

Physical And Chemical Changes

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Physical Changes

In a physical change:

- Some of the properties of a material may change, but the material remain the same.
- Some physical changes are reversible (ice melting and refreezing).

Example of physical changes:

- Melting Ice – Solid water is now liquid water (could be reversed)
- Shredding Paper - Now you have very small pieces of paper, but it's still paper!
- Slicing a tomato

Examples of Physical Changes



Chemical Change

In a chemical change,

- The substance reacts to form one or more new substances.

Examples of Chemical Changes:

- A Banana ripening
- A nail rusting
- Making cottage cheese!

Examples of Chemical Changes



Assuming its
Permanent hair dye

How would we know when a chemical change has occurred?

- In a chemical change, the bonds holding atoms together are changed.
- We can not observe the bonds changing with our 5 senses. However, we can look for signs that demonstrate that a chemical change has occurred.

How to Recognize Chemical Changes

- There are clues for a chemical change:
 - A new substance is formed
 - Unexpected change in color
 - Production of a Gas
 - Production of an odor (a smell)
 - Unexpected change in temperature
 - Formation of a solid or precipitate (when a solid separates from a liquid)



We will be in the lab on 10/18

- We will get to see demonstrations of signs of chemical change.
- In order to be successful, you will need to have memorized the signs of a chemical change on the previous slide.
- Take the time now, to review your notes and especially the previous slide.