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Chapter 1 Section 2: Scientific Inquiry

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| **Main Ideas**  1. Scientific inquiry refers to the many ways that scientists study the natural world and make explanations based on the evidence they gather. |  |  |
| 2. A hypothesis is testable so that researchers can carry out investigations and gather evidence to either support or disprove the hypothesis. |  |  |
| 3. Scientific attitudes, or habits of the mind, include curiosity, honesty, open-mindedness, skepticism, and creativity. |  |  |
| Scientific inquiry | ?????  ???????  ????????? | The many different ways that scientists study the world and explain the information using the evidence that they collect. |
| Hypothesis |  | A possible explanation for a set of observations or an answer to a scientific question. |
| Variable |  | A factor that can change in an experiment |
| Controlled Experiment |  | An experiment in which only one variable is manipulated at a time. |
| Manipulated variable |  | The one variable that is purposely changed to test a hypothesis is called the manipulated variable.  AKA independent variable |
| Responding variable |  | The factor that may change in response to the manipulated variable.  AKA dependent variable |
| Operational definition |  | A statement that describes how to measure a variable or define a term.  Example: What is a scream on a bus? |
| Data |  | The facts, figures, and other evidence gathered through observations.  Data tables organize information collected. Graphs can help interpret information. |
| Communicating |  | The sharing of ideas and experimental findings with others through writing and speaking. |