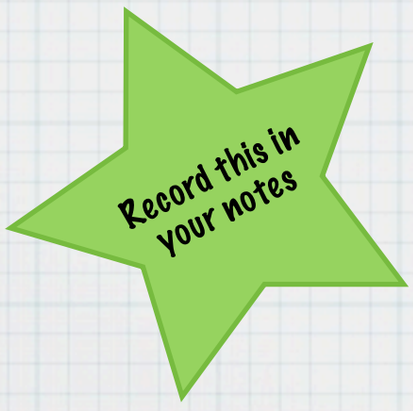
Chemical and Physical Changes

How to identify if a chemical change has occured



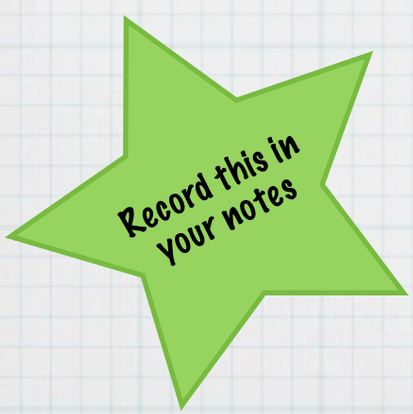
Record this in your notes

Physical Changes

* In a physical change, the substance involved remains the same, even if it changes shape, size or state.
* Therefore, changes of state are physical changes (melting, boiling, condensing etc.).
* Physical changes are also often easily reversible (dissolving sugar in water).

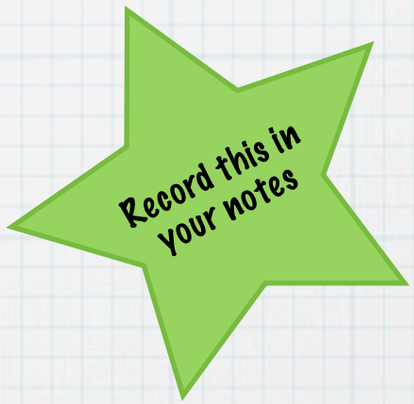
Chemical Changes

* In a chemical change, new substances are created.
* They are not easily reversible.



Chemical Changes

* Some clues to look for which can help you decide if a chemical change has occurred:
  * a new colour appears
  * heat or light is given off
  * bubbles of gas form
  * solid material is formed (precipitate)
  * a newodour forms



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Energy

* In a physical change, the original substance still exists; it has only changed in form. Energy changes usually do not accompany physical changes, except in phase changes an when the substances dissolve.

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* In a chemical change, a new substance is produced. Energy changes always accompany chemical changes.
* Chemical changes are always accompanied by physical changes.

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  * iron rusts
  * ice melts