SCIENTIFIC METHOD

Name:

- QUESTION
- RESEARCH
- HYPOTHESIS
- EXPERIMENT
- DATA
- CONCLUSION
- REPORT

definitions

scientific method

observation

inference

dependent variable

independent variable

hypothesis

quantitative data

qualitative data

controlled experiment





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SCIENTIFIC METHOD

Name:

- **QUESTION** — Observations lead to questions about why or how something happens
- **RESEARCH** — Gather background information on