

	<b>8F The Periodic Table</b>
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1. Dalton's Atomic Model	
<b>Matter</b>	All things are made of matter.
<b>John Dalton</b>	An English chemist.
<b>Dalton's Atomic Theory</b>	<ul style="list-style-type: none"> <li>all matter is made up of atoms.</li> <li>atoms in an element are identical. Each element has its own type of atom.</li> <li>atoms cannot be destroyed or created.</li> <li>In compounds each atom is always joined to a fixed number of other atoms.</li> <li>atoms rearrange during chemical reactions to form new substances.</li> </ul>
<b>Atoms</b>	Small particles that all matter is made up of.
<b>Element</b>	A substance made up of one kind of atom.
<b>Compound</b>	Contains atoms of two or more different elements chemically joined together.
<b>Physical Properties</b>	The properties that describe a substance on its own. (colour, strength, density, etc.)
<b>Physical Changes</b>	A change in which no new substances are formed.
<b>Symbols</b>	Letters used to represent the elements. <i>e.g. C represents Carbon</i>

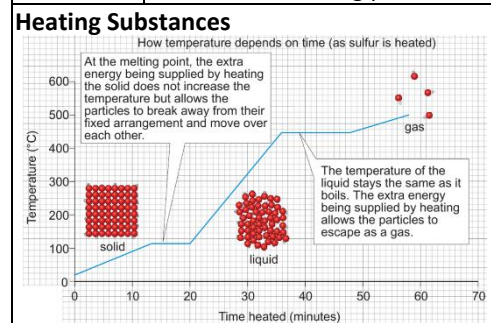
2. Chemical Properties	
<b>Chemical Properties</b>	How a substance reacts with other substances.

<b>Hypothesis</b>	An idea about how something works that can be tested using experiments.
<b>Prediction</b>	What you think will happen in experiment and why.
<b>Conserving Mass</b>	The mass of the products of a reaction will be the same as the mass of the reactants.
<b>Chemical Formulae</b>	The combination of symbols and numbers that shows how many atoms of different element are in a particular molecule. <i>e.g. water is H<sub>2</sub>O</i>
<b>Ratio</b>	Comparison of the proportion of two quantities <i>e.g. in water there are 2 hydrogens for every oxygen, the ratio is 2:1</i>

3. Mendeleev's Table	
<b>Johann Döbereiner</b>	(1780-1849) German chemist who highlighted some groups of 3 elements had similar physical / chemical properties.
<b>John Newlands</b>	(1837-1898) English chemist who ordered elements by the mass of atoms and noticed every 8 <sup>th</sup> element has similar properties.
<b>Dmitri Mendeleev</b>	(1834-1907) Russian chemist who published the first periodic table by ordering elements by increasing masses of their atoms forming groups of similar properties.
<b>Gaps</b>	Mendeleev left gaps in his table for undiscovered elements and predicted their properties.

<b>Group</b>	A vertical column in the Periodic Table- contains elements with similar properties.
<b>Alkali Metals</b>	Group 1 Very reactive metals, they even react with water.
<b>Halogens</b>	Group 7 React with most metals to form solid compounds.
<b>Noble Gases</b>	Group 0 Unreactive gases

4. Physical Trends	
<b>Melting Point</b>	When a substance changes from a solid into a liquid
<b>Boiling Point</b>	When a substance changes from a liquid into a gas.
<b>Freezing Point</b>	When a substance changes from a liquid into a solid- the same as the melting point.



<b>Periods</b>	The horizontal rows in the Periodic table.
<b>Transition Metals</b>	Block of elements in the middle of the Periodic table- separates the eight main groups.
<b>Metal Properties</b>	High melting points, strong, flexible, malleable, shiny, good conductors.
<b>Non-Metal Properties</b>	Low melting points, brittle, dull, poor conductors.

5. Chemical Trends	
<b>Alkali Metals &amp; Water</b>	Alkali metals produce metal hydroxides and hydrogen when reacting with water. <i>(sodium + water → sodium hydroxide + hydrogen)</i>
<b>Alkali Metals &amp; Oxygen</b>	Alkali metals produce metal oxides when reacting with oxygen. <i>(lithium + oxygen → lithium oxide)</i>
<b>Reactivity</b>	How quickly / vigorously something reacts.
<b>Alkali Metal Reactivity</b>	As you move down the group the reactivity increases.
<b>Oxides</b>	Formed when elements react with oxygen.
<b>Oxide Trends</b>	When we dissolve oxides in water there is a trend in their pH. Further to the left of the Periodic table oxides formed are more alkaline. Further to the right they are more acidic.

Lesson	Memorised?
1. Dalton's Atomic Model	
2. Chemical Properties	
3. Mendeleev's Table	
4. Physical Trends	
5. Chemical Trends	