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| **Process Standards** |

**The Nature of Science**

Students gain scientific knowledge by observing the natural and constructed world, performing and evaluating investigations, and communicating their findings.  These principles should guide student work and be integrated into the curriculum along with the content standards on a daily basis.

8.5.1 Make predictions and develop testable questions based on research and prior knowledge.

8.5.2 Plan and carry out investigation—often over a period of several class lessons—as a class, in small groups or independently.

8.5.3 Collect quantitative data with appropriate tools or technologies and use appropriate units to label numerical data.

8.5.4 Incorporate variables that can be changed, measured or controlled.

8.5.5 Use the principles of accuracy and precision when making measurements.

8.5.6 Test predictions with multiple trials

8.5.7 Keep accurate records in a notebook during investigations.

8.5.8 Analyze data, using appropriate mathematical manipulation as required, and use it to identify patterns. Make inferences based on these patterns.

8.5.9 Evaluate possible causes for differing results (i.e., valid data).

8.5.10 Compare the results of an experiment with the prediction.

8.5.11 Communicate findings through oral and written reports by using graphs, charts maps and models.