

Unit 1: The Scientific Process

		Skill	Objectives	Cognitive Domain and Learning Cycle Stage
Module 1:	Theories and Hypotheses			
Learning Objective 1.1.1	Discuss the difference between hypothesis and theory	1.1.1A	Define hypothesis	Remembering, concrete experience
		1.1.1B	Define theory	Remembering, concrete experience
Module 2:	The Scientific Method			
Learning Objective 1.1.2	Discuss the importance of using a set method in scientific inquiry	1.1.2A	List the steps of the scientific method	Remembering, concrete experience
		1.1.2B	Summarize the peer review process	Understanding, reflective observation
Learning Objective 1.1.3	Design a simple experiment that follows the scientific method	1.1.3A	Use the steps of the scientific method to develop a simple experiment	Applying, active experimentation
Learning Objective 1.1.4	Analyze an article published in popular media for scientific accuracy	1.1.4A	Read a short peer-reviewed article with the steps of the scientific method in mind	Remembering, concrete experience
		1.1.4B	Determine if the authors followed the scientific method	Evaluating, abstract conceptualization
Module 3:	Presenting Scientific Information			
Learning Objective 1.2.1	Discuss the fluidity of the scientific process and discuss why the processes of scientific inquiry are not always linear	1.2.1A	Describe why the scientific process does not stop with the proving or disproving of a hypothesis	Understanding, reflective observation
		1.2.1B	Describe how new technologies, new ideas influence how the scientific method functions	Understanding, reflective observation
		1.2.1C	Apply the scientific method to common issue	Applying, abstract conceptualization
Learning Objective 1.2.3	Explain the importance of peer review process and funding sources in high quality research and solutions to environmental issues	1.2.1A	Define peer review	Remembering, concrete experience
		1.2.1B	Discuss what the National Science Foundation is and the grant process	Understanding, reflective observation
		1.2.1C	Discuss the pros and cons of industry sponsored research	Understanding, reflective observation
Learning Objective 1.2.3	Analyze the issues in public understanding of the scientific process as it relates to current environmental issues	1.2.3A	Discuss how scientific research is presented to the general public	Understanding, reflective observation
		1.2.3B	Discuss biases in presentation of information based on economic and political concerns	Understanding, reflective observation
		1.2.3C	Analyze the role of education in public understand of science and environmental issues	Analyze, active experimentation

		1.2.3D	Evaluate the way environmental issues are presented relative to solutions	
Learning Objective 1.2.3	Analyze the importance of continued review and re-evaluation of environmental issues and solutions	1.2.3A	Evaluate the role of emerging technologies in solving environmental issues	Evaluating, abstract conceptualization
		1.2.3B	Analyze the public conception of "scientists are always changing their mind", what drives this perception, and how to combat it	Analyze, active experimentation
		1.2.3C	Propose a method of better communication of environmental issues and solutions	Create, active experimentation