

The Periodic Table

Lesson 8 - Conservation of Mass

Science

Chemistry - Key Stage 3

Miss Willett



What have you learnt already?

1. What is an atom?
2. What are the columns on the periodic table called?
3. What type of compound is made when a metal reacts with oxygen?



Describing experiments

Match up the definitions

Repeatable

Close to the true value

Accurate

Same person, same equipment, similar results

Reproducible

Close to each other

Precise

Different person, different equipment, similar results



Describing experiments

Use the keywords to describe the scenarios.

Scenario:	Repeatable/ reproducible/ accurate/ precise?
1) I want to find the density of a rock. I decide to repeat my experiment 3 times and the 3 densities I measure are: 2.5g/cm ³ 2.3g/cm ³ 2.3g/cm ³	
2) I want to find out how quickly pondweed photosynthesises in different coloured lights. I choose red light and repeat the experiment 3 times. I get the following number of bubbles in 1 minute, each time: 10, 11, 10 My friend, in a different class, does the same experiment but gets these results: 27, 28, 26	



Chemical or physical?!

New products are formed (that are different to the reactants)

The change is easily reversible

Atoms rearrange



Complete the table to compare chemical and physical changes

Chemical	Physical
Not easily _____	Easily _____
New _____ formed	No _____ _____formed
_____ used up	Usually just a _____ _____
Heat _____/ _____/ _____ may be given out	
_____ may occur	

Think about:
 Products?
 Signs of a chemical reaction?
 Reversible?



What is the missing mass?

$$16\text{g} + 14\text{g} \rightarrow \underline{\hspace{2cm}}$$

$$3.5\text{g} + 7.5\text{g} \rightarrow \underline{\hspace{2cm}}$$

$$8\text{g} + \underline{\hspace{2cm}} \rightarrow 22\text{g}$$



Bringing it all together..

	Mass before (g):	Mass after (g):
Student 1	12g	12g
Student 2	13g	8g

Q1) Describe the reproducibility of the results.

Q2)) Why does Student 1 have the same mass before and after?

Q2) Why might Student 2 have apparently lost mass?

