Verona. Wants to marry Juliet. Killed by Romeo at the end of the play.	<b>feud</b> – a serious argument and sometimes violent argument between two people or groups that continues for a long time.
<b>Friar Lawrence (no family)</b> Religious leader in Verona. Agrees to marry Romeo and Juliet, thinking it will bring peace to the city. <i>"For this alliance may prove To turn your households' rancour to pure love"</i>	<b>shrine</b> – a holy place that people go to pray.
<b>Mercutio (Montague)</b> Romeo's friend. Killed by Tybalt. <i>"A plague a'both your houses!"</i>	<b>status quo</b> – the situation that exists now, without any changes.
<b>Prince Escalus (no family)</b> Ruler of Verona. Wants to bring peace to the city. <i>"If ever you disturb our streets again, Your lives shall pay the forfeit of the peace"</i>	<b>obstacle</b> – a problem that must be overcome.
<b>Structure of Shakespearean tragedy (Bradley)</b>	<b>vindictive</b> – vengeful
<b>Exposition</b> Introduces the main characters and the obstacles they will overcome in the play.	<b>patriarchy</b> - a society in which power lies with men
<b>Rising tension</b> The heroes try to overcome the obstacles they face. They suffer.	<b>belligerent</b> - warlike
<b>Catastrophe</b> The play ends with the deaths of the heroes.	<b>exile (vb.)</b> – to force them from their home and live in another place.
	<b>tenacious</b> – very determined
	<b>calamity</b> – a terrible accident.
	<b>stoicism</b> – calm self control
Terminology: Key words	Terminology: Key words
	<b>Tragedy</b> – a play in which the main character brings about their own downfall.
	<b>prologue</b> – the introduction to a book, film, or play.
	<b>sonnet</b> – a type of love poem. It has 14 lines, a strict rhyme scheme and 10 syllables per line.
	<b>dramatic irony</b> – when the audience knows something that the character on stage does not
	<b>Tragic hero</b> – the main character in a Tragedy that makes an error of judgement that leads to their downfall.
	<b>soliloquy</b> – a speech in a play where the character speaks to himself or herself.
	<b>hyperbole</b> – exaggeration.
	<b>tragic flaw</b> - a character has a tragic flaw when what makes them so special also brings about their downfall.
	<b>foreshadow</b> – to show or warn that something bigger, worse, or more important is coming.
	<b>thesis</b> – the main idea that you want to discuss throughout an essay.
Features of Shakespearean tragedy (Bradley)	Features of Shakespearean tragedy (Bradley)
	The characters are ' <b>high-status</b> ' – they are important people.
	The tragic hero <b>acts</b> : they <b>try to do things</b> . They don't just let things happen to them.
	Whatever they try to do, it always <b>puts them in a worse situation</b> .
	They are <b>exceptional</b> – there is something that makes them special.

# 'Romeo and Juliet': T Knowledge Organiser

Plot breakdown	
<b>P</b>	<b>The Prologue</b> outlines the main _____ in the play and _____ the _____ of the _____ of _____ and _____.
<b>1.1</b>	The _____ and _____ in the _____ of _____. Prince Escalus swears that any further fighting will be _____ by _____.
<b>1.2</b>	_____ asks Lord _____ about marrying his _____ Juliet. Capulet tells Paris to wait as she is too young.
<b>1.3</b>	Lady _____ advises _____ to agree to _____.
<b>1.5</b>	At the Capulet's _____ ball, Romeo sees Juliet and _____ in love with her. They _____, _____, and fall in _____. As they depart, they learn they are from _____ families.
<b>2.2</b>	In the _____ scene, Romeo and Juliet fall _____ in love. They _____ to get _____.
<b>2.3</b>	Romeo asks _____ to _____ him and _____. Lawrence _____, thinking it will _____ the _____.
<b>2.6</b>	Friar _____ Romeo and _____.
<b>3.1</b>	_____ and _____ fight in the streets. _____ kills _____; _____ kills _____. Prince Escalus decides to _____ from Verona.
<b>3.4</b>	Lord _____ tells _____ that he can marry Juliet in three days' time.
<b>3.5</b>	After their _____ night, Romeo leaves Juliet for the last time. They have a _____ of the other's _____. After Romeo leaves, Lord Capulet _____ Juliet to marry _____, threatening to _____ her if she _____.
<b>4.1</b>	Friar Lawrence comes up with a _____: Juliet must _____ to be _____ and then _____ Verona with Romeo. She _____ to the plan.
<b>5.3</b>	Romeo _____ learn of Friar Lawrence's _____. He sneaks back into Verona and visits Juliet's _____. He thinks she is _____, and kills himself with _____. Moments later, Juliet wakes up. She finds Romeo's body and kills _____ with his dagger. The two _____ agree to end their _____.

## The Big Ideas:

**Role of women:** Juliet is \_\_\_\_\_ to make her own decisions. She is \_\_\_\_\_ by her father who eventually decides to \_\_\_\_\_ her off to a \_\_\_\_\_ man. She breaks the \_\_\_\_\_ when she \_\_\_\_\_ her father and makes her own decisions.

**Evolution of Juliet's character:** Juliet is a stereotypical \_\_\_\_\_ daughter at the \_\_\_\_\_, she is loyal and \_\_\_\_\_. She becomes \_\_\_\_\_ and independent through her romance with Romeo. She becomes a tragic hero by \_\_\_\_\_ in pursuit of her own desires.

**Tragedy:** A Shakespearean tragedy is the story of one or two heroes of '\_\_\_\_\_', such as Kings or Lords. They act in pursuit of one \_\_\_\_\_. The story leads up to and includes the \_\_\_\_\_ of the hero as a result of their \_\_\_\_\_.

**Fate and destiny:** Fate is the idea that the \_\_\_\_\_ of a life are not in their control. The \_\_\_\_\_-crossed lovers suggests they were fated for \_\_\_\_\_. This leads to many questions: Is the tragic ending inevitable? Do they act \_\_\_\_\_?

## Characters

### Romeo (Montague)

Young \_\_\_\_\_. Falls in love with \_\_\_\_\_.  
\_\_\_\_\_ at the end of the \_\_\_\_\_. "Did my heart love till now? forswear it, sight! For I ne'er saw true beauty till this night!"; "Thus with a kiss I die"

### Juliet (Capulet)

13-y\_\_\_\_\_ - \_\_\_\_\_ girl. Falls in \_\_\_\_\_ with \_\_\_\_\_. Kills \_\_\_\_\_ at the end of the \_\_\_\_\_. "Wherefore art thou Romeo? Deny thy father and refuse thy name!"; "O happy dagger, This is thy sheath; there rust, and let me die"

### Lord Capulet (Capulet)

Head of the \_\_\_\_\_ family.  
Juliet's \_\_\_\_\_. Orders her to marry his friend, Paris. "She will be ruled In all respects by me"

### Paris (no family)

\_\_\_\_\_ of Verona. Wants to \_\_\_\_\_.  
Killed by \_\_\_\_\_ at the end of the play.

### Friar Lawrence (no family)

\_\_\_\_\_ in Verona. \_\_\_\_\_ to \_\_\_\_\_ Romeo and Juliet, thinking it will bring \_\_\_\_\_ to the city. "For this alliance may prove To turn your households' rancour to pure love"

### Mercutio (Montague)

Romeo's \_\_\_\_\_. Killed by \_\_\_\_\_. "A plague a' both your houses!"

### Prince Escalus (no family)

\_\_\_\_\_ of Verona. Wants to bring \_\_\_\_\_ to the city. "If ever you disturb our streets again, Your lives shall pay the forfeit of the peace"

## Structure of Shakespearean tragedy (Bradley)

### Exposition

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Development/Rising Action:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Catastrophe:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Vocabulary: Key words

tragic –

submissive –

narcistic –

feud –

shrine –

status quo –

obstacle –

vindictive –

patriarchy –

belligerent – warlike

exile (vb.) –

tenacious –

catastrophe –

stoicism –

## Terminology: Key words

Tragedy –

prologue –

sonnet –

dramatic irony –

Tragic hero –

soliloquy –

hyperbole –

tragic flaw –

foreshadow –

thesis –

## Features of Shakespearean tragedy (Bradley)

The characters are '\_\_\_\_\_' – they are important people.

The tragic hero \_\_\_\_\_: they **try to do** \_\_\_\_\_. They don't \_\_\_\_\_ things \_\_\_\_\_ to them.

Whatever they try to do, it always **puts them in a worse situation**.

They are \_\_\_\_\_ – there is something that makes them \_\_\_\_\_.



**What we are learning this term:**

- A. Atoms, elements and compounds
- B. Mixtures and separation
- C. Development of the atomic model
- D. Structure of the atom
- E. Electronic structure

**6 Key Words for this term**

1. Isotopes
2. Protons
3. Ionisation
4. Aqueous
5. Residue

**B. What is a mixture?**

A mixture consists of two or more elements or compounds not chemically combined.

**What properties do mixtures have?**

Each substance in the mixture will have the same chemical properties

**How are mixtures separated?**

By physical methods:	Filtration
Crystallisation	Simple Distillation
Fractional Distillation	Chromatography

**Are new substances made?**

No new substances are made

**A. What is Conservation of Mass**

Atoms are not created or destroyed in a reaction

**A. What are atoms?**

All substances are made of atoms. An atom is the smallest part of an element that can exist

<b>What are elements?</b>	<b>What are compounds?</b>
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An element is a substance made of one type of atom	Compounds contain two or more elements chemically combined
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<b>How are elements represented?</b>	<b>How are compounds represented?</b>
--------------------------------------	---------------------------------------

By a chemical symbol.	By the symbols of the atoms that formed them
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<b>Example: Sodium</b>	Na	<b>Example: Sodium Chloride</b>	NaCl
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<b>How many elements are there?</b>	<b>How can compounds be separated?</b>
-------------------------------------	--

There are about 100, all shown on the periodic table	By chemical reactions only
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**A. What are word equations?**

These show the names of each substance that is involved in a chemical reaction. The reactants are shown on the left. The products are shown on the right.



