Chemical Reactions

Lesson 1 - Indicators of a chemical reaction

Chemistry - Key Stage 3

Mrs Walsh

Evidence of a chemical change

Evidence of a chemical reaction

Reaction	Evidence of a chemical reaction
Ammonium dichromate	***Energy released and transferred through radiation, Temperature change, colour change, new substance made***
Citric acid and bicarbonate of soda	
Hydrochloric acid and magnesium	
Lead iodide and potassium nitrate	
Copper carbonate (decomposition)	

Independent task

Decide if the following are reactions are chemical or physical.

Justify your answer for each one.

1. Dissolving salt/sugar into water .....
2. Burning wood .....
3. Rusting .....
4. Chocolate melting .....
5. Firework .....

What happens in a chemical reaction?

Using the idea of particles, explain how melting is not an example of chemical reaction.

When a substance melts, the particles.....

.....

This process can easily be .....

Whereas, in a chemical reaction the particles.....

.....

This process cannot be easily .....

Word bank: rearranged, bonds, reversible

Conservation of mass

Conservation of mass - independent practice

For each of the reactions on the following page, write a word equation and determine the mass of each substance.

Example

In a reaction between 12 g of carbon and 32 g of oxygen, how much carbon dioxide is produced?

Carbon	***+***	***oxygen***	***→***	***carbon dioxide***
12g		***32g***		***44g***

Conservation of mass - independent practice

1. In a reaction between 24 g magnesium and 16 g oxygen, how much magnesium oxide is produced?

2. In a reaction between 27 g aluminium and 24 g of oxygen, how much aluminium oxide is produced?

3. How much hydrogen was reacted with 8 g of oxygen to produce 12 g of water?

Independent task - consolidation

A word equation for the reaction in the video:

Lead nitrate	**+**	**potassium iodide**	**→**	**lead iodide**	**+**	**potassium nitrate**

1. Explain how you know a reaction took place

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2. Why does mass stay the same? Use the idea of particles to explain.

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