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Science Demystified

WE ARE PLEASED TO ANNOUNCE A NEW RESOURCE FROM *SCIENCE* FOR EXPOSING PRE-COLLEGE and university students to the nature of science as a fascinating and powerful way of knowing about the world. The need to do so is by no means new.* “Being well informed about science is not the same thing as understanding science...What is needed is methods for importing some knowledge of the tactics and strategy of science to those who are not scientists.”† Our new initiative, *Science in the Classroom (SitC)*, is designed to help demystify how scientists build a basis for understanding the world. It is freely available (<http://scienceintheclassroom.org>) as a resource to enable more effective teaching and understanding of the sciences.

The products of science and technology have the potential to improve health and livelihoods, counteract environmental threats, and provide adequate drinking water and food to the nearly 10 billion people expected in the increasingly crowded world of 2050. For a nation to take optimum advantage of what science has to offer, it is imperative that its citizens understand how scientists make judgments and gain confidence in the scientific approach for evaluating the safety of foods and of medical treatments, warning of dangers to the global environment, or arguing for immediate actions that address potential crises. Experience demonstrates that myths can very easily spread when a population lacks a solid understanding of how scientific knowledge is generated. At both the individual and community levels, this lack of appreciation can lead to important decisions being made that are based not on science, but on what might be called “magical thinking.”

SitC has been designed to help every educated person attain an understanding of the nature of scientific knowledge by reading at least one scientific paper before he or she completes school. On the open-access *SitC* Web site, an initially small set of published science research papers has been posted. Each publication includes a set of tools to facilitate student exploration and understanding. A “Learning Lens” tool highlights and clarifies special vocabulary, for example, and figures are deconstructed into parts that are annotated with explanations, as well as with questions for students to ponder. Many of the authors’ references are annotated so that students can follow how scientists build on previous scientific findings.

To help connect each scientific publication to the students’ lives, free links to relevant News and Policy articles in *Science* are provided. Designed by outstanding teachers, Teacher’s Guides present several alternative ways to use *SitC* as a teaching resource. At their suggestion, an abbreviated version of each paper is presented in parallel with the full university version. *SitC* also connects users to the *Science* Education Portal, where a great deal of other *Science* content relating to science education is freely available. The entire *SitC* project, developed with funding from the United States National Science Foundation, owes a great deal to the feedback provided by many dozens of teachers throughout the project’s evolution.

Science is launching *SitC* with six publications that cover biology, chemistry, and physics; future publications will expand both the topics and disciplines covered, giving teachers a large range of subject matter from which to choose. As emphasized in the *SitC* Teacher’s Guides, each paper is designed to be used to illustrate general points about the way that science is done and the nature of scientific communication. Thus, the exact topic covered in class is less important to us than the fact that students will be exposed to an authentic science paper and learn how the authors use evidence to derive important new understandings. And for some, this encounter could ignite a passion to pursue science as a career.

— Bruce Alberts and Marcia McNutt

*]. A. Moore, *Science As a Way of Knowing (SAAWOK)*, Society for Integrative and Comparative Biology (www.sicb.org/dl/saawok.php3). †]. B. Conant, *Science and Common Sense* (Yale Univ. Press, New Haven, CT, 1951).