**What are symbol equations?**

The chemical formulae (symbols) of the reactants and products show what happens in a chemical reaction

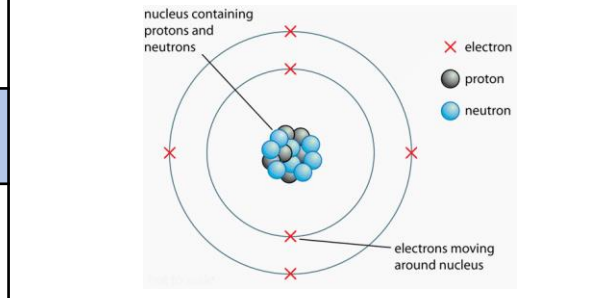
**CuO + H<sub>2</sub>SO<sub>4</sub> → CuSO<sub>4</sub> + H<sub>2</sub>O**

<b>D. What are subatomic particles?</b>	<b>Where are each subatomic particles found?</b>
---	--

The particles that make up atoms

**Name the 3 subatomic particles**

Protons, neutrons and electrons





<b>What we are learning this term:</b>	
<ul style="list-style-type: none"> <li>A. Atoms, elements and compounds</li> <li>B. Mixtures and separation</li> <li>C. Development of the atomic model</li> <li>D. Structure of the atom</li> <li>E. Electronic structure</li> </ul>	
<b>6 Key Words for this term</b>	
<ul style="list-style-type: none"> <li>1. Isotopes</li> <li>2. Protons</li> <li>3. Ionisation</li> <li>4. Aqueous</li> <li>5. Residue</li> </ul>	
<b>B.</b>	<b>What is a mixture?</b>
<b>What properties do mixtures have?</b>	
<b>How are mixtures separated?</b>	
<b>Are new substances made?</b>	
<b>A.</b>	<b>What is Conservation of Mass</b>

<b>A.</b>	<b>What are atoms?</b>		
<b>What are elements?</b>		<b>What are compounds?</b>	
<b>How are elements represented?</b>		<b>How are compounds represented?</b>	
<b>Example: Sodium</b>		<b>Example: Sodium Chloride</b>	
<b>How many elements are there?</b>		<b>How can compounds be separated?</b>	
<b>A.</b>	<b>What are word equations?</b>		
<p>_____ → _____</p> <p>Copper Oxide + Sulphuric Acid → Copper Sulphate + Water</p>			
<b>What are symbol equations?</b>			
<b>D.</b>	<b>What are subatomic particles?</b>		<b>Where are each subatomic particles found?</b>
<b>Name the 3 subatomic particles</b>			



C. Development of the Atomic Model – How was our current atomic model developed?					
Person/Time	Demicritus (400BC) Dalton (1803)	JJ Thomson (1898)	Ernest Rutherford (1909)	Niels Bohr (1913)	James Chadwick (1932)
Ideas/model	<ul style="list-style-type: none"> <li>Small indivisible matter</li> <li>Tiny hard spheres.</li> </ul>	Plum Pudding model  <ul style="list-style-type: none"> <li>Sphere of positive charge with negative charged particles spread throughout (like plums in a pudding)</li> </ul>	<ul style="list-style-type: none"> <li>Alpha particle scattering experiment</li> <li>Proved that mass of atoms found in the centre – nucleus</li> <li>Negative electrons surround the positive nucleus</li> </ul>	<ul style="list-style-type: none"> <li>Electrons are restricted to certain orbits like planets round the sun</li> </ul>	<ul style="list-style-type: none"> <li>Discovered the neutron</li> </ul>
Diagram					
Contribution to current model:	Everything is made of atoms	Negative electrons	Positive mass in the centre surrounded by negative electrons	Electrons orbit in shells/orbitals at specific distances	Neutrons found in nucleus along with protons

D.	How big are atoms?
	0.1nm ( $1 \times 10^{-10}$ m)
D.	How big is the radius of an atom?
	1/10000 the size of the atom – $1 \times 10^{-14}$ m

D.	What is relative mass and charges of the subatomic particles?	
Subatomic particle	Relative Mass	Relative Charge
Proton	1	+1
Neutron	1	0
Electron	1/2000	-1

D.	What is the overall charge of an atom?
	Atoms have no charge
	No of protons = no of electrons

D.	How do we know how many subatomic particles are in each element?	
$\text{C}^{12}_{6}$	← Mass Number	What is Mass number?
		Number of protons and neutrons
	← Atomic Number	What is atomic number?
		Number of protons – same for each individual element

D.	How can we know what element we have?
	Each element has a unique number of protons
D.	What is an isotope?
	An isotope is a substance with the same number of protons but different number of neutrons


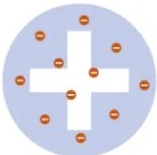

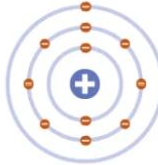
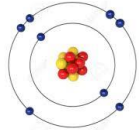
D.	What is relative atomic mass of an element?
	An average value that takes account of the abundance of the isotopes of an element

E.	Which energy level do electrons fill first?	
	Electrons in an atom occupy lowest energy level first	
How many electrons does each orbital hold?		
First	Up to 2	
Second	Up to 8	
Third	Up to 8	

Electronic structure of Sodium:	
	2,8,1





C. Development of the Atomic Model – How was our current atomic model developed?					
Person/Time	Demicritus (400BC) Dalton (1803)	JJ Thomson (1898)	Ernest Rutherford (1909)	Niels Bohr (1913)	James Chadwick (1932)
Ideas/model					
Diagram					
Contribution to current model:					

D.	How big are atoms?
How big is the radius of an atom?	

D.	What is relative mass and charges of the subatomic particles?	
Subatomic particle	Relative Mass	Relative Charge
Proton		
Neutron		
Electron		

D.	What is the overall charge of an atom?

D.	How do we know how many subatomic particles are in each element?	
C	12 ← Mass Number	What is Mass number?
	6 ← Atomic Number	What is atomic number?

D.	How can we know what element we have?
What is an isotope?	

D.	What is relative atomic mass of an element?

E.	Which energy level do electrons fill first?	
How many electrons does each orbital hold?		
First		
Second		
Third		

Electronic structure of Sodium:

**What we are learning this term:**

- A. Arrangement of the Periodic table
- B. Development of the periodic table
- C. Metals and non metals
- D. Group 1
- E. Group 7
- F. Group 0

**6 Key Words for this term**

1. Halogens                      2. Intermolecular

**C. How many elements are metals?**

Most elements in the periodic table are metal

**What are ions?**

Ions are formed when elements gain or lose electrons

**What are positive ions?**

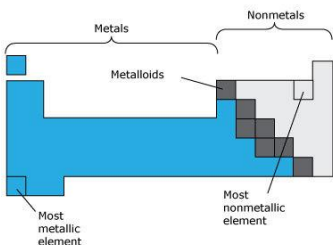
When an element loses an electron it forms a positive ion

**What type of ions do metals form?**

Metals react to form positive ions

**Where are metals and non-metals found on the periodic table?**

Metals are found to the left, towards the bottom. Non-metals are found towards the top right of the periodic table



**A. How are the elements in the periodic table arranged?**

Elements are arranged in order of increasing atomic number.

**What are Groups?**

The vertical columns are groups.

**What similarities do elements in groups have?**

- Similar properties
- Same no of electrons on outer shell

**What are periods?**

The horizontal rows in a periodic table

**B. Before the discovery of protons, how did scientists try to arrange elements?**

Scientists tried to group elements in order of their atomic weights

**What problems were often found with early periodic tables?**

- Not all elements had been discovered
- Some elements placed in the wrong position when atomic weight was used

**C. What are negative ions?**

Ions formed when atoms gain electrons

**What type of ions do non-metals form?**

Non-metals do not form positive ions – they form negative ions

**Periodic Table of Elements**

Key:  
 relative atomic mass →  
 atomic number →  
 element symbol →  
 element name →

Periods: 1, 2, 3, 4, 5, 6, 7, 8  
 Groups: 1, 2, 3, 4, 5, 6, 7, 8

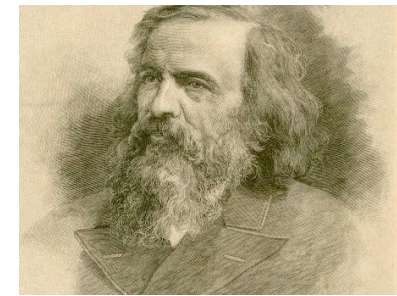
Legend:  
 hydrogen (light green), alkali metals (yellow), alkali earth metals (orange), transition metals (blue), non-metals (purple), metalloids (grey), halogens (pink), noble gases (light blue), lanthanides (light orange), actinides (light green)

**B. How did Mendeleev overcome some of the problems of grouping elements?**

- He left gaps for possible elements that had not been discovered
- He sometimes changed the order based on atomic weights

**What was discovered that helped explain why using atomic weights didn't always work?**

Knowledge of isotopes





**What we are learning this term:**

A. Arrangement of the Periodic table  
 B. Development of the periodic table  
 C. Metals and non metals  
 D. Group 1  
 E. Group 7  
 F. Group 0

**6 Key Words for this term**

1. Halogens                      2. Intermolecular

**C. How many elements are metals?**

**What are ions?**

**What are positive ions?**

**What type of ions do metals form?**

**Where are metals and non-metals found on the periodic table?**

**C, What are negative ions?**

**What type of ions do non-metals form?**

**A. How are the elements in the periodic table arranged?**

**What are Groups?**

**What similarities do elements in groups have?**

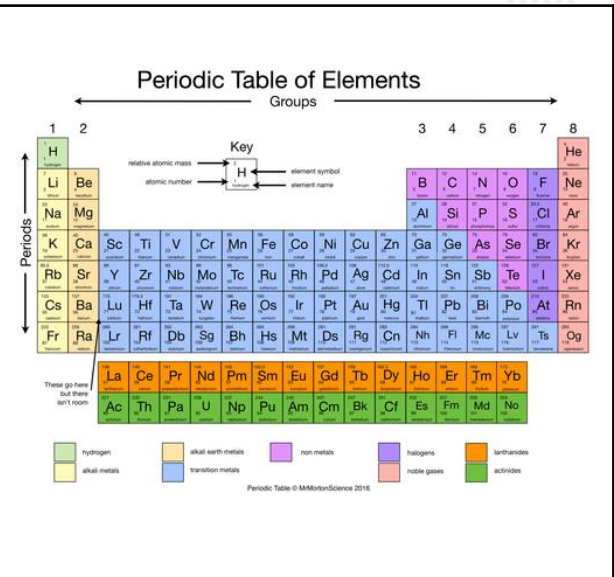
**What are periods?**

**B. Before the discovery of protons, how did scientists try to arrange elements?**

**What problems were often found with early periodic tables?**

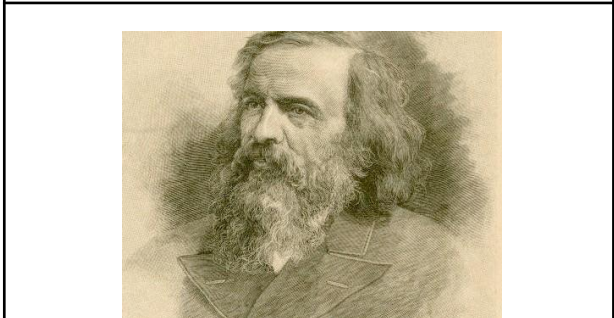
**C, What are negative ions?**

**What type of ions do non-metals form?**



**B. How did Mendeleev overcome some of the problems of grouping elements?**

**What was discovered that helped explain why using atomic weights didn't always work?**

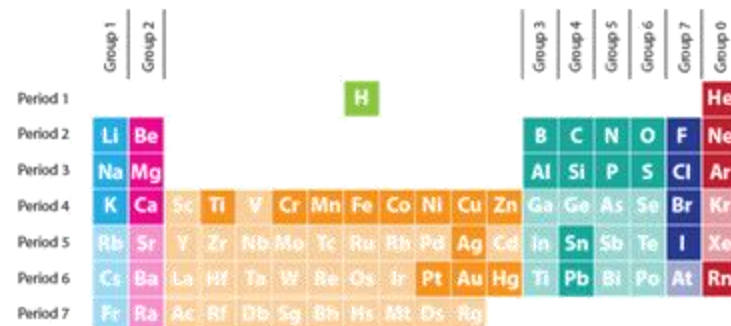




D	Group 1 of the Periodic Table -	
What are group 1 elements known as?	Alkali Metals	
Metal or non-metal	Metal	
How many electrons are in the outer shell?	1 electron in the outer shell	
How reactive are they?	<ul style="list-style-type: none"> <li>Group 1 metals easily lose the electron on the outer shell.</li> <li>This makes group 1 elements very reactive</li> <li>Vigorous reactions with water</li> </ul>	
What ions do they form?	<ul style="list-style-type: none"> <li>Group 1 elements readily lose electrons to form positive ions</li> <li>This is so they can have a filled outer shell</li> </ul>	
How does reactivity change down the group?	Reactivity increases down the group	

