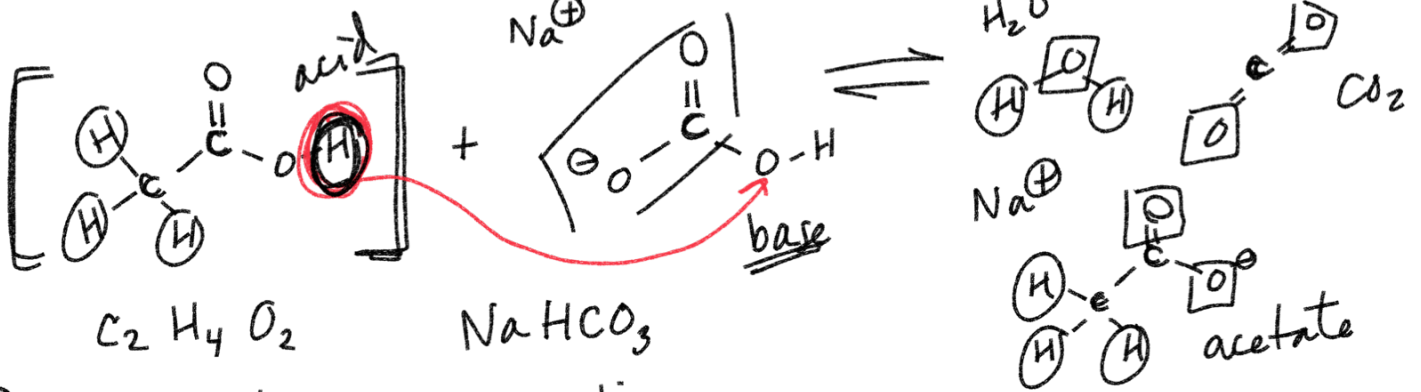


Experiment

Reactants $\xrightarrow{\text{change}}$ Products
 starting compounds ending compounds
 acid-base reaction

Vinegar 5% acetic acid + baking soda sodium bicarbonate \longrightarrow water + [gas carbon dioxide]



- 2 carbon atoms
- 4 hydrogen atoms
- 2 oxygen atoms

- 1 sodium
- 1 hydrogen
- 1 carbon
- 3 oxygen

- 3 total carbon
- 5 total hydrogen
- 5 total oxygen
- 1 total sodium

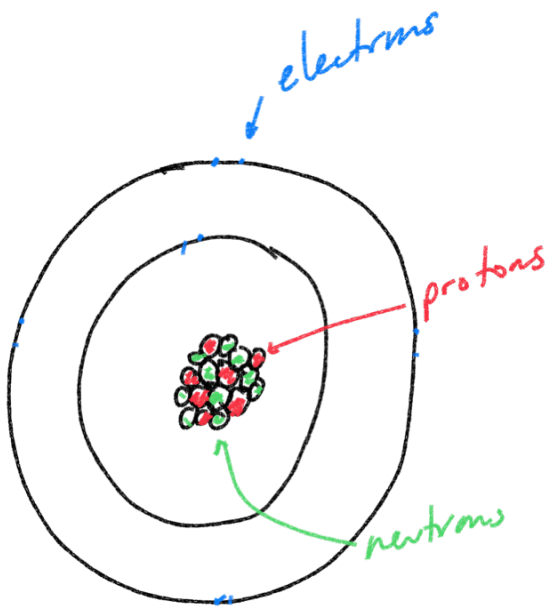
Acid donates a hydrogen
Base accepts a hydrogen

Law of conservation of matter

1. Atoms are indivisible - Democritus
2. An atom is the smallest piece of matter - Democritus
- 3.) In an atom, electrons are located in energy levels that are a certain distance from the nucleus. - Bohr
- 4.) Atoms are small, hard particles - Democritus
- 6.) In an atom, electrons move in definite orbits around the nucleus - Bohr
- 7.) Atoms of the same element are exactly alike - Dalton
- 8.) An atom is made of positively charged pudding-like material through which negatively charged particles are scattered. - Thomson
Plum-Plum Model
- 9.) An atom is mostly empty space with a dense positively charged nucleus in the center. - Rutherford (Gold-foil Experiment)
- 10.) An atom contains negatively charged particles called corpuscles (electrons) - Thomson

Bohr Model

subatomic particles



Nucleus

protons (positive, big)

neutrons (no charge, big)

Orbiting around the nucleus

electrons (negative, small)

Think about materials

3-D model

HW
Worksheet 1 pg 1-3
online HW 13 }
quiz 13 } Jan 14th
Brainstorm materials
for project