

# Chapter 1 Quiz (20 Points)

## True/False Questions (10 Points)

1. True or False: A hypothesis is an educated guess that can be tested by experimentation.  
**Answer:** True  
**Point Value:** 1
2. True or False: A scientific theory is an unproven idea that science cannot test.  
**Answer:** False  
**Point Value:** 1
3. True or False: Scientific laws are descriptions of observed phenomena, but they do not explain why the phenomena occur.  
**Answer:** True  
**Point Value:** 1
4. True or False: The observation phase in the scientific method involves developing a new theory.  
**Answer:** False  
**Point Value:** 1
5. True or False: Theories in science can change as new evidence becomes available.  
**Answer:** True  
**Point Value:** 1
6. True or False: A hypothesis must always be correct for it to contribute to scientific knowledge.  
**Answer:** False  
**Point Value:** 1
7. True or False: A scientific theory becomes a scientific law after it has been proven to be true.  
**Answer:** False  
**Point Value:** 1
8. True or False: Experimental results that do not support a hypothesis can lead to the development of a new or revised hypothesis.  
**Answer:** True  
**Point Value:** 1
9. True or False: The law of gravity is an example of a scientific law that explains why objects fall to the ground.  
**Answer:** False  
**Point Value:** 1
10. True or False: Reproducibility of experimental results is a key element in the scientific method.  
**Answer:** True  
**Point Value:** 1

## Multiple Choice Questions (10 Points)

1. **What is the first step in the scientific method?**
  - A) Forming a hypothesis
  - B) Conducting an experiment
  - C) Making an observation

D) Developing a theory

**Answer:** C) Making an observation

**Point Value:** 2

2. **Which term is used to describe an initial educated guess that explains a phenomenon?**

A) Theory

B) Law

C) Hypothesis

D) Observation

**Answer:** c) Hypothesis

**Point Value:** 2

3. **Which of the following best describes a scientific law?**

A) An educated guess

B) A description of a consistent and universal phenomenon

C) A tentative and testable statement

D) d) A proven fact

**Answer:** B) A description of a consistent and universal phenomenon

**Point Value:** 2

4. **What distinguishes a theory from a hypothesis?**

A) A hypothesis is a well-tested explanation, while a theory is a tentative idea.

B) A theory is formed before a hypothesis.

C) A theory is a comprehensive explanation while a hypothesis is a proposed explanation.

D) A hypothesis is considered irrefutable, while a theory is not.

**Answer:** C) A theory is a comprehensive explanation while a hypothesis is a proposed explanation.

**Point Value:** 2

5. **Which of the following is an example of the scientific method's "Experiments" phase?**

A) Generating initial observations

B) Conducting experiments to gather data

C) Formulating potential explanations

D) Collecting existing scientific theories

**Answer:** B) Conducting experiments to gather data

**Point Value:** 2