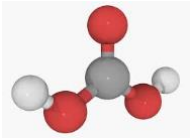
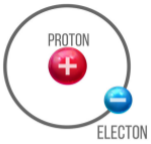
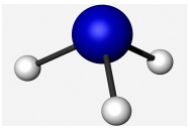
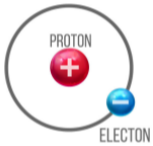
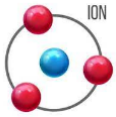
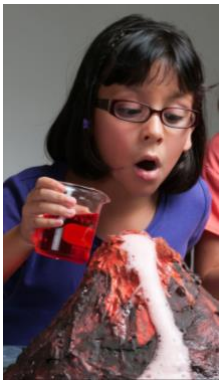
Science V10/S6: Acid and Base Reactions

Word	Image	Definition
Acid		Substances that release hydrogen ions
Protons		Positively charged particles
Base		Substances that release electrons
Electron		Negatively charged particles
Reaction		Interactions between two or more things
Ions		Atoms or molecules with an electrical charge
Neutralize		To complete the reaction
Eruption		A quick explosion

Characteristics of Acid and Base Neutralization Reaction

Step 1	Step 2	Step 3	Step 4	Step 5
Acid and Base Mix are mixed together.	H+ ions or OH- particles are transferred.	Carbonic Acid is created and causes fizzing.	Reaction neutralizes as either H+ or OH- are used.	Salt and Water are created as a result of the acid base reaction.

Volcanic Eruption Experiment



A common science experiment is to build a volcano and then cause it to "erupt" using a mix of baking soda and vinegar. The foaming reaction is caused by the mixing of an acid (vinegar) and a base (baking soda). The positively charged hydrogen ions (H+) in the vinegar react with the negatively charged bicarbonate ions (OH-) in the baking soda. Mixing vinegar and baking soda creates sodium acetate and carbonic acid. Carbonic acid is the gas that makes sodas fizz. Interestingly, the size of the eruption can change based on the amount of ingredients. Too little of either the vinegar or baking soda will cause a smaller reaction. The reaction continues until all of the H+ or OH- molecules are used up. When the reaction finishes, salt and water has been created!

Vinegar and Baking Soda Mix	Carbonic Acid Created	Visible Reaction Occurs	Reaction Neutralizes	Salt and Water Created