



## Chemistry 101 - What Is Chemistry

What Chemistry Is, What Chemists Do, Why Study Chemistry

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### What Is Chemistry?

Chemistry is the study of matter and energy and the interactions between them. This is also the definition for physics, by the way. Chemistry and physics are specializations of **physical science**. Chemistry tends to focus on the properties of substances and the interactions between different types of matter, particularly reactions that involve electrons. Physics tends to focus more on the nuclear part of the atom, as well as the subatomic realm. Really, they are two sides of the same coin.

The [formal definition](#)<sup>1</sup> of chemistry is probably what you want to use if you're asked this question on a test.

### Why Study Chemistry?

Because understanding chemistry helps you to understand the world around you. Cooking is chemistry. Everything you can touch or taste or smell is a chemical. When you study chemistry, you come to understand a bit about how things work. Chemistry isn't secret knowledge, useless to anyone but a scientist. It's the explanation for everyday things, like why laundry detergent works better in hot water or how baking soda works or why not all pain relievers work equally well on a headache. If you know some chemistry, you can make educated choices about everyday products that you use.

### What Fields of Study Use Chemistry?

You could use chemistry in most fields, but it's commonly seen in the sciences and in medicine. [Chemists](#)<sup>3</sup>, physicists, biologists, and [engineers](#)<sup>4</sup> study chemistry. Doctors, nurses, dentists, pharmacists, physical therapists, and veterinarians all take chemistry courses. Science teachers study chemistry. Fire fighters and people who make fireworks learn about chemistry. So do truck drivers, plumbers, artists, hairdressers, chefs... the list is extensive.

### What Do Chemists Do?

Whatever they want. Some chemists work in a lab, in a research environment, asking questions and testing hypotheses with experiments. Other chemists may work on a computer developing theories or models or predicting reactions. Some chemists do field work. Others contribute advice on chemistry for projects. Some chemists write. Some chemists teach. The career options are extensive.

### Where Can I Get Help With a Chemistry Science Fair Project?

There are several sources for help. A good starting point is the [Science Fair Index](#)<sup>5</sup> on this website. Another excellent resource is your local library. Also, do a search for a topic that interests you using a search engine, such as Google.

### Where Can I Find Out More About Chemistry?

Start with the [Chemistry 101 Topic Index](#)<sup>6</sup> or list of [Questions Chemistry Students Ask](#)<sup>7</sup>. Check out your local library. Ask people about the chemistry involved in their jobs.

### Where Can I Get Answers to Chemistry Questions?

The [Chemistry Forum](#)<sup>8</sup> is a great place for quick answers from scientists, teachers, students, and other people interested in chemistry.

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