F.	Group 0 of the Periodic Table – Helium, Neon, Argon, Krypton, Xenon, Radon	
What are group 0 elements known as?	The Noble Gases	
Metal or non-metal	Non-metal	
How many electrons are in the outer shell?	8 - Filled outer shell (except Helium that has 2)	
How reactive are they?	Filled outer shell so not very reactive	
How do boiling points change down the group?	Boiling point increases down the group as the atomic weight increases	

E.	What is a Halogen Displacement reaction?	
A more reactive halogen can displace a less reactive halogen from an aqueous solution from its salt		
$\text{Cl}_2 + 2\text{KBr} \rightarrow 2\text{KCl} + \text{Br}_2$		



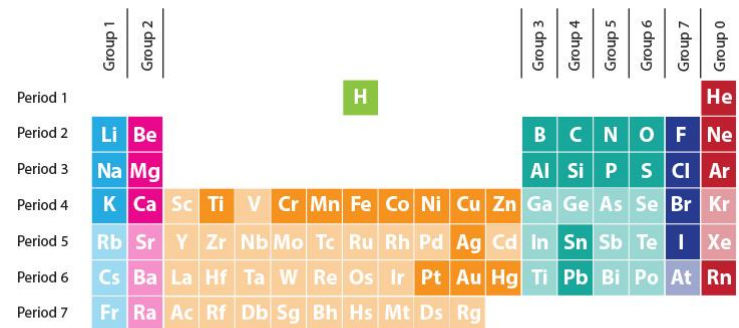
E.	Group 7 of the Periodic Table	
What are group 7 elements known as?	Halogens	
How are they found	Halogens travel in pairs – diatomic molecules ( $\text{Cl}_2$ , $\text{Br}_2$ ....)	
Metal or non-metal	Non-metal	
How many electrons are in the outer shell?	7 electrons in the outer shell	
How reactive are they?	<ul style="list-style-type: none"> <li>Group 7 elements easily gain electrons</li> <li>This makes group 7 elements very reactive</li> </ul>	
What ions do they form?	<ul style="list-style-type: none"> <li>Group 7 elements readily gain electrons to form negative ions.</li> <li>This is so they can have a filled outer shell</li> </ul>	
How does reactivity change down the group	Reactivity decreases down the group	
How do boiling points change down the group?	As you go down the group, the boiling point increases as the atomic weight increases	



D	Group 1 of the Periodic Table -
What are group 1 elements known as?	
Metal or non-metal	
How many electrons are in the outer shell?	
How reactive are they?	
What ions do they form?	
How does reactivity change down the group?	

F.	Group 0 of the Periodic Table – Helium, Neon, Argon, Krypton, Xenon, Radon
What are group 0 elements known as?	
Metal or non-metal	
How many electrons are in the outer shell?	
How reactive are they?	
How do boiling points change down the group?	

E.	What is a Halogen Displacement reaction?



E.	Group 7 of the Periodic Table
What are group 7 elements known as?	
How are they found	
Metal or non-metal	
How many electrons are in the outer shell?	
How reactive are they?	
What ions do they form?	
How does reactivity change down the group	
How do boiling points change down the group?	

# Y9- T2 -

**A. Background:**

- Natural Hazard is a threat to people and property**
- Hazard risk** is the **probability (chance)** that a natural hazard occurs.
- Earthquakes and **volcanoes** are **distributed** in narrow belts across the world. They are mostly found along **plate margins**, for example the **Pacific ring of fire** is a circle of volcanoes and earthquakes that surrounds the Pacific ocean.
- Volcanoes** are also found in **hotspots** across the world. These are areas where the crust of the earth is slightly thinner, allowing **magma** to rise to the surface.
- People live in areas at risk of **tectonic hazards** as they hold benefits such as **geothermal power** and **fertile soils** around volcanoes, examples of this are **Iceland**. People in poverty also live in **hazardous areas** as they cannot afford to move out

**B. What happens at plate margins?**

<b>Destructive plate margin</b>	At <b>destructive plate boundaries</b> , two plates move towards each other, the denser oceanic plate is forced under the less dense continental plate in a process called subduction
<b>Constructive plate margin</b>	At <b>constructive plate boundaries</b> , two plates are moving away from each other..
<b>Conservative plate margin</b>	At conservative plate margins, two plates are <b>moving past each other</b> . The plates get stuck which builds up pressure. The sudden release of this <b>pressure</b> causes <b>violent</b> earthquakes.
<b>Subduction/ Subduction Zone</b>	To go underneath. / the point at which the oceanic plate sinks beneath the continental one at a destructive/ subductive plate margin.

D.	Example of Tectonic Hazard HIC: Chile
<b>Date</b>	27 February 2010
<b>Magnitude</b>	8.8
<b>No. Dead</b>	521
<b>Epicentre</b>	Off the coast of Chile
<b>Causes</b>	Destructive plate: South American (continental) & Nazca Plate (oceanic)
<b>Primary effects</b>	<ul style="list-style-type: none"> <li>- 500 dead</li> <li>- 12,000 injured</li> <li>- 500,000 homes damaged</li> <li>- Santiago airport slightly damaged</li> <li>- Several bridges and roads damaged and a hospital</li> </ul>
<b>Secondary effects</b>	<ul style="list-style-type: none"> <li>- Much of Chile lost power, water supplies and communication cut off</li> <li>- Tsunami warning</li> <li>- A fire in a chemical plant &gt; evacuation</li> <li>- Copper mines suffered damage (Copper crucial to economy)</li> </ul>
<b>Short term responses</b>	<ul style="list-style-type: none"> <li>- After day Ten 90% houses had power back, roads quickly fixed</li> <li>- Temporary repairs to main roads</li> </ul>
<b>Long-term responses</b>	<ul style="list-style-type: none"> <li>- One month later houses rebuilding plan, due to the strong economy, it recovered and rebuilt without aid.</li> </ul>

E.	Example of Tectonic Hazard LIC: Nepal
<b>Date</b>	25 April 2015
<b>Magnitude</b>	7.9
<b>No. Dead</b>	521
<b>Epicentre</b>	80km from the capital city Kathmandu
<b>Causes</b>	Destructive plate: Indo-Australian plate colliding with the Eurasian plate
<b>Primary effects</b>	<ul style="list-style-type: none"> <li>- 9000 dead</li> <li>- 20,000 injured</li> <li>- 3 million made homeless</li> <li>- Electricity, water supplies and communications affected</li> <li>- 7000 schools destroyed, 50% of shops destroyed</li> </ul>
<b>Secondary effects</b>	<ul style="list-style-type: none"> <li>- Landslides and avalanches that blocked roads</li> <li>- Avalanches on Mount Everest killed at least 19 people</li> <li>- Landslides blocked the Kali Gandaki River causing flooding North of Kathmandu</li> </ul>
<b>Short term responses</b>	<ul style="list-style-type: none"> <li>- Search and rescue teams</li> <li>- Emergency food and water/ aid from the UK</li> </ul>
<b>Long-term responses</b>	<ul style="list-style-type: none"> <li>- 7000 schools to be rebuilt or repaired</li> <li>- Stricter controls on building codes</li> </ul>

**C. What happens at plate margins?**

<b>Hazard risk</b>	How likely you are to be harmed
<b>Hazardous</b>	Dangerous or a risk to life.

F.	How do we manage tectonic hazards?	
<b>Monitoring</b>	Warning signs: gases, sides of volcanoes swell, change shape and size, heat melts snow, rocks fracture, earthquakes. Monitored through seismographs, and tiltmeters (shape).	
<b>Prediction</b>	Based on scientific monitoring as above.	
<b>Protection</b>	Little can be done. However, you can create earth embankments or explosives to divert lava away from property.	
<b>Planning</b>	When machines begin to do the work which humans once completed.	
<b>Preparedness</b>	How ready you are for a situation	

# Y9- T2 -

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**B. What happens at plate margins?**

Destructive plate margin	
Constructive plate margin	
Conservative plate margin	
Subduction/ Subduction Zone	

D.	Example of Tectonic Hazard HIC: Chile
Date	
Magnitude	
No. Dead	
Epicentre	
Causes	
Primary effects	
Secondary effects	
Short term responses	
Long-term responses	

E.	Example of Tectonic Hazard LIC: Nepal
Date	
Magnitude	
No. Dead	
Epicentre	
Causes	
Primary effects	
Secondary effects	
Short term responses	
Long-term responses	

**C. What happens at plate margins?**

<b>Hazard risk</b>	
<b>Hazardous</b>	

F.	How do we manage tectonic hazards?
Monitoring	
Prediction	
Protection	
Planning	
Preparedness	



What we are learning this term:		B. Key People			
1.1 Ideas about the cause of disease and illness 1.2 Approaches to treatment and prevention 1.3 Dealing with the Black Death 1348-49		<b>Hippocrates</b>	<b>Galen</b>	<b>Physicians, apothecaries and surgeons</b>	<b>Hospitals</b>
<b>A.</b>	<b>Can you define these key words?</b>	<p>'Father of Medicine' – 4 humours, clinical observation (watch and record details, use this to help with future cases), importance of exercise, Hippocratic Oath for doctors (to preserve life)</p>	<p>Built on Hippocrates' ideas – theory of opposites (if cold, give something hot), also dissected animals to find out about anatomy (structure of body). Proved brain, not the heart, controls the body</p>	<ul style="list-style-type: none"> <li>• <b>Physicians</b> – diagnosed + recommended treatment, trained at university for around 7 years. Did not get to see dissections so new little about body. Learned everything from Galen's books. Only for super rich</li> <li>• <b>Apothecaries</b> – mixed herbal remedies (joined a guild, worked for master to train).</li> <li>• <b>Surgeons</b> – least qualified, also cut hair. Learned on job and only performed minor, on-invasive surgeries</li> <li>• <b>Monks and nuns</b> – worked in hospitals mostly prayed for patients and gave comfort. Not allowed to cut or bleed patients so could not do surgery</li> <li>• <b>Housewives and mothers</b> – treated most people. Mixed herbal remedies and treated minor wounds</li> </ul>	<ul style="list-style-type: none"> <li>• Ran by monks and nuns</li> <li>• Offered patients shelter, beds, food and very limited treatment.</li> <li>• Treatments mostly religious based – praying</li> <li>• Patients would offer share beds which led to all of diseases spreading around the hospitals</li> </ul>
Miasma	Bad air that was believed to be filled with harmful fumes.				
Quarantine	Separating the sick from the healthy to stop the spread of a disease.				
Humours	The humours were four fluids that were thought to spread throughout the body and influence its health.				
Purging	To get rid of anything unwanted.				
Phlebotomy	The drawing of blood by opening a vein.				
Leprosy	a painful skin disease				
Prevention	To stop something from happening				
Treatment	giving medicine or using other means to help a person get better when sick or hurt	<b>C. What were the causes of disease in Medieval England?</b>			
Apothecary	A person who mixes herbal remedies and treated patients as an alternative to a doctor as they were cheaper.	<u>Causes</u>	<u>Prevention</u>	<u>Treatments</u>	
Barber surgeon	barbers and surgeons who also performed minor operations such as removal of warts .	<b>Religious – Punishment from God</b> God has sent an illness as punishment for sins. Especially true at times of panic such as the Black Death.	<b>Religious - Church</b> – Lead a life free of sin.  Regular prayers and confessions.  Offering tithes to the church to make sure sins were forgiven quickly.	<b>Religious – Healing prayers and incantations</b>  Paying for a special mass to be said  Fasting  Pilgrimages	
<b>D.</b>	<b>Dealing with the Black Death</b>	<b>Rational - Miasma</b> – You had breathed in bad air. This was thought to come from swamps or rubbish. During this period there was allot of animal much in towns and often open sewers in the streets meaning the whole place stank. In these filthy places disease was more common seemingly proving this theory	<b>Rational and religious - Regimen Sanitatis</b> – A set of instructions provided by physicians to maintain good health.  Bathing was also used to prevent miasma.	<b>Supernatural - Astrology</b> – Treatments varied according the the horoscope of the patient. The alignment of the planets was checked at every stage of the treatment prescribed eg herb gathering.	
What is the Black Death?	<ul style="list-style-type: none"> <li>• Bubonic plague – outbreak in 1348-9 – 1/3<sup>rd</sup> to 1/ 2 of the population died in England. Caused by bacteria Yersinia pestis that was thought to have originated in China and came to Britain on fleas, on rats on ships.</li> </ul>	<b>Rational - The Theory of the Four Humors</b> – The 4 liquids in your body (blood, yellow bile, black bile, phlegm) were seen to be out of balance making you ill. Recovery came from getting them back in to balance through the theory of opposites Created in ancient Greece by Hippocrates.	<b>Rational - Diet</b> – Eating to much was strongly discouraged. What and when you ate were considered to be important in preventing a humoral imbalance.	<b>Rational - Humoral Treatments</b> – Blood letting – Bad humours could be removed from the body by removing some of the blood. Purging – Purging the digestive system to remove any leftover food. Eg using a laxative.	
Causes	<p>Miasma – bad air from the filthy conditions making you ill.</p> <p>Astrology – there was a weird alinement of Jupiter, mars and Saturn the previous year which was blamed for the plague</p> <p>Punishment from God- = People thought that society had become wicked so God had sent the plague to punish them.</p>	<b>Supernatural - Astrology</b> – Impact of the stars and planets on health. Physicians would use star charts to examine a patient and work out what was wrong with them.	<b>Rational - Purifying the air</b> –This was achieved by spreading sweet herbs.	<b>Rational - Herbal remedies</b> – Using herbal infusions to drink, sniff or bathe in.	
Treatments	Confesses sins and pray, bleeding and purging (but seemed to make worse), sweet herbs or fire to clean air.				
Prevention	Pray and fast, leave the area, carry sweet herbs, quarantine (new people stay away for 40 days), clean streets (or don't, maybe bad smell will drive out miasma)				





