1.13 Define the terms hypothesis and theory

**Ag Earth Science – Chapter 1.5 – What is Scientific Inquiry?**

**1.5 Vocabulary**

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| **Word** | **Definition** | **Paraphrase** | **Picture** |
| hypothesis | A tentative explanation that is tested to determine if it is valid |  |  |
| experimentation | The testing of an idea |  |  |
| experimental error | In conducting an experiment, a person encounters one or more errors |  |  |
| variables | Those parts of an experiment that can change during an experiment and influence the results |  |  |
| conclusion | A decision that is reached after thinking/analyzing about certain facts or information |  |  |
| theory | A well-tested and widely accepted view that explains certain observable facts. |  |  |

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| **Word** | **Definition** | **Paraphrase** | **Picture** |
| Scientific law | Results from many scientists repeatedly reaching the same conclusions. |  |  |

**I. Scientific Method**

1. The process of gathering facts through observations and formulating scientific hypotheses and theories
2. Steps in Scientific Method

1. Collection of scientific facts through observation and measurement

2. Development of one or more working hypotheses to explain these facts

3. Development of observations and experiments to test hypotheses

4. Acceptance, modification, or rejection of the hypothesis based on extensive testing

**II. Hypothesis**

A. Once data have been gathered, scientists try to explain how or why things happen in the manner observed.

B. Scientists do this by stating a possible explanation called a hypothesis

C. A hypothesis must be “testable”

**III. Theory**

A. A scientific theory is a well tested and widely accepted by the scientific community and best explains certain observable facts.