**The Nature of Science**

**Scope and Sequencing**

**Overview & Concepts**

In this introductory module, students will be introduced to the nature and practices of science and to the underlying framework of the Climate Science Investigations (CSI): South Florida program. Students will learn about the assumptions that scientists make, how science is different from other ways of knowing, which methods scientists use to obtain information and construct reliable explanations of the way our natural world works, and why skepticism is important to scientists’ work. Students will also learn about the important role scientific argumentation plays in the process and how scientists collaborate to reach consensus and build scientific knowledge.

When students complete this module, they should be able to

* Explain the nature of scientific inquiry.
* Differentiate between science and other ways of knowing.
* Explain the variety of methods that scientists use to revise and produce new knowledge.
* Describe the components of an evidence-based scientific argument.
* Explain the role of skepticism in scientific inquiry.
* Explain how the scientific community reaches consensus about certain findings and explanations.
* Provide an example of international collaboration among climate scientists.
* Explain how theories are developed.

**Science Standards (Next Generation Science Standards, Sunshine State Science Standards, and Climate and Energy Literacy Principles)**

See website for standards addressed in the module.

**Suggested Scope and Sequencing of Module**

|  |  |
| --- | --- |
| **Introduction** | Activity – What Do You Think and Know About Climate Change? |
| **Inquiry Lesson** | Experimental Design - What Solar Cooker Design Factors Are Best for Absorbing and Radiating Heat? |
| **Module Content** | Guided Reading/Note-Taking and PowerPoint Presentation |
| **Argumentation Practice** | Introduction to Skeptical Science Website |
| **Evaluation** | Pre and Post Quiz Questions, Inquiry Lesson, Guided Reading/Note-Taking and Argumentation Practice |