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Teaching the Process of Science



This module was authored by Anne E. Egger, Stanford University, as part of a collaboration between [Visionlearning](#) and the [SERC Pedagogic Service](#), and includes the products of a July 2009 [workshop](#) on Teaching the Process of Science.

How do we know what we know? Many resources are available to help you teach 'what we know' - the science content that fills textbooks. Few of those resources explicitly address 'how we know' that content. We might feel that the process is implicit in our teaching, or that we don't have time to teach the process when there is so much content to cover. This module explains why teaching the process can support - rather than replace - teaching the content, and will help you integrate the process of science into your teaching. We have also developed a series of readings aimed at the undergraduate level that explicitly address aspects of the process of science such as different types of research methods, the nature of peer review, and data analysis and interpretation, available at [Visionlearning](#).



Students measuring gravity and shading the gravity meter in Surprise Valley, California.
Created by Anne Egger, Stanford University
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What is Teaching the Process of Science?

You may feel that the process of science is implicit in your teaching, but do your students get it?

What exactly does "teaching the process of science" involve?

[Learn more...](#)

Why Should I Teach the Process of Science?

We know that students bring misconceptions to their undergraduate days in many areas, including the process of science, and that these misconceptions must be acknowledged before new, more accurate concepts can be learned. What misconceptions do they hold about the process of science?

Why is it important for me to address those misconceptions in my course?

[Learn more...](#)

How Do I Teach the Process of Science?

Integrating the process of science into your teaching does not necessarily require making major changes. Simply making the aspects of science that you consider implicit within your teaching explicit can significantly improve student understanding of the nature of science. There are many ways to integrate the process into your teaching. [Learn more...](#)

Examples and texts for Teaching the Process of Science

[Browse examples](#) of activities and courses that integrate the process of science into their teaching in a wide variety of ways.

[Browse text resources](#) that you can use for teaching the process of science.

References and Resources for the Process of Science

[Browse references and resources](#) on teaching the process of science.

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