What we are learning this term:		B. Key People			
1.1 Ideas about the cause of disease and illness 1.2 Approaches to treatment and prevention 1.3 Dealing with the Black Death 1348-49		Hippocrates	Galen	Physicians, apothecaries and surgeons	Hospitals
<b>A.</b>	<b>Can you define these key words?</b>				
Miasma					
Quarantine					
Humours					
Purging					
Phlebotomy					
Leprosy					
Prevention		C. What were the causes of disease in Medieval England?			
Treatment		Causes	Prevention	Treatments	
Apothecary					
Barber surgeon					
<b>D.</b>	<b>Dealing with the Black Death</b>				
What is the Black Death?					
Causes					
Treatments					
Prevention					

Year 9 Religious Education: Buddhism		B.	<u><i>The Buddha and Enlightenment</i></u>	
A.	<i>Can you define these key words?</i>		Religion in India	Hinduism was the most common religion – Hinduism and Buddhism have common origins and have lots of similarities. Hinduism, Buddhism and Sikhism are known as Dharmic religions
Key word	Key definition		Caste system	Determined at birth and channels them into the caste’s occupation, their place in society, who they can marry People don’t do jobs which don’t fit their caste and the lowest caste is treated badly by others
Ascetic	Characterized by severe self-discipline and avoiding all forms of indulgence, typically for religious reasons		The Buddha’s early childhood	Born as a prince and lived in a palace - family belonged to the Kshatriya caste which was associated with rulers and leaders He was expected to follow his father as a local ruler but a seer predicted he would become a great ruler
Enlightenment	Understanding and accepting the truth about life and suffering and entering the state of pure happiness		Religious quest	Siddhartha saw 4 things which changed his perspective - old man, a sick person, a corpse, a holy man He realised that he no longer needed to live a luxury life but wanted to live a life on “The Middle Way”
Caste	A Hindu social order of higher and lower class		The middle way	The Buddha experienced wealth and poverty but didn’t get satisfaction so he meditated until he achieved enlightenment
Impermanence	The state of fact of lasting for only a limited period of time		C. <u><i>Three Marks of Existence (Universal Truths)</i></u>	
Craving	A powerful desire for something		Anicca (Impermanence)	All things are constantly changing – nothing is fixed & Everything depends on conditions which can also change - Even stars and galaxies are changing
Karma	The force produced by a person’s actions in one life that influences what happens to them in future lives		Anatta (No soul)	No permanent identity/no separate self As conditions change, people change too e.g. our personality and the way that we act - Nothing has a fixed or permanent nature so there is no soul which is eternal
Samsara	The cycle of birth, death and rebirth to which life in the material world is bound		Dukkha (dissatisfaction)	If life is always changing, all that we know will eventually stop existing -Even if we escape illness, we will one day face death The world is unsatisfactory because every time you gain happiness, things change again
Cessation	Ending something or being brought to an end		D.	<u><i>Karma and rebirth</i></u>
Puja	Ceremonies that involve meditation, prayer and offerings		Karma	If someone does a good action, they will get good karma - You can be free from the negative effects of negative karma if you forgive what happened in the past, accept it and understand it
Meditation	Thinking quietly as a way to calm the mind		Samsara	When someone dies, their energy passes into another form which depends on their actions in their past life The cycle ends when they achieve enlightenment
			F. <u><i>Puja and meditation</i></u>	
E.	<u><i>Four noble truths</i></u>		Samatha meditation	Used to try and focus the mind by concentrating on breathing and to concentrate at a deeper level Might use visual objects to aid meditation e.g. a coloured desk
Dukkha	There is suffering as a part of life because of sickness or frustration and unhappiness with life		Vipassana meditation	Helps Buddhists to seek truth about reality and develop wisdom so they can reach enlightenment Gaining insight into true reality by reflecting on the teachings of the Buddha Usually practised in a sitting position with legs crossed
Tanha	Craving for more because everything is constantly changing		G. <u><i>Ethical way of living</i></u>	
Niroda	Cessation – to stop suffering you need to stop craving more and more things		Abstain from taking life (don’t harm or kill living things)	Abstain from misusing senses (no over indulgence)
Magga	The Middle Way – set out in the form of a path of eight steps – these are 8 features of Buddhist life		Abstain from taking what is not freely given (against stealing and exploiting people)	Abstain from wrong speech (lying, slander, gossip, harsh speech and idle chatter)
				Abstain from taking drugs and alcohol which cloud the mind and could also include not playing video games or forms of work which numb the mind

Year 9 Religious Education: Buddhism		B.	<i>The Buddha and Enlightenment</i>	
A.	<i>Can you define these key words?</i>		Religion in India	
Key word	Key definition		Caste system	
Ascetic			The Buddha's early childhood	
Enlightenment			Religious quest	
Caste			The middle way	
Impermanence			<b>C.</b> <i>Three Marks of Existence (Universal Truths)</i>	
Craving			Annica (Impermanence)	
Karma			Anatta (No soul)	
Samsara			Dukkha (dissatisfaction)	
Cessation			<b>D.</b> <i>Karma and rebirth</i>	
Puja			Karma	
Meditation			Samsara	
			<b>F.</b> <i>Puja and meditation</i>	
<b>E.</b>	<i>Four noble truths</i>		Samatha meditation	
Dukkha			Vipassana meditation	
Tanha			<b>G.</b> <i>Ethical way of living</i>	
Niroda			Abstain from taking life (don't harm or kill living things)	
Magga			Abstain from taking what is not freely given (against stealing and exploiting people)	

**What we are learning this term:**

- A. Learning about Spanish life and routines
- B. Learning about local customs
- C. Talking about a Spanish festival
- D. Learning about Latin American culture
- E. Skim reading for key information
- F. Using past expressions of time

**6 Key Words for this term**

- |               |                    |
|---------------|--------------------|
| 1. divertirse | 4. el desfile      |
| 2. hispánico  | 5. celebrarse      |
| 3. el turismo | 6. los antepasados |

**4.1G La vida en familia**

a media mañana	at mid-morning
acostarse	to go to bed
el bollo	bun
la cena	evening meal
coger	to catch
la comida	food, meal, lunch
el desayuno	breakfast
la dieta	diet
la leche	milk
levantarse	to get up
ligero/a	light
participar	to participate, to take part
probar	to try, to try out
el recreo	break
saludable	healthy
la sobremesa	sitting chatting at the table
after a meal	
el trabajador	worker
la tradición	tradition
traer	to bring
tranquilamente	calmly
el vaso	glass

**4.1H ¿Cambian las costumbres?**

acostarse	to go to bed
cerrarse	to close
coger	to catch
corto/a	short
empezar	to start
hace calor	it is hot
levantarse	to get up
el marido	husband
la mayoría	majority
el ordenador	computer

**4.1F Algunas costumbres regionales**

la actuación	performance
agradable	pleasant
el ambiente	atmosphere
antiguo/a	old
la batalla	battle
el caballo	horse
la camisa	shirt
el concurso	competition
conmemorar	to commemorate
correr	to run
la costumbre	custom
demasiado	too much, too many
el desfile	parade, procession
el diablo	devil
divertirse	to enjoy oneself
emocionante	exciting
el encierro	bull run
encontrar	to find
enorme	enormous
entender	to understand
entrenarse	to train
el espectáculo	show, display
extraño/a	strange
fatal	awful
formar	to form
histórico	historic
humano	human
impresionante	impressive
incómodo/a	uncomfortable
llevar	to wear, take, carry
el Mediterráneo	Mediterranean
el/la moro/a	Moor (historically a person from North Africa)
nadie	no one
natural	natural
el origen	origin
pasarlo bien	to have a good time
el peligro	danger
peligroso/a	dangerous
por encima de	over
precioso/a	beautiful
el producto	product
saltar	to jump
la seguridad	safety, security
la suerte	luck
el toro	bull
la torre	tower
el traje	suit, costume
único/a	only, unique
varios/as	several
vestirse (de)	to dress (in)

**Key Verbs**

<u>Celebrar</u> To celebrate	<u>Ir</u> To go	<u>Disfrutar</u> To enjoy	<u>Hacer –</u> to do/make	<u>Disfrazar</u> To dress up
Celebro I celebrate	Voy I go	Disfruto I enjoy	Hago I do	Disfrazo I dress up
Celebras You celebrate	Vas You go	Disfrutas You enjoy	Haces You do	Disfrazas You dress up
Celebra – he/she celebrates	Va s/he goes	Disfruta He/she enjoys	Hace s/he does	Disfraza He/she dresses up
Celebramos We celebrate	Vamos They go	Disfrutamos We enjoy	Hacemos We do	Disfrizamos We dress up
Celebran They celebrate	Van They go	Disfrutan They enjoy	Hacen They do	Disfrazan They dress up

**4.2G Las fiestas de España – la Tomatina**

al final	at the end
americano/a	American
australiano/a	Australian
británico/a	British
el camión	lorry
la camiseta	T-shirt
el camaval	carnival
divertirse	to enjoy oneself
duchar	to shower
empezar	to start
la entrada	(entry) ticket
la foto	photo
la gente	people
hace (+ tiempo)	(time) ago
japonés/esa	Japanese
limitar	to limit
limpiar	to clean
llegar	to arrive
la manguera	hose, hosepipe
mojado/a	wet, soaked
el montón	heap, pile
la plaza mayor	the main square
primero/a	first
pronto	soon
rojo/a	red
sucio/a	dirty
típico/a	typical
tirar	to throw
todo el mundo	everyone, everybody
el tomate	tomato
el turismo	tourism
varios/as	several
el/la visitante	visitor
el/la voluntario/a	volunteer
volver	to return, to go back

