

Scientific Research Common Vocabulary

Abstract - a brief overview of the investigation

Analyze - to examine methodically by separating into parts and studying their interrelations

Anomalous Data (outliers) – data that seems to be inconsistent or contradictory to the pattern established by additional data

Bar Graph - a type of graph used for descriptive data that comes from research questions asking about variables that will be counted

Conclusion - summarizes the important parts of your experiment and is a discussion of what the data, patterns, and relationships mean

Constant Variable - a variable that is not changed

Controlled Variable - a constant variable that is part of the experiment that is not being tested and is used for comparison

Data - factual information, especially information organized for analysis or used to reason or make decisions

Data Analysis (interpretation) - making sense of observations and data collected during an experiment using appropriate measures of central tendency (mean, median, mode, range) and by looking at patterns and relationships between the independent variable and the dependent variable

Data Table - organizes data into rows and columns

Dependent (Responding) Variable - the response to the independent variable that can be observed (qualitative) and measured (quantitative)

Extraneous Data - data that seems to be inconsistent or contradictory to the pattern established by additional data

Hypothesis - a special kind of prediction that forecasts how the independent variable will affect the dependent variable

Independent (Manipulated) Variable - variable changed by the scientist; what the investigator is testing

Line Graph - a type of graph used when data has taken place over time

Observations - anything noticed about the problem

Operational Definition - the method used to measure the dependent variable; the method used to describe the independent variable when testing various products

Procedure - a numbered, step-by-step set of directions written to conduct an investigation and to identify what data will be collected

Scientific method - a series of steps used by scientists/people to help find solutions to problems and/or questions

Variable - anything that can be changed in an experiment that could affect the results of the investigation