

**How is scientific knowledge created and communicated?**

- Scientific inquiry is a thoughtful and coordinated attempt to search out, describe, explain and predict natural phenomena.
- Scientific literacy includes the ability to read, write, discuss and present coherent ideas about science
- Scientists use a variety of processes to answer scientific questions

**Key Vocabulary**

Biologist  
Biology  
Control Group  
Data  
Dependent Variable  
Environment  
Experimental Group  
Hypothesis  
Independent Variable  
Inference  
Inquiry  
Judgment  
Law (Scientific)  
Observation  
Organism  
Science  
Theory

**Assignments**

**#1** - Get your lab safety sheet signed and complete your student parent contact sheet. **Turn both sheets in.**

**#2 - A hypothesis is a statement that attempts to explain an observation.** (Pages 14-20 in Modern Biology)

Answer the following questions

1. How does an inference differ from a hypothesis?
2. Enumerate the steps of the scientific method using specific examples from the reading.
3. What is the relationship between a hypothesis and data?
4. Why is there no single scientific method?

**#3 - For 10 extra work points**

Read the Science News Article “Leashing the Rattlesnake” on my website or via ProQuest. Answer the questions on the sheet.

**Due**

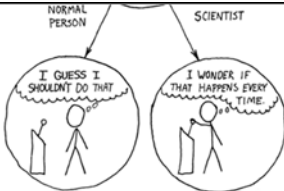
Due

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The password to open files downloaded from my website is always: **science**



## The Nature of Science

Process	Data	Observations	
A goal-directed, series of actions or steps.	Information collected from observations and experiments		
The Scientific Method		Hypothesis	
The scientific method is a process for investigating phenomena, acquiring new knowledge, or correcting and combining previous knowledge.		<b>Science is a systematic process that builds and organizes knowledge in the form of testable explanations and predictions about the universe.</b>	
Variables	Independent Variable	Dependent Variable	
	An independent variable is usually the variable you have the ability to manipulate. It is usually the factor that you think will affect the dependent variable.		
Inquiry	Theory	Law	
the act of asking for information			
Experimental Group		Control Group	Experiment
			An orderly procedure carried out with the goal of verifying, refuting, or establishing the validity of a hypothesis.
		<b>Why is creating models important to science?</b>	