**4.2F Las fiestas del mundo hispano**

el altar	altar, shrine
los antepasados	ancestors
aparecer	to appear
el azúcar	sugar
la calavera	skull
celebrarse	to be held
el cementerio	cemetery
cerca de	close to, near to
la ciudad	city, town
comenzar	to start
completamente	completely
describir	to describe
el desfile	parade
el diablo	devil
disfrazado	dressed up, disguised
en honor a	in honour of
encendido/a	lit
el esqueleto	skeleton
el estaño	tin
los familiares	family members
famoso/a	famous
la flor	flower
hispánico	Hispanic (i.e. of the Spanish speaking world)
la mina	mine
el/la minero/a	miner
el mole	'mole' sauce / Mexican chocolate sauce
la montaña	mountain
muerto	dead
la normalidad	normality
el número	number
la plata	silver
proteger	to protect
el pueblo	village, (small) town

**What we are learning this term:**

A. Learning about Spanish life and routines  
 B. Learning about local customs  
 C. Talking about a Spanish festival  
 D. Learning about Latin American culture  
 E. Skim reading for key information  
 F. Using past expressions of time

**6 Key Words for this term**

1. divertirse	4. el desfile
2. hispánico	5. celebrarse
3. el turismo	6. los antepasados

**4.1G La vida en familia**

a media mañana \_\_\_\_\_  
 acostarse \_\_\_\_\_  
 el bollo \_\_\_\_\_  
 la cena \_\_\_\_\_  
 \_\_\_\_\_ to catch  
 \_\_\_\_\_ food, meal, lunch  
 \_\_\_\_\_ breakfast  
 la dieta \_\_\_\_\_  
 la leche \_\_\_\_\_  
 \_\_\_\_\_ to get up  
 \_\_\_\_\_ light  
 \_\_\_\_\_ to participate, to take part  
 \_\_\_\_\_ to try, to try out  
 el recreo \_\_\_\_\_  
 saludable \_\_\_\_\_  
 la sobremesa sitting chatting at the table  
 after a meal \_\_\_\_\_  
 el trabajador \_\_\_\_\_  
 la tradición \_\_\_\_\_  
 \_\_\_\_\_ to bring  
 \_\_\_\_\_ calmly  
 \_\_\_\_\_ glass

**4.1H ¿Cambian las costumbres?**

\_\_\_\_\_ to go to bed  
 \_\_\_\_\_ to close  
 coger \_\_\_\_\_  
 corto/a \_\_\_\_\_  
 empezar \_\_\_\_\_  
 \_\_\_\_\_ it is hot  
 \_\_\_\_\_ to get up  
 el marido \_\_\_\_\_  
 la mayoría \_\_\_\_\_  
 \_\_\_\_\_ computer

**4.1F Algunas costumbres regionales**

\_\_\_\_\_ performance  
 \_\_\_\_\_ pleasant  
 el ambiente \_\_\_\_\_  
 antiguo/a \_\_\_\_\_  
 \_\_\_\_\_ battle  
 el \_\_\_\_\_ horse  
 la camisa \_\_\_\_\_  
 el \_\_\_\_\_ competition  
 conmemorar to \_\_\_\_\_  
 correr \_\_\_\_\_  
 la \_\_\_\_\_ custom  
 \_\_\_\_\_ too much, too many  
 \_\_\_\_\_ parade, procession  
 el diablo \_\_\_\_\_  
 divertirse to \_\_\_\_\_  
 emocionante \_\_\_\_\_  
 el encierro \_\_\_\_\_  
 \_\_\_\_\_ to find  
 \_\_\_\_\_ enormous  
 \_\_\_\_\_ to understand  
 entrenarse \_\_\_\_\_  
 el espectáculo \_\_\_\_\_  
 extraño/a \_\_\_\_\_  
 \_\_\_\_\_ awful  
 \_\_\_\_\_ to form  
 histórico \_\_\_\_\_  
 humano \_\_\_\_\_  
 \_\_\_\_\_ impressive  
 \_\_\_\_\_ uncomfortable  
 \_\_\_\_\_ to \_\_\_\_\_  
 llevar \_\_\_\_\_  
 el Mediterráneo \_\_\_\_\_  
 el/la moro/a Moor (historically a  
 person from North Africa)  
 nadie \_\_\_\_\_  
 \_\_\_\_\_ natural  
 \_\_\_\_\_ origin  
 pasarlo bien \_\_\_\_\_  
 el peligro \_\_\_\_\_  
 peligros/a \_\_\_\_\_  
 \_\_\_\_\_ over  
 \_\_\_\_\_ beautiful  
 \_\_\_\_\_ product  
 \_\_\_\_\_ to jump  
 la \_\_\_\_\_ safety, security  
 la suerte \_\_\_\_\_  
 el toro \_\_\_\_\_  
 la torre \_\_\_\_\_  
 \_\_\_\_\_ suit, costume  
 \_\_\_\_\_ only, unique  
 varios/as \_\_\_\_\_  
 vestirse (de) \_\_\_\_\_

**Key Verbs**

To celebrate	To go	To enjoy	Hacer – to do/make	Disfrazar To dress up
I celebrate	Voy I go	Disfruto	Hago	Disfrazo
Celebras You _____	You go	You enjoy	You do	You dress up
Celebra – he/she celebrates	s/he goes	Disfruta He/she enjoys	Hace	Disfraza He/she dresses up
We celebrate	Vamos	Disfrutamos We enjoy	We do	Disfrazamos
Celebran	They go	They enjoy	They do	They dress up

**4.2G Las fiestas de España – la Tomatina**

al final \_\_\_\_\_  
 \_\_\_\_\_ American  
 australiano/a \_\_\_\_\_  
 \_\_\_\_\_ British  
 \_\_\_\_\_ lorry  
 la camiseta \_\_\_\_\_  
 el camaval \_\_\_\_\_  
 \_\_\_\_\_ to enjoy oneself  
 \_\_\_\_\_ to shower  
 empezar to \_\_\_\_\_  
 \_\_\_\_\_ (entry) ticket  
 la \_\_\_\_\_ photo  
 la gente \_\_\_\_\_  
 hace (+ tiempo) \_\_\_\_\_  
 \_\_\_\_\_ Japanese  
 \_\_\_\_\_ to limit  
 \_\_\_\_\_ to clean  
 llegar \_\_\_\_\_  
 la manguera \_\_\_\_\_  
 mojado/a \_\_\_\_\_  
 \_\_\_\_\_ heap, pile  
 \_\_\_\_\_ the main square  
 \_\_\_\_\_ first  
 pronto \_\_\_\_\_  
 rojo/a \_\_\_\_\_  
 sucio/a \_\_\_\_\_  
 \_\_\_\_\_ typical  
 \_\_\_\_\_ to throw  
 todo el mundo \_\_\_\_\_  
 el tomate \_\_\_\_\_  
 el turismo \_\_\_\_\_  
 \_\_\_\_\_ several  
 el/la visitante \_\_\_\_\_  
 \_\_\_\_\_ volunteer  
 \_\_\_\_\_ to return, to go back, to  
 come back

**4.2F Las fiestas del mundo hispano**

\_\_\_\_\_ altar, shrine  
 los antepasados \_\_\_\_\_  
 aparecer \_\_\_\_\_  
 el azúcar \_\_\_\_\_  
 la \_\_\_\_\_ skull  
 \_\_\_\_\_ to be held  
 el \_\_\_\_\_ cemetery  
 \_\_\_\_\_ close to, near to  
 la ciudad \_\_\_\_\_  
 comenzar \_\_\_\_\_  
 completamente \_\_\_\_\_  
 \_\_\_\_\_ to describe  
 el \_\_\_\_\_ parade  
 el \_\_\_\_\_ devil  
 \_\_\_\_\_ dressed up, disguised  
 en honor a \_\_\_\_\_  
 encendido/a \_\_\_\_\_  
 el esqueleto \_\_\_\_\_  
 el estaño \_\_\_\_\_  
 los familiares \_\_\_\_\_  
 \_\_\_\_\_ famous  
 la flor \_\_\_\_\_  
 \_\_\_\_\_ Hispanic (i.e. of the  
 Spanish speaking world)  
 la mina \_\_\_\_\_  
 el/la minero/a \_\_\_\_\_  
 \_\_\_\_\_ 'mole' sauce /  
 Mexican chocolate sauce  
 la montaña \_\_\_\_\_  
 muerto \_\_\_\_\_  
 la normalidad \_\_\_\_\_  
 el \_\_\_\_\_ number  
 la \_\_\_\_\_ silver  
 \_\_\_\_\_ to protect  
 el pueblo \_\_\_\_\_



Translation Practice. G – blue F – orange H - Green	
Normalmente _____ cereals	Normally <b>for breakfast we have...</b>
Ayer _____ una manzana	Yesterday I <b>ate</b> an apple
Carmen _____ de casa a las ocho	Carmen <b>leaves</b> the house at 8.00
Esta tarde _____ con la familia de mi amigo	This afternoon I <b>chatted</b> with my friend's family
Muchas veces no _____ nada	Many times <b>they don't drink</b> anything
No hablamos _____	We don't speak <b>a lot</b>
El año pasado _____ Pamplona	Last year I <b>visited</b> Pamplona
El _____ es una tradición extraña	The <b>bull run</b> is a strange tradition
Fue muy _____	It was very <b>exciting</b>
_____ dos años fuimos a Burgos	2 years <b>ago</b> we went to Burgos
Ayer fuimos a ver el _____	Yesterday we went to see the <b>procession</b>
El pueblo _____ interesante	The town <b>was</b> interesting
Vimos un _____ muy interesante	We saw a very interesting <b>competition</b>
¿Qué _____?	What <b>did you do?</b>
Hoy me _____ muy temprano	Today I <b>got up</b> very early
Compré _____ para mi familia.	I bought <b>presents</b> for my family
La _____ fue que..	The <b>disadvantage</b> was that..
_____ mucha basura.	<b>There was</b> a lot of rubbish.

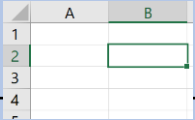
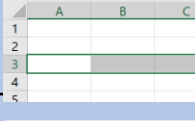
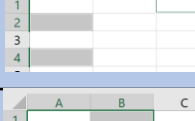
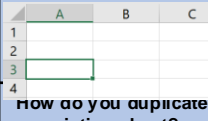
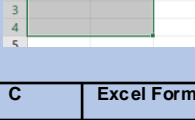
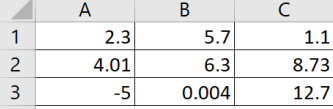






Key Questions: Answer the following in your own words. Use these model answers	
Describe una fiesta popular en España	Una fiesta muy popular en España es la Tomatina. La gente celebra la Tomatina en Agosto en Buñol cerca de Valencia. Durante la fiesta, la gente tira tomates, hay desfiles y bailes, se puede comer comida tradicional, la gente lleva disfraces. Después de la fiesta las calles están llenas de tomates. Es mi fiesta española favorita porque es muy entretenida y cómica.
Describe una fiesta popular en tu país	En Inglaterra celebramos la fiesta de Fuegos artificiales. Cada 5 de noviembre, celebramos el día de Guy Fawkes. Durante la noche, la gente va a parques o el centro de la ciudad y hay muchos fuegos artificiales. Celebra la noche cuando Guy Fawkes intentó poner fuego al gobierno de Inglaterra. Es muy entretenida y cómica.
Describe tu experiencia la última vez que fuiste a una fiesta en tu país	La última vez que fui a una fiesta en Inglaterra fue muy entretenida y cómica. Fue en Noviembre cuando celebramos la fiesta de Guy Fawkes. Fuimos en el centro de la ciudad o el parque para ver muchos fuegos artificiales. Fue muy entretenido, porque comí algodón de azúcar y pasé la noche con mis amigos.
¿Qué diferencias notas entre la vida española y la vida de tu propio país?	La vida en España y en Inglaterra es un poco diferente. En España se come una dieta mediterránea, la gente come muchas frutas, verduras, mucho pescado y aceite de oliva. En Inglaterra comemos más patatas fritas y más carne y menos frutas y verduras. En Inglaterra los jóvenes suelen llevar uniforme para ir al colegio pero en España los jóvenes no llevan uniforme. ¡Qué bueno! También, en España los jóvenes de 17 o 18 años no suelen emborracharse durante el fin de semana pero en Inglaterra hay más problemas con los jóvenes y el alcohol.

