



YEAR of SCIENCE 2009

Welcome to the Year of Science 2009 -- a yearlong celebration of Science!

The purpose of this celebration is to focus on “how we know what we know” and to provide opportunities to share who scientists are, how they do their work, and why it matters. The ultimate goal is to help connect YOU to the amazing science that is being studied and explored everyday! We have a lot of ground to cover this year -- so join us, get involved, and celebrate with us the great things that science contributes to our lives!

What is Science?

The word “science” probably brings to mind many different pictures: a fat textbook, white lab coats and microscopes, an astronomer peering through a telescope, a naturalist in the rainforest, Einstein’s equations scribbled on a chalkboard, the launch of the space shuttle, bubbling beakers All of those images reflect some aspect of science, but none of them provides a full picture because science has so many facets:

These images all show an aspect of science, but a complete view of science is more than any particular instance.

- **Science is both a body of knowledge and a process.** In school, science may sometimes seem like a collection of isolated and static facts listed in a textbook, but that’s only a small part of the story. Just as importantly, science is also a process of discovery that allows us to link isolated facts into coherent and comprehensive understandings of the natural world.
- **Science is exciting.** Science is a way of discovering what’s in the universe and how those things work today, how they worked in the past, and how they are likely to work in the future. Scientists are motivated by the thrill of seeing or figuring out something that no one has before.
- **Science is useful.** The knowledge generated by science is powerful and reliable. It can be used to develop new technologies, treat diseases, and deal with many other sorts of problems.



Image collage courtesy of the Understanding Science website; Diver photo provided by OAR/National Undersea Research Program (NURP); lab photo courtesy of Pacific Northwest National Laboratory; photo of geologists on volcano by J.D. Griggs;

- **Science is ongoing.** Science is continually refining and expanding our knowledge of the universe, and as it does, it leads to new questions for future investigation. Science will never be “finished.”
- **Science is a global human endeavor.** People all over the world participate in the process of science. And you can too!

As part of the Year of Science, the scientific community is excited to launch a new resource -- Understanding Science -- which is a Web site that paints an entirely new picture of what science is and how science is done. This portrayal captures science as it really works, showing it to be a dynamic and creative process rather than the standard, linear, “one size fits all” depicted in most textbooks. The site also gives users an inside look at the general principles, methods, and motivations that underlie all of science - the passion, curiosity, and even rivalries and pitfalls that characterize all human ventures. Filled with stories both recent and historical, the site portrays science as a journey that is often unpredictable with unexpected stops and starts, disappointments and a-ha moments.