

Physical and Chemical change objectives:

#1-3 Chemical changes create new substances with new properties (differentiation between physical and chemical processes):

- > I can identify phase changes and/or physical manipulations as physical processes.
- > I can identify indicators of chemical processes.

What is a chemical reaction?

Physical change vs. Chemical change

No
new substance
formed

new substance
formed

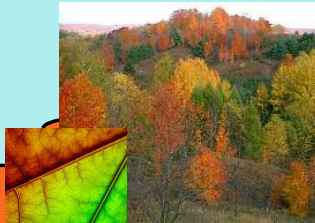
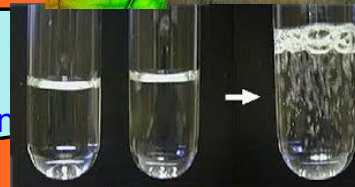
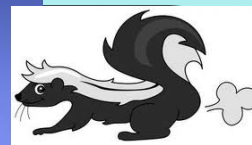
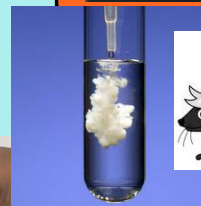
4 indications

color change

precipitate
solid from chem. reaction

energy change

gas formation



- bonds are broken and new bonds are made

examples(what are the indicators?):

acid corrosion <http://www.youtube.com/watch?v=X8IFPpNL8Po>

$\text{Hg}(\text{SCN})_2$ <http://www.youtube.com/watch?v=dX7xeF-ywxc&feature=related>

growth <http://www.youtube.com/watch?v=xCTepKr6ssw>

decay http://www.youtube.com/watch?v=C6sFP_7Vezg

life processes

<http://www.youtube.com/watch?v=8TPnns-5UxA>

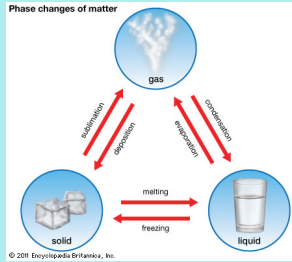
Physical change vs. Chemical change

No new substance formed

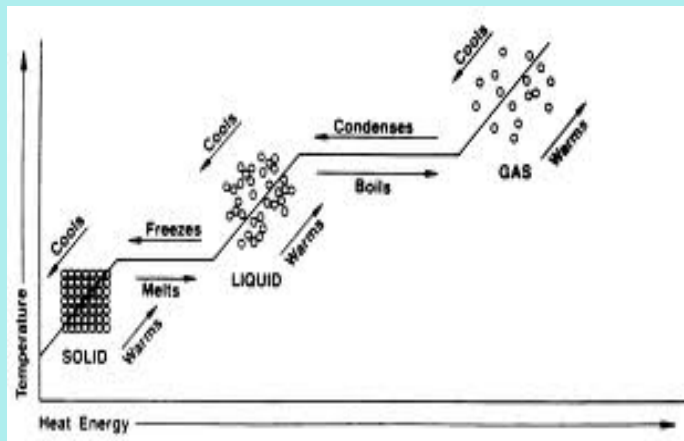
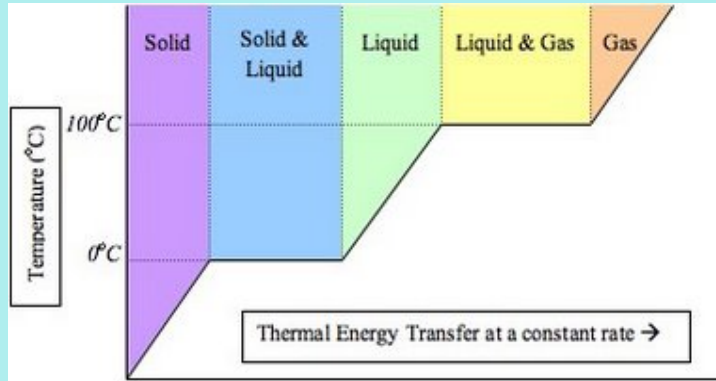
new substance formed

physical manipulation
 -size
 grind into powder
 cut
 dissolve
 stretch
 -magnetize

phase change



phase change diagram



physical change	chemical change
<p>crumbling condense burn melt solidify make new substance color change occurs rust form a precipitate</p> <p>cut baking corrode tarnish combustion</p>	<p>evaporate fill with air (inflation) grow freeze digestion change in energy decay cooking</p> <p>dissolve react produce a new solid produce gas</p>

Attachments

watch.webloc