Key Grammar	
Forming the preterite (past tense). Always remove the –AR, –ER, –IR endings first	Remember the preterite (past) tense endings for –AR, –ER, –IR verbs. They are: -AR: -é, -aste, -ó, -amos, -astéis, -aron -ER: -í, -íste, -ió, -imos, -istéis, -ieron -IR : -í, -iste, -ió, -imos, -istéis, -ieron
<b>Imperfect Tense</b> ( <i>Past, ongoing actions, descriptions, 'used to' or 'was doing'</i> )	-ar -aba, -abas, -aba, -ábamos, -abais, -aban -er and -ir -ía, -ías, -ía, -íamos, -íais, -ían
Using the immediate future tense IR + A + INFINITIVE	Voy a casarme = I'm going to get married Va a discutir con su padre = He / She is going to argue with his/her father



## Year 9 COMPUTER SCIENCE Term 5 – Digital Literacy

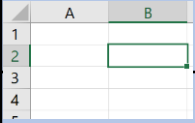
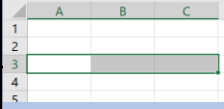
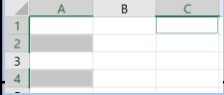
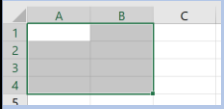
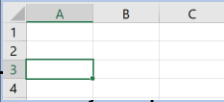
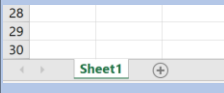










A Passwords and Shortcuts		B Excel Cell References		D Excel Absolute Cell References	
A feature of a strong password has...		What is the cell reference for the following...		Why are absolute cell references used?	
1	10 to 15 characters			To stop a cell reference from being modified automatically	
2	Special characters				
3	Upper- and lower-case letters			What is the absolute cell reference for the following	
4	Numbers				
5	NO patterns or sequences				
6	Only been used for one website/account				
7	NO obvious letter substitutions (for example, 'E' replaced by 3)			How do you duplicate an existing sheet? 1. Right click the sheet we want to copy. 2. Select 'move or copy'. 3. Select 'create a copy'. 4. Choose where you want the copy to be placed. 5. Press 'OK'.	
8	NO personal information				
9	To be memorable			How do you reference a cell in a different sheet	
What do the following shortcuts do?				=Sheet Name!Cell Reference For example, cell H3 in Sheet5 Would be referenced as =Sheet5!H3	
Ctrl-C	Copy	C Excel Formulae		E Excel Tools	
Ctrl-V	Paste	What is the Excel formula for...		What do the following buttons in Excel do?	
Ctrl-X	Cut		Adding cells B1 and C2 =B1+C2	 Accounting Number Format (format the cell in a currency, £, \$, and so on)	
Ctrl-Z	Undo		Subtracting cell A1 from cell A3 =A3-A1	 Bold (make text bold)	
Ctrl-A	Select all		Multiplying cells B3 and C1 =B3*C1	 Fill Colour (change the colour of selected cells)	
Ctrl-S	Save	Finding the mean of cells: A1, A2, A3, B1, B2 and B3 =AVERAGE(A1: B3)	Dividing cell A2 by cell B2 =A2*B2	 Borders (put an outline around selected cells)	
F2	Rename (file/folder)			 Merge & Center (combine multiple cells into one)	
Ctrl-Shift-N	Create a new folder	Finding the maximum of cells: A1, A2, A3, B1, B2, B3, C1, C2 and C3 =MAX(A1:C3)	Raising A1 to the power of 7 =A1^7	 Wrap Text (make the selected text fit in one cell)	
Ctrl-P	Print				
Ctrl-B	Bold text	Finding the product of cells: A1, A2, A3, C1, C2 and C3 =PRODUCT(A1: A3,C1:C3)			
Ctrl-U	Underline text				



# Year 9 COMPUTER SCIENCE Term 5 – Digital Literacy

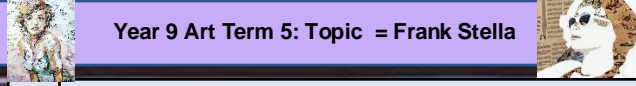


A	B	D													
<b>Passwords and Shortcuts</b>	<b>Excel Cell References</b>	<b>Excel Absolute Cell References</b>													
A feature of a strong password has...	What is the cell reference for the following...	Why are absolute cell references used?													
1	   	What is the absolute cell reference for the following													
2		 an existing sheet?													
3			 Sheet1												
4															
5															
6		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #d9e1f2;"> <th style="width: 10%;">A</th> <th style="width: 10%;">B</th> <th style="width: 10%;">C</th> </tr> </thead> <tbody> <tr><td>1</td><td>2.3</td><td>5.7</td></tr> <tr><td>2</td><td>4.01</td><td>6.3</td></tr> <tr><td>3</td><td>-5</td><td>0.004</td></tr> </tbody> </table>	A	B	C	1	2.3	5.7	2	4.01	6.3	3	-5	0.004	How do you reference a cell in a different sheet
A			B	C											
1			2.3	5.7											
2			4.01	6.3											
3	-5		0.004												
7	<b>Excel Tools</b>														
8		What do the following buttons in Excel do?													
9															
What do the following shortcuts do?															
<b>Ctrl-C</b>															
<b>Ctrl-V</b>															
<b>Ctrl-X</b>															
<b>Ctrl-Z</b>															
<b>Ctrl-A</b>															
<b>Ctrl-S</b>															
<b>F2</b>															
<b>Ctrl-Shift-N</b>															
<b>Ctrl-P</b>															
<b>Ctrl-B</b>															
<b>Ctrl-U</b>															

C	Excel Formulae
---	----------------

What is the Excel formula for...				
	A	B	C	
1	2.3	5.7	1.1	Adding cells B1 and C2
2	4.01	6.3	8.73	Subtracting cell A1 from cell A3
3	-5	0.004	12.7	
Finding the mean of cells: A1, A2, A3, B1, B2 and B3				Multiplying cells B3 and C1
Finding the maximum of cells: A1, A2, A3, B1, B2, B3, C1, C2 and C3				Dividing cell A2 by cell B2
Finding the product of cells: A1, A2, A3, C1, C2 and C3				Raising A1 to the power of 7





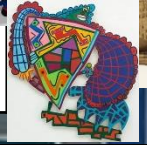
**What we are learning this term:**

- Cubism
- Frank Stella
- Segments and Templates
- Relief Sculpture
- Clay, Score & Slip



**B Answer the questions about Frank Stella**

- What type of sculptures does Frank make? Relief Sculptures
- What materials does he use? Frank uses a range of metal and Cardboard to create skeleton of the sculpture
- How big are his sculptures? His sculptures can fill a whole room and usually fill up a whole wall.



**A. Cubism- List 3 facts about Cubism.** What does it look like? Who created it? What different types of cubism are there?

- Cubism can be described as angular and a smashed mirror effect
- Cubism was created by Georges Braque and Pablo Picasso in 1907
- There are two types of Cubism; Analytical and Synthetic. Analytical is sharp and dull colours, Synthetic is bright and organic

Using the grid method technique, draw this Frank Stella image into 'Your response' box.



Example

Your response

**C. Segments & Templates- Looking at the image below, what describing words could you use to describe this artwork by Frank Stella. Use your formal elements to guide you.**

- Organic, natural, colourful, curvy, bright, bold, pattern, skewed, misshaped, mixed, disconnected, random, thought provoking

**D This is a relief sculpture; how has it been made and what materials have been used?**

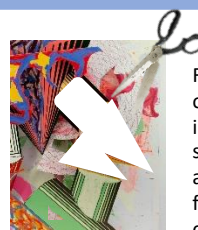


To create a relief sculpture you will need Cardboard or a strong yet easily cut material. Start by having an image to create from. The image on the left has been created by many layers of cut Cardboard. As more layers are added they create a 3-dimensional illusion.

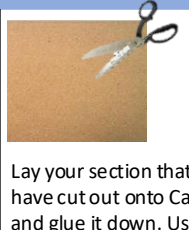


**Write a step by step guide to making a cardboard template for relief sculpture**

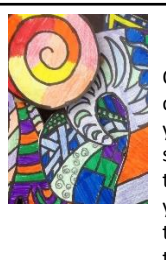
Firstly cut out individual sections and shapes from your chosen image. use scissors



Lay your section that you have cut out onto Cardboard and glue it down. Using a sharp pair of scissors cut this out of Cardboard staying very close to the edge



Once you have cut out all of your shapes and sections from the Cardboard you can arrange them and layer them onto



Finally seal all of your relief sculpture together with PVA glue .this will help to secure it, give it extra



**E Write a step- by- step guide to slab method & score and slip.**

**Slab**



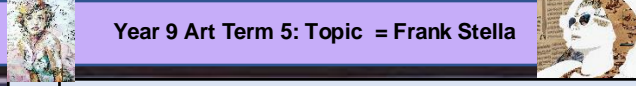
Firstly, start off by having your wooden board your wooden slats and your rolling pin With your ball of clay in the middle. Make sure the slats are the same thickness. Start off by gently rolling out your ball of clay in a rectangle, lifting up the clay every so often to rotate it so that you create a square. The slats will prevent the Play from going too thin. The rolling pin should now be rested on the slats as you roll, therefore the clay cannot go any thinner.

**Score& Slip**



Score and slip enables you to join 2 pieces of clay together. The scoring on each side of the clay will create a rough surface for attachment. The slip is watered down clay to create a paste. Using the slip like glue, add

	Keywords
Abstract	Abstract art is art that does not attempt to represent an accurate depiction of a visual reality but instead use shapes, colours, forms and gestural marks to achieve its effect
Geometric	Is something associated with geometry, or the use of straight lines and shapes. An example of geometric is an art piece made from rectangles, squares and circles
Sculpture	The art of processing by carving, modeling with plastic or hard materials into works of art. A three-dimensional work of art such as a statue
Formal Elements	are line, shape, form, tone, texture, pattern, colour and composition
Ines Kouidis	A collage artist who collages famous people
Collage	A piece of art made by sticking various materials such as photographs and pieces of paper or fabric on to a backing.



**What we are learning this term:**

- A. Cubism
- B. Frank Stella
- C. Segments and Templates
- D. Relief Sculpture
- E. Clay, Score & Slip



**B Answer the questions about Frank Stella**

- 1 What type of sculptures does Frank make?.....
- 2 What materials does he use?.....
- 3 How big are his sculptures?.....


**C. Segments & Templates- Looking at the image below, what describing words could you use to describe this artwork by Frank Stella. Use your formal elements to guide you.**

- 1.....
- 2.....
- 3.....

