This is a study guide to help you to organize your notes based on the Objectives for this Module. This is not graded and is provided only as a study aid. To use it, fill in the table. Box 1 will ask you to redefine the terms or explain the concept. Box 2 will ask you to provide information about where you can find this information. Provide enough information in this box for you to be able to use this box as a reference to finding the information again. Box 3 will ask you to give an example or try to apply the concept to a new situation.

Define way of knowing and discipline.

Define the terms.	Where is this information located?	Give examples of different disciplines, what they know, and how they learn about it.
"Way of Knowing" 1 Discipline	2	3

Define Science.

Copy the module definition of science then try to explain it in your own words.	Where is this information located?	What is your major/discipline? How do you define it?
1	2	3

Explain what Science comes to know.

What does science study?	Where is this information located?	Why does this make science very limited in what it can know? What types of ideas are outside the realm of what science can know?
1	2	3

Understand the assumptions and limitations of Science.

List the five assumptions given in the Module.	Where is this information located?	Explain how these assumptions give us the limitations of science.
Assumption 1:		
Assumption 2:		
Assumption 3: 1	2	3
Assumption 4:		
Assumption 5:		

Understand the causes of uncertainty and how it can be reduced.

Why are scientific explanations inherently uncertain? Describe the three ways that uncertainty can be reduced.	Where is this information located?	How is this uncertainty related to the Assumptions? Does it mean that science is unreliable?
1	2	3

Explain and apply the Scientific Method.

List the steps of the Scientific Method as described in your module and explain each step.	Where is this information located?	How do these steps relate to the Assumptions and Limitations? How do these steps work to reduce uncertainty?
1-Observe		
2-Question		
3-Develop a Hypothesis		
4-Design a Test		
5-Collect Data 1	2	3
6-Analyze and Conclude		
7-Validate		
8-Modify & Publish		
9-Repeat		

Explain and identify a scientific hypothesis and scientific theory, being able to differentiate them from common definitions.

Define the terms in terms of science. Define them in terms of a common, general definition.	Where is this information located?	Why is it important to use discipline specific definitions? What makes the scientific definition of these terms so special?
Idea		
Scientific Idea		
Hypothesis		
Scientific Hypothesis		
Theory		
Scientific Theory		

Write a Hypothesis. (Practice)

Make an observation.	What do you think causes it?	Using an if-then statement, write a statement that attempts to explain your observation. (See the Module for an example.) Can your hypothesis be tested using the scientific method?
1	2	3

Identify and give examples of pseudoscience.

Define pseudoscience and protoscience. Explain the following examples.	Where is this information located?	Why are they pseudoscience?
Pseudoscience		n/a
Protoscience		n/a
Baby Einstein 1	2	3
Atkins Diet		
Vaccines and Autism		

Recognize were science ends.

What do we mean by where science ends? Give an example. Why does it end?	Where is this information located?	Do you use science in your own life to make decisions? How?
1	2	3