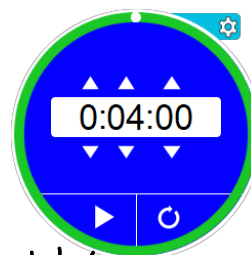


Warmup

Without looking at your notes list 5 physical properties and 2 chemical properties.

hardness
crystal form
lustre
melting point/boiling point
colour
density

flammability/ combustibility
reaction with acid
reaction with _____



Physical and Chemical Changes

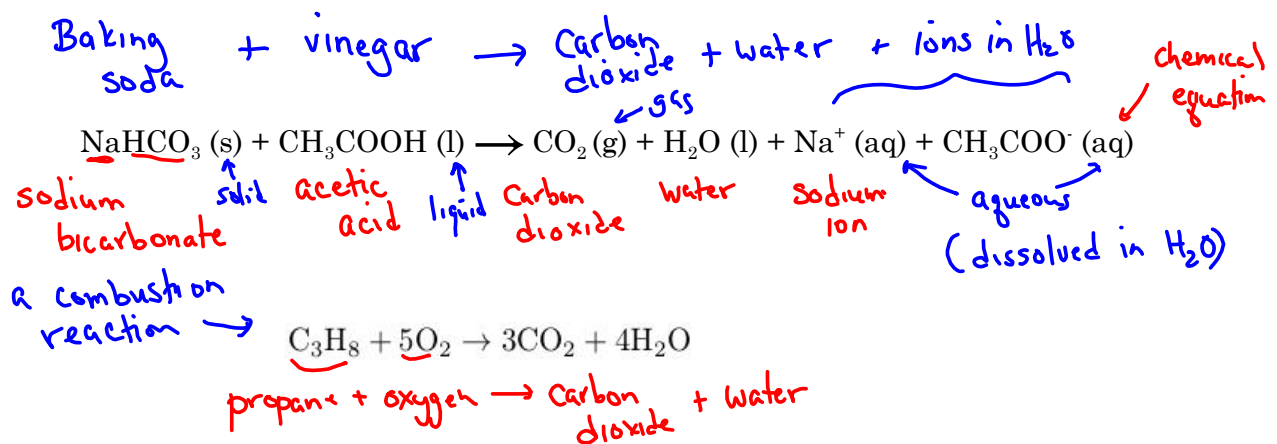
Matter can undergo changes that are either **physical** or **chemical**

Physical Change: the substance may change its appearance but the particles of the substance remain the **same**. (no new chemical formed)

Examples: melting (solid → liquid) or freezing (liquid → solid) evaporation (liquid → gas) or condensation (gas → liquid)

Chemical Change: the original substance(s) react to create a **new** substance or substances that have different properties.

Examples:



Physical changes include:

1. Breaking/tearing (size)

ex: tearing paper, breaking glass

2. Changes of state

ex: melting, freezing

3. Dissolving

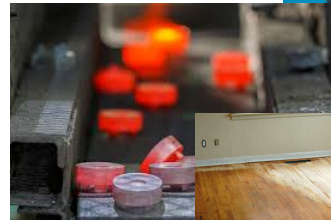
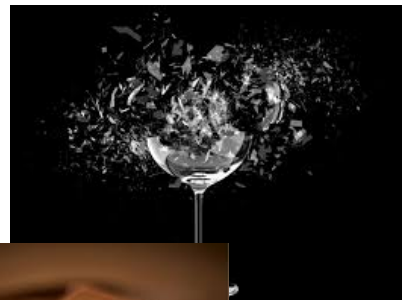
ex: salt or sugar in water

4. Change in durability

ex: tempering (heating up and cooling)

5. Change in texture

ex: sanding.



Physical changes are *usually* (but not always) easily reversible.

Evidence of Chemical Change

1. Difficult to reverse
2. A solid precipitate forms in a liquid
3. New colour
4. Bubbles (gas) made
(note: not like CO_2 bubbles which are dissolved in pop)
5. Odour change
6. Temperature change (heating or cooling from the reaction, not an outside source)

Note: A precipitate is a solid formed when we combine 2 (or more) liquids.



Classwork/Homework:

- Classifying properties and changes worksheet
- During a power failure, Blair lit four identical candles. He placed three candles very close together on a table, and one on a different table. When the power came back on an hour later, Blair was surprised to see that the candles in the group were much shorter than the one by itself. There was also more melted wax around the base of the three candles. Account for Blair's observation.
 - > What kind of candles should you keep on hand for emergencies?
 - > What types of physical and chemical changes are occurring in this scenario?