**A. Cubism- List 3 facts about Cubism.** What does it look like? Who created it? What different types of cubism are there?

- 1.
- 2.
- 3.


Using the grid method technique, draw this Frank Stella image into 'Your response' box.



Example

Your response

**D This is a relief sculpture; how has it been made and what materials have been used?**



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**Write a step by step guide to making a cardboard template for relief sculpture**




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**E Write a step-by-step guide to slab method & score and slip.**

**Slab**



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**Score & Slip**



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	Keywords
Abstract	
Geometric	
Sculpture	
Formal Elements	
Ines Kouidis	
Collage	



# Year 9 PRODUCT DESIGN Rotation Knowledge Organiser



What we are learning this term:

A. Workshop Tools    B. Materials    C. Key concepts    D. Key Words    E. Evaluating Work

A. Workshop Tools						
Steel Rule	Tri-Square	Laser Cutter	Mitre square	Tenon Saw	Pillar Drill	Bandfacer

B. Materials	
<b>Timbers</b> come from trees	
	<p><b>Scots pine</b> – which you used for your box walls – is a <b>softwood</b></p> <p><b>Softwoods</b> come in planks and boards</p>
<b>Manufactured Boards</b> come from <b>wood pulp</b>	
	<p><b>Plywood</b> – which you used as your base and Lid– is a <b>manufactured board</b></p> <p><b>Manufactured Boards</b> come in sheets</p>

<b>Polymers</b> come from <b>crude oil</b>	
	<p><b>Acrylic</b> – which you used as your lid decoration for your trinket box – is a <b>polymer</b></p> <p><b>Polymers</b> come in sheets, graduals and filament</p>

C. Key concepts	
Designers research and investigate resources and materials to help inspire ideas.	
<b>Computer-aided design (CAD)</b> is the process of using <b>computer software</b> to create <b>2D or 3D designs</b> .	
Advantages	Disadvantages
Designs can be <b>created, saved and edited</b> quickly, saving time	CAD takes a <b>long time to learn</b>
Designs or parts of design can be easily viewed from <b>different angles, copied or repeated</b>	Software can be <b>very expensive</b>
CAD is <b>very accurate</b>	CAD files can become <b>corrupted or lost</b>
<p><b>Hazards</b> – these are something that could potentially harm you. There are many such as:</p> <ul style="list-style-type: none"> <li>• Bags and chairs acting as a trip hazard</li> <li>• Untucked shirts, baggy clothes and untied hair are common things to get caught on tools and machines.</li> <li>• Drinks and liquids, if spilled can become slip hazards</li> </ul>	
<p><b>Preventative measures</b> – rules put in place to minimize the likelihood of a hazard occurring.</p> <ul style="list-style-type: none"> <li>• No food and drink in workshops</li> <li>• Bags and chairs stored neatly in designated areas</li> <li>• Long hair must be tied up and correct uniform worn.</li> </ul>	
<p><b>Personal protective equipment (PPE)</b></p> <p>The three used most often are aprons, safety goggles and ear defenders.</p>	

C. Key Words	
<b>Prototype</b>	An early model or sample of a product used to test a concept
<b>Tolerance</b>	The margin of error allowed for a dimension without negatively impacting a product
<b>Depth stop</b>	A part on a tool which is used to help cut or drill a specific depth.
<b>Assemble</b>	Creating a product by bringing several components together.

D. Evaluation of Products	
<b>Evaluate</b>	To judge and give an opinion.
<p>Designers will evaluate their products to see what works well and what doesn't. This way they can make any improvements on their current designs to ensure a high-quality product.</p> <p><b>When writing an evaluation it is important to include the following three things:</b></p> <ol style="list-style-type: none"> <li>1. Positives – what works well</li> <li>2. Negatives – what doesn't work well</li> <li>3. Possible improvements – how could you make it better?</li> </ol> <p><b>For example:</b></p> <p>My trinket box is well constructed and uses bright colours to look appealing. However, under closer inspection, the paint is messy and overlaps in some places. One improvement I could make is by applying the paint with a smaller brush so that it is easier to control and will make it look neater.</p>	



# Year 9 PRODUCT DESIGN Rotation Knowledge Organiser



**What we are learning this term:**

A. Workshop Tools    B. Materials    C. Key concepts    D. Key Words    E. Evaluating Work

**A. Workshop Tools**

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**B. Materials**

**Timbers** come from \_\_\_\_\_

	<p><b>Scots pine</b> – which you used for your box walls – is a <b>softwood</b></p> <p><b>Softwoods</b> come in _____</p>
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**Manufactured Boards** come \_\_\_\_\_

	<p><b>Plywood</b> – which you used as your base and Lid– is a <b>manufactured board</b></p> <p><b>Manufactured Boards</b> come in _____</p>
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**Polymers** come from \_\_\_\_\_

	<p><b>Acrylic</b> – which you used as your lid decoration for your trinket box – is a <b>polymer</b></p> <p><b>Polymers</b> come in _____</p>
--	---

**C. Key concepts**

Designers research and investigate \_\_\_\_\_

\_\_\_\_\_ (CAD) is the process of using computer \_\_\_\_\_.

Advantages	Disadvantages

**Hazards** – these are something that could potentially harm you. There are many such as:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Preventative measures** – rules put in place to minimize the likelihood of a hazard occurring.

\_\_\_\_\_

\_\_\_\_\_

**Personal protective equipment (PPE)**  
The three used most often are \_\_\_\_\_

\_\_\_\_\_

**C. Key Words**

<p><b>Prototype</b> </p>	
<p><b>Tolerance</b> </p>	
<p><b>Depth stop</b> </p>	
<p><b>Assemble</b> </p>	

**E. Evaluation of Products**

**Evaluate** \_\_\_\_\_

**Think back to your completed Trinket box. Evaluate one positive aspect of it, one negative aspect of it and an improvement you would like to have made if you had time.**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Possible sentence starters:**

- One thing that was successful.....
- One thing that I had issues with was.....
- If I had more time, I could improve this by.....

## Year 9 – High Skills

### What we are learning this term:

- A. Health, safety and hygiene in the kitchen
- B. The Eatwell guide and nutrients
- C. The Dietary requirements of a teenager
- D. Skills testing
- E. Healthy cooking
- F. Chopping Board Colours

### 6 Key Words for this term

- |                        |                       |
|------------------------|-----------------------|
| 1 Hygiene              | 4 Healthy             |
| 2 Dietary Requirements | 5 Teenager            |
| 3 Skills Test          | 6 Cross Contamination |

### A. Explain the main four things that you should do when you enter the kitchen area.

Remove all of your jewellery.	Jewellery can harbour bacteria and could fall off into the food.
Tie back your hair	Hair could fall into the food or touch equipment.
Wash your hands with hot soapy water.	To remove any germs and bacteria from your hands and nails.
Put on and apron and tie it back.	To protect you from the food and equipment and the food from touching you.

### B. Can you list 5 of the dietary requirements of a teenager?

- 1 A diet high in carbohydrate as a teenager is normally an energetic person.
- 2 A diet with 2-3 portions of protein to maintain muscle growth and cell repair
- 3 A diet with 2 -3 sources of calcium to build developing teeth and bones.
- 4 A diet low in fat to avoid becoming obese or developing other health problems.
- 5 Drinking 2 litres of water a day.

**FOOD SAFETY CHOPPING BOARDS**  
If used correctly, colour coded chopping boards can eliminate or reduce the risk of cross contamination during food preparation

- RAW MEAT
- RAW FISH
- COOKED MEATS
- SALAD & FRUIT PRODUCTS
- VEGETABLE PRODUCTS
- BAKERY & DAIRY PRODUCTS

**!** Clean and store chopping boards correctly after use



### A. What is cross contamination and how can it be prevented?

Cross contamination happens when you use the wrong chopping board or equipment to prepare food which can therefore result in food poisoning. You must use the correct equipment for the correct ingredients. You must also ensure that you are always following good hygiene practices when cooking.

### B. What do the following terms mean?

Grilling	Using the top part of the oven. It involves a significant amount of direct, radiant heat, and tends to be used for cooking meat and vegetables quickly. It is also a healthier method of cooking meat products.
Baking	Baking is a method of preparing food that uses dry heat, normally in an oven. Heat is gradually transferred from the surface of cakes, cookies, and breads to their centre.
Frying	Frying is the cooking of food in oil or another fat. It is usually done in a frying pan using the hob of the cooker. It is also known to be unhealthy.

### C. Can you list 5 reasons for why we cook food and why it is important?

Rule	Why it is important
• 1 to get rid of bacteria on the food	• 1 to stop food poisoning
• 2 to make the food taste better	• 2 to make the food more appealing
• 3 to make food chewable	• 3 it could be raw or a choking hazard
• 4 to ensure that food is not raw	• 4 to stop food poisoning
• 5 to add colour to the food	• 5 to make it look more appetising or change its use

E.	Keywords
Hygiene	A method of keeping yourself and equipment clean
Research	Information that you find out to help you with a project
Nutritious	A meal that is healthy and contains vital nutrients.
Target Market	The age or type of person you re creating a product for.
Carbohydrates	Foods that give you energy
Protein	Food that grow and repair your muscles
Fibre	Foods that keep your digestive system healthy and avoid constipation.
Calcium	Foods that make your teeth and bones strong
Design Idea	A sketch or plan of how you are hoping a project to turn out.
Organisation	Having everything ready for a lesson and following instructions
Time keeping	Using the time to remain organised.
Sensory analysis	Use your senses to taste and describe a product
Mood Board	A collage of photos and key words based on a project
Time Plan	Instructions of wat you are going to do and how long it should take.
Skills Test	Demonstrating your knowledge of a cooking term.
Teenager	Someone between the age of 13 – 19.



**Year 9 – High Skills**

**What we are learning this term:**

- A. Health, safety and hygiene in the kitchen
- B. The Eatwell guide and nutrients
- C. The Dietary requirements of a teenager
- D. Skills testing
- E. Healthy cooking
- F. Chopping Board Colours

**6 Key Words for this term**

1 Hygiene	4 Healthy
2 Dietary Requirements	5 Teenager
3 Skills Test	6 Cross Contamination

**A. Explain the main four things that you should do when you enter the kitchen area.**


**B. Can you list 5 of the dietary requirements of a teenager?**

1
2
3
4
5

**FOOD SAFETY CHOPPING BOARDS**  
 If used correctly, colour coded chopping boards can eliminate or reduce the risk of cross contamination during food preparation

- Red
- Blue
- Yellow
- Green
- Orange
- BAKERY & DAIRY PRODUCTS

**!** Clean and store chopping boards correctly after use



**A. What is cross contamination and how can it be prevented?**

**B. What do the following terms mean?**

Grilling	
Baking	
Frying	



**C. Can you list 5 reasons for why we cook food and why it is important?**

<u>Rule</u>	<u>Why it is important</u>
• 1	• 1
• 2	• 2
• 3	• 3
• 4	• 4
• 5	• 5

E.	Keywords
Hygiene	
Research	
Nutritious	
Target Market	
Carbohydrates	
Protein	
Fibre	
Calcium	
Design Idea	
Organisation	
Time keeping	
Sensory analysis	
Mood Board	
Time Plan	
Skills Test	
Teenager	

# YEAR 9 GRAPHIC COMMUNICATION

## What are we learning this term?

A Logos	B Typography	C Computer skills	D Key words	E Evaluation
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## D| Key words

Merchandise	Branded products used to promote and sell a product
Combined Logo	A logo that uses both images and text
Photoshop	A software for editing photos and graphics. It is used for image editing, making illustrations or web design.
Photo Editing	The act of image and enhancement and manipulation

## A | Logos

What is a logo?

