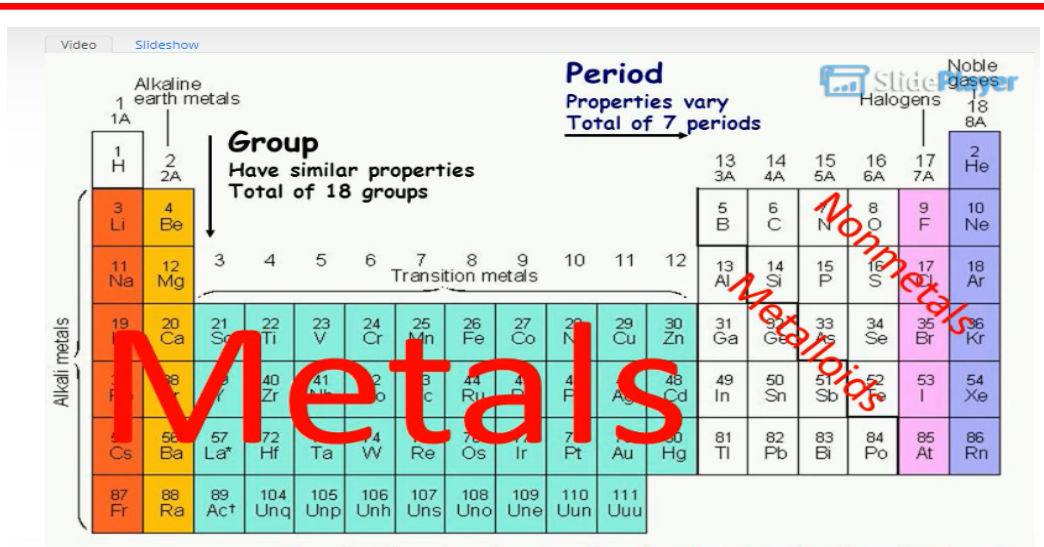
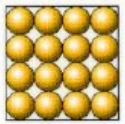
Helston Science Department

KS3 C2a

Topic outcome: Periodic Table and Separation Techniques



Elements contain only one type of atom.

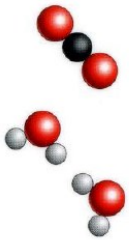


Sodium (Na)

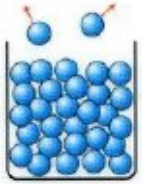
There are just over 100 different elements.

Chlorine (Cl_2)

Molecules are made of atoms joined together (bonded), for example, carbon dioxide.



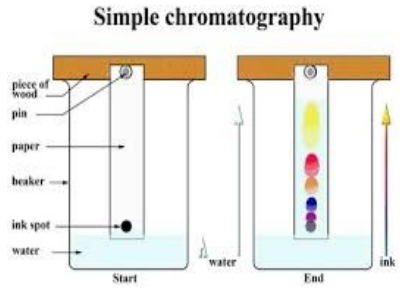
...evaporation

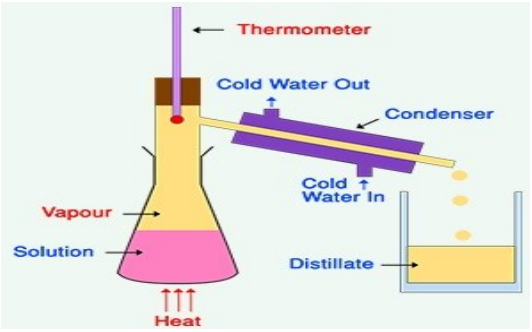


The fastest-moving particles escape from the surface of the liquid.

...dissolving

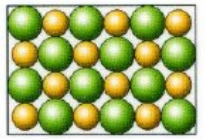
Particles from the solid break off and spread out amongst the particles of the liquid.





Key Words

Compounds have a fixed combination of different types of atoms.



Sodium chloride (NaCl)

Compounds can't easily be separated.

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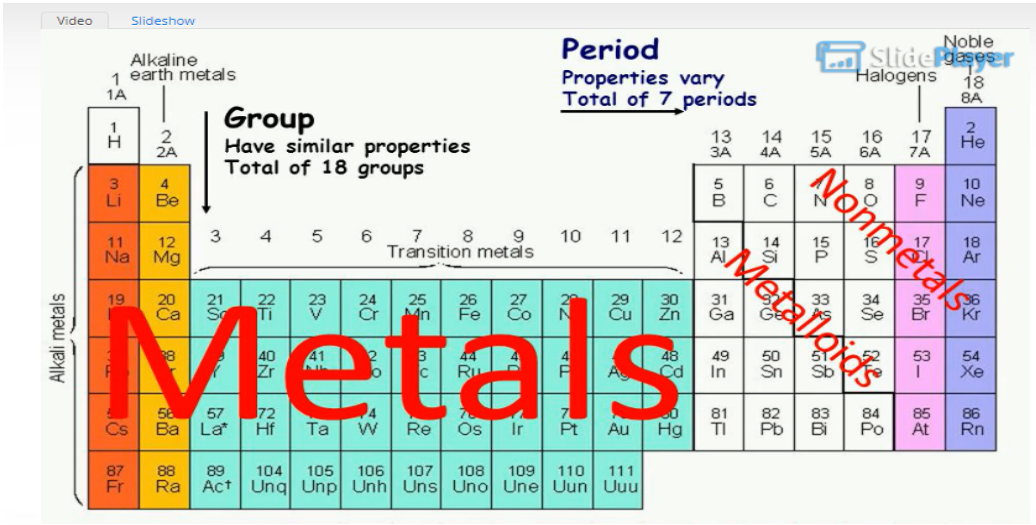


Things to do

Classify **properties** of **metalloids** into **metallic** and **non-metallic** properties.

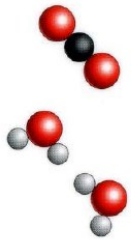
Predict the properties of an **element,** given its position on the **Periodic Table**.

Explain how the position of an element can be used to suggest properties of elements.

Apply patterns shown within **groups or periods** to unknown elements.

I can describe patterns in the properties of Group 1 elements using data given.

Compare predictions with evidence, and from reactions involving **Group 1 elements.**



State what an element is and recall some chemical symbols.

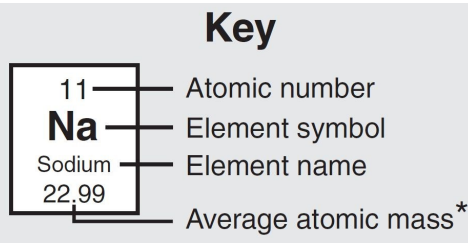
State what an atom is, its properties as a single atom and as an element.

Know a compound has more than one type of element joined together.

A compound will have different properties to the original element.

Interpreting simple chemical formula..

Describe displacement reactions of the halogens.



Describe the **physical and chemical properties** of the **group 0 elements.**

Describe particle arrangements in mixtures using the particle model.

Describe solutions using key nomenclature.

Use a **particle model** to explain **dissolving.**

Explain using a particle model the term **saturated solution.**

Explain how **filtration** works.

Describe and explain how chromatography separates mixtures.

What should you be able to do?

I can comment on a substance's purity by interpreting temperature change data.

I can explain the relationship between **solutes, solvents, and solutions.**

I can draw **particle diagrams** to represent solutions and pure substances.

I can explain why temperature affects the amount of solute dissolved in a solution.

I can use particle diagrams to illustrate how **filtering** works.

I can compare **evaporation**