Science Processes Unit Organizer
6th Grade Churchill 8-01-03

Previous Unit
None

Next Unit
Astronomy

Integrated Units
All science units throughout the year

Core Knowledge Content
All Core Knowledge content

State and District Guidelines

6.1.A choose measurement methods and devices according to the level of precision demanded by the problem
6.1.B predict an outcome based on a set of experimental data
6.1.C recognize that scientific investigations sometimes lead to new methods or procedures for conducting an investigation or new technologies to improve the collection of data
6.1.D construct a model that illustrates a concept developed from an inquiry
6.1.E refine hypotheses from a previous investigation
6.1.F identify the variables in an investigation
6.1.G create a written plan to include the question to be investigated, and appropriate hypothesis, design of the experiment, identification of the variables, a developed scientific procedure to collect and record data; the design should also include a number of repeated trials, accurate measurements and record keeping and a comparison to a control
6.1.H organize and present the data in appropriate formats (e.g. histograms, circle graphs, flow charts) and make inferences based on that data
6.1.I identify, and interpret patterns, trends, relationships in collected data
6.1.J identify data that does not fit a pattern
6.1.K analyze the results of an experiment, draw conclusions about the question being investigated, and defend those conclusions

Standards for Achievement and Performance
Students will -

- describe what science is
- describe the difference between hypothesis and opinion
- obtain, organize, and interpret data
- distinguish between observations and inferences
- record detailed and accurate observations
- describe elements of a fair test
- establish a control and perform an experiment
- identify the independent variable and the dependent variable in an experiment
- make observations, measure, and record data over time
- identify some of the problems science is expected to help solve
- describe problem-solving strategies

identify some of the fields of science
examine pie and bar graphs
classify, compile, and interpret data

Types of Assessments

Students will take a variety of quizzes over the content covered.
Students will demonstrate their understanding of the content through experiments and will record findings in an experiment log.
Students will review the content covered in a game of Jeopardy
Students will take a final exam