

# Natural Inquirer Scientific Process Module



## National Science Education Standards

The National Science Education Standards (NSES) for all grade levels focuses heavily on science as inquiry and science and technology. Specifically, in grades 5-8, the content standard for science as inquiry states the following:

- Content Standard A: As a result of activities in grades 5-8, all students should develop
  - o Abilities to do scientific inquiry
  - o Understandings about scientific inquiry
- Fundamental abilities and concepts for the “abilities to do scientific inquiry” include
  - o Identifying questions that can be answered through scientific investigations
  - o Designing and conducting a scientific investigation
  - o Using appropriate tools and techniques to gather, analyze, and interpret data
  - o Developing descriptions, explanations, predictions, and models using evidence
  - o Thinking critically and logically to make relationships between evidence and explanations
  - o Recognizing and analyzing alternative explanations and predictions
  - o Communicating scientific procedures and explanations
  - o Using mathematics in all aspects of science inquiry
- Fundamental abilities and concepts for the “understandings about scientific inquiry” include
  - o Different kinds of questions suggest different kinds of scientific investigations
  - o Current scientific knowledge and understanding guide scientific investigations
  - o Scientific explanations emphasize evidence, have logically consistent arguments, and use scientific principles, models and theories
  - o Science advances through legitimate skepticism
  - o Scientific investigations sometimes result in new ideas and phenomena for study

Adapted from National Science Education Standards (1996), National Academy Press.

The *Natural Inquirer* Scientific Process Module addresses all of the areas listed above, as well as some of the content standards depending on which articles and research topics are chosen. For more information on the National Science Education Standards, please visit <http://newton.nap.edu/html/nses/>.