

7.1: Whiz Bang!

Children often get cuts and scrapes while playing. When this happens, it is important to cleanse the wound. If this happened to you as a kid, you may have had hydrogen peroxide poured on the cut. One thing that you may have noticed, in addition to any stinging, were the tiny bubbles forming in the cut. This was due to a chemical reaction known as a decomposition reaction which breaks hydrogen peroxide down to oxygen gas and water. Hydrogen peroxide undergoes this decomposition naturally all of the time. However, when added to a cut, enzymes in the body make the reaction go faster and the changes can be visualized. Enzymes are not the only substance which can speed up this reaction.

What happens when we add one of these other substances to speed up the decomposition of a *lot* of hydrogen peroxide, along with some soap to form bubbles with the oxygen gas? A reaction commonly known as elephant toothpaste, is shown in [Video](#) *[Math Processing Error]* below.



Video *[Math Processing Error]*: Elephant toothpaste reaction. Hydrogen peroxide decomposes to form lots of oxygen gas and water very quickly.

Chemistry is not only concerned with the composition of matter. It is also interested in how different types of matter interact with each other. These interactions are known as **chemical reactions** and are what make chemistry such an interesting field of science. Chemical reactions are occurring all of the time and all around us. Some of them, like the elephant toothpaste, can be very exciting to observe as they are accompanied by changes in colors, phases, heat, and light that grab our attention. Others are much more subtle and we tend not to notice them. In either case, these reactions involve changes in how atoms and molecules are arranged leading to the formation of new substances. In doing so, chemical reactions drive everything that happens to us on a daily basis and are therefore important to study and understand.

This page is shared under a [CC BY-NC-SA 4.0](#) license and was authored, remixed, and/or curated by Lance S. Lund (Anoka-Ramsey Community College) and Vicki MacMurdo (Anoka-Ramsey Community College).

7.1: Whiz Bang! is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.