

## Understanding What Science Is

Written by Phil Plait

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The United States is a funny place, full of self-contradictions. We know that science education is getting slammed, and has been for years. Yet in surveys (admittedly from a few years back) we also know that people love science news, and want to hear more about it. Many people understand that science has a big impact on their lives, but have a limited understanding of how science works, or even what it is.

And, of course, the past few years we've seen an unprecedented attack on it, both from government and from self-styled "think tanks" where thinking appears to be the *last* thing on their minds.

There's a clear need for us – scientists, educators, hobbyists, and just plain old lovers of reality – to do more to educate people. And more than that: we need to *excite* them. Science isn't just another topic to learn from a dusty book or a dry website, it's an aspect of the Universe itself to be experienced and to revel in.

Enter [Understanding Science](#) . It's a website designed to get people started in, well, understanding science. And as if they were sending a message straight to my heart, [this is what they say about science](#)

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Science is, in one sense, our knowledge of ... all the stuff that is in the universe: from the tiniest subatomic particles in a single atom of the metal in your computer's circuits, to the nuclear reactions that formed the immense ball of gas that is our sun, to the complex chemical interactions and electrical fluctuations within your own body that allow you to read and understand these words. But just as importantly, **science is also a reliable process by which we learn about all that stuff in the universe.**

However, science is different from many other ways of learning because of the way it is done. Science relies on testing ideas with evidence gathered from the natural world.

The emphasis above is mine, because this is something I tell kids all the time. They think of science like a dictionary: a bunch of facts to memorize. But science is also the *way* we know those things. It's a method.

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But it's far, far more than that. It's discovery, it's understanding, it's trying, it's thinking, it's asking, it's investigating, it's questioning, it's being clever, it's doubting, it's wondering, it's solving, it's uncovering, it's finding things out.

It's us, being curious. **That's science.**