Poppy CW

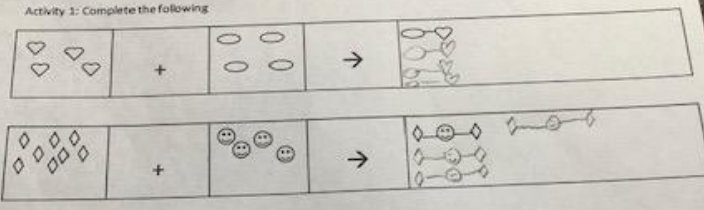
Conservation of Mass

The law of conservation of mass states that mass cannot be created nor destroyed during a chemical reaction.

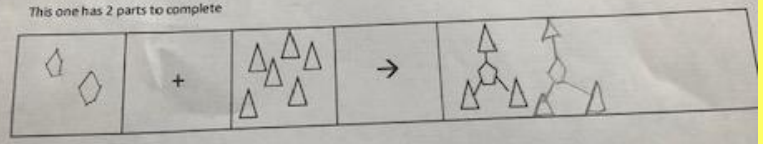
For example:

So what went in, *reactants* (3 triangles + 3 rectangles), also came back out, products (3 triangles bonded with rectangles).

Activity 1: Complete the following



This one has 2 parts to complete



True or false statements:

- In a chemical reaction the total mass of reactants is equal to the total mass of products, unless one of the products is a gas.
- In any chemical reaction the total mass of reactants is equal to the total mass of products.
- In a reaction, the atoms of the reactants are rearranged to make the products, but no atoms are lost or gaine
- When the product of a reaction is a gas, the gas escapes into the air and so mass is not conserved.
- When the product of a reaction is a gas, the gas escapes into the air so the mass of the reaction mixture ap to decrease.

1 = true
0 = False

Poppy CW

Word Equations

This pattern is used when writing word equations of chemical reactions. The products can be predicted.

For example

Hydrogen peroxide → hydrogen gas + oxygen gas

Follow the pattern and complete the word equations

Hint: oxide means oxygen

1. Aluminium + hydrochloric acid → Aluminium chloride + hydrogen gas
2. Zinc chloride + hydrogen sulphide → Zinc sulphide + hydrochloric acid
3. Barium nitrate + sodium chromate → barium chromate + Sodium nitrate
4. Zinc carbonate + oxygen gas → Zinc oxide + carbon dioxide
5. potassium + fluorine gas → potassium fluoride
6. Sodium sulphate + barium chloride → Sodium chloride + barium Sulphate
7. calcium carbonate + lithium chloride → lithium carbonate + calcium chloride
8. Sodium chloride + potassium chromate → Sodium chromate + potassium chloride
9. Magnesium + oxygen gas → magnesium oxide.

Optional Practicals: calculate the original mass & compare with the mass once cooked.

mass of popcorn kernels	mass of oil	mass of Popped Corn
100g	26g	110g

The mass seems to have decreased I expected it to weigh 126 grams but it weighed 100 grams. this shows that some oil evaporated into the air and some oil remained in our measuring cup. this was a fun practical.