A graphic design element that includes words and images, shapes, symbols or colour.

How does Alex Trochut design logos?

Alex Trochut collaborates with brands to create new catchy designs. He uses text and imagery to create visual art. The viewer first notices the imagery but looks closer to find a hidden message through typography.

## B | Typography

Draw your initials in the typographic style of designer Alex Trochut work



## C | Computer skills

What is the shortcut for copy?

Ctrl + C

What is the shortcut for paste?

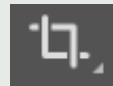
Ctrl + V

What does this symbol stand for?



Photoshop

What does this symbol mean?



Cropping

## E | Evaluation

Evaluation: To judge or give an opinion

Designers will evaluate their products to see what works well and what doesn't. This way they can make any improvements on their current designs to ensure a high-quality product.

**When writing an evaluation it is important to include the following three things:**

1. Positives – what works well
2. Negatives – what doesn't work well
3. Possible improvements – how could you make it better?

**For example:**

My tote bag looks great, the colours are bright which appeals to the audience of the festival. However, I have not designed a combined logo. One improvement I could make is to use images and text to create a combined logo.

# YEAR 9 GRAPHIC COMMUNICATION

## What are we learning this term?

A Logos	B Typography	C Computer skills	D Key words	E Evaluation
------------	-----------------	----------------------	----------------	-----------------

## D | Key words

Merchandise	
Combined Logo	
Photoshop	
Photo Editing	

## A | Logos

What is a logo?

How does Alex Trochut design logos?

## B | Typography

Please use pencil for the drawing of your design

## C | Computer skills

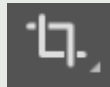
What is the shortcut for copy?

What is the shortcut for paste?

What does this symbol stand for?



What does this symbol mean?



## E | Evaluation

Evaluation: To judge or give an opinion

**When writing an evaluation it is important to include the following three things:**

1. Positives – what works well
2. Negatives – what doesn't work well
3. Possible improvements – how could you make it better?

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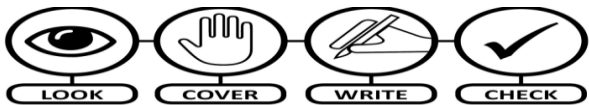
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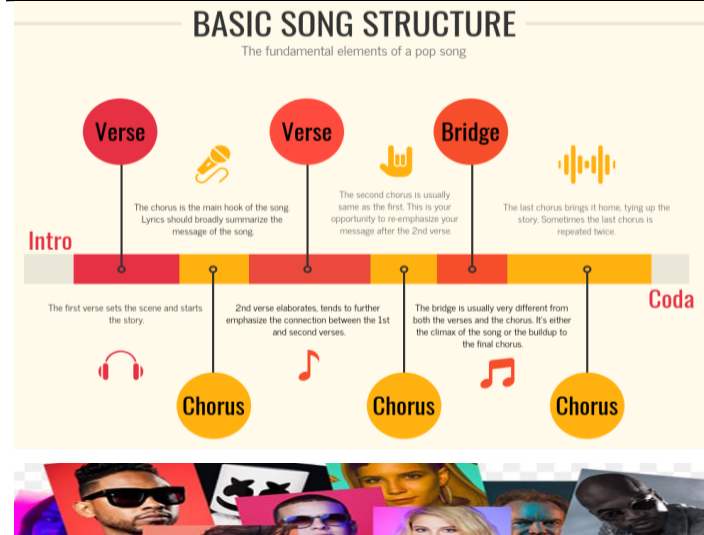


A	What we are learning about this term...
1	Basic Song Structure
2	How to write a perfect Evaluation
3	Playing an instrument / Chords / Melody
4	What are the music symbols – Note values
5	Keywords
6	How to read music - Treble clef and bass clef



B	Keywords
<b>Instrumental Break</b>	An <b>instrument section</b> during a song – no singing
<b>Lyrics</b>	The <b>words</b> of a song
<b>Verse</b>	A section of a song <b>telling the story</b> , followed by a chorus
<b>Chorus</b>	<b>Repeated idea</b> within a song, lyrics and music usually remain the same
<b>Bridge / Middle 8</b>	<b>Passage of music</b> that contrasts the <b>verse and chorus</b>
<b>Outro / Coda</b>	<b>Passage of music</b> that <b>brings the song to an end</b>
<b>Album</b>	A collection of <b>audio recordings</b>
<b>Arrangement</b>	<b>A rework of a musical composition</b> so that it can be played by different combinations of instruments
<b>Genre</b>	A <b>style</b> or category of <b>art, music, or literature</b>
<b>Cover Song</b>	<b>A performance of a song</b> by someone other than the original artist/band.

**C Instruments in popular music**



**D How to write a perfect Evaluation?**

1	Write a full sentence explaining what your musical performance or music composition was about
2	Explain what you were trying to communicate to an audience and how you did it
3	Pick out at least two moments that worked really well, using specific examples and say what you did that made them successful
4	Pick out one moment that you could make better. Explain why it needed improving and how you would make it better if you did your performance again
5	Sum up your evaluation and discuss one thing that you will take forward into your next work

**E Basic Note Values - Recap**

Note	Name	Beats	Rest	Note	Name	Beats	Rest
	Semibreve, Whole Note	4 beats			Dotted Semibreve, Dotted Whole Note	6 beats	
	Minim, Half Note	2 beats			Dotted Minim, Dotted Half Note	3 beats	
	Crotchet, Quarter Note	1 beat			Dotted Crotchet, Dotted Quarter Note	1½ beats	
	Quaver, Eighth Note	1/2 beat			Dotted Quaver, Dotted Eighth Note	¾ beat	

**F How to read music – treble clef and Bass Clef**

**TREBLE LINES: E G B D F**      **TREBLE SPACES: F A C E**

**BASS LINES: G B D F A**      **BASS SPACES: A C E G**

**G Describing music – MAD T SHIRT**

M	A	D	T	S	H	I	R	T
<b>Melody</b>	<b>Articulation</b>	<b>Dynamics</b>	<b>Texture</b>	<b>Structure</b>	<b>Harmony/Tonality</b>	<b>Instruments</b>	<b>Rhythm</b>	<b>Tempo</b>
The tune	How notes are played	Loud/quiet and any other volume changes	Layers of sound / how they fit together	The sections and organising	Chords used / the mood	Types of instruments heard	Pattern of notes	The speed



## Improvisation

improvising is inventing and creating content spontaneously. It's a great way to generate new ideas and for creating and developing characters, using a variety of useful techniques.

Spontaneous improvisation which is completely unplanned can generate dialogue or scenarios that you feel work for the piece you are creating. This can then be refined, rehearsed and included in your finished **devised** piece.

A **constraint** is a condition that you must apply to a scene, so that you're improvising within a set of rules. Here are some ideas for working with constraints when improvising.

### Space

A very small space, such as a lift. Characters must behave as they would normally but within a tiny playing area.

A vast space, such as across a giant mountain range.

Consider how changing **proximity** affects body language, vocal tone and volume and interaction, between characters. There may be something that works and could be included in your devised piece.



This improvisational exercise is excellent for creating entirely new and unplanned characters and scenarios.

### Where, who, what?

Choose a location, eg a supermarket or a roller coaster.

Select characters, eg an astronaut or an I.T. manager.

Finally, choose a motivation for the character, eg they are looking for a partner or want to be famous at any cost.

Each piece of information should be randomly selected, so that they don't necessarily match up. This can make for interesting and very humorous drama.

- **Improvisational Theater (improv):** is a form of theater where most or all of what is performed is created at the moment it is performed.
- In its purest form, the dialogue, the action, the story and the characters are created collaboratively by the players as the improvisation unfolds.
- Improv exists in performance as a range of styles of improvisational comedy as well as some non-comedic theatrical performances.
- It is sometimes used in film and television, both to develop characters and scripts and occasionally as part of the final product.

## Tips for success

### -Listen to your partner.

A scene will often 'go stale' if the people involved are not responding genuinely to each other. Improv is all about **teamwork** and the relationship you have with each other. The better the relationship, the better the scene will be to the audience.

### -Use 'yes, and...'

When your partner tells you something in an improv scene, accept it and then add something to the conversation. If your partner starts by asking you why you've come to a party dressed as a pineapple, don't tell them that you think they're seeing things. Ask them why they're the only one who hasn't come dressed as a giant piece of fruit and that you have a spare costume in your car if they need it. Scenes where actors deny what their partners are saying often go dry very quickly and offer nothing for the audience. It's also a good way to annoy your partners.

### - Don't necessarily try to be funny.

Sure, comedy is great, but one person trying to make the audience laugh often alienates the others on stage.

### -Accept your mistakes.

Like any learning process, you will make mistakes. It's how you learn. Don't beat yourself up if you forgot a key rule of improv or your scene wasn't particularly good. Make some general notes for yourself and put it behind you. Next time you get up to improvise, treat it like a fresh start and be positive.

**Examples – Mock the Week, Whose Line Is it Anyway? Outnumbered. The Office.**



# Drama – Year 9 Improvisation

improvising is \_\_\_\_\_ and \_\_\_\_\_ content spontaneously. It's a great way to generate \_\_\_\_\_ and for creating \_\_\_\_\_ and developing \_\_\_\_\_, using a variety of useful techniques.

Links to  
Comp 1  
and 2

Spontaneous improvisation-

A \_\_\_\_\_ is a condition that you must apply to a scene, so that you're improvising within a set of rules. Here are some ideas for working with constraints when improvising.

S \_\_\_\_\_

A very small s \_\_\_\_\_, such as a lift. Characters must behave as they would normally but within a tiny playing area.

A vast space, such as across a giant mountain range.

Consider how changing p \_\_\_\_\_ affects body language, vocal tone and volume and interaction, between characters. There may be something that works and could be included in your devised piece.



**Create your own**

**Where, who, what?**

Location-

Character-

Motivation-

- **Improvisational Theater (improv):** is a form of theater where most or all of what is performed is created at the moment it is performed.
- In its purest form, the dialogue, the action, the story and the characters are created collaboratively by the players as the improvisation unfolds.
- Improv exists in performance as a range of styles of improvisational comedy as well as some non-comedic theatrical performances.
- It is sometimes used in film and television, both to develop characters and scripts and occasionally as part of the final product.

Tips for success

What are the 5 tips for successful improvisation and why are these important?

**Examples – Can you name any tv shows that are improvised?**



# SWINDON ACADEMY READING CANON

## Year 7



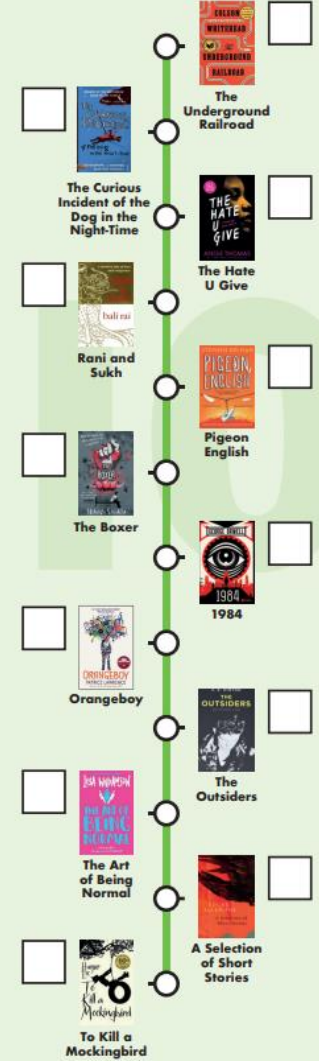
## Year 8



## Year 9



## Year 10



#ReadingisPower