

Physical & Chemical Changes

Physical change – the substance is changed somehow but it is still the same substance.

ie: colouring paper (its still paper!)

Ripping paper

Crumpling paper

Melting ice (frozen water is the same substance as liquid water!)

*change of state is a physical change

Chemical Change = something happens and a *new* substance is created.

ie: burning paper -- it is no longer paper..it is ash

Cooking an egg - a cooked egg is different that a raw egg and they certainly look/feel different.

5 Clues that a Chemical Change has occurred

1. Colour change (ie: burnt paper is black whereas the paper is white!)
2. Gas is formed (ie: baking sode + vinegar → gives off bubbles!)
3. Precipitate forms. A precipitate is a solid that appears when 2 liquids are mixed. We will see this in class.
4. Heat is given off / absorbed ...or...light is given off.
ie: paper burns and releases heat and light
glow sticks – mix the 2 chemicals and they give off light
cool pack – crack it and mix the chemicals and it absorbs heat.
5. The change is difficult to reverse. This is my least favourite clue because some physical changes can't be reversed. ie: if I cut up a carrot, I can't put it back together.

The biggest idea is that a chemical change CREATES A NEW SUBSTANCE but a physical substance does not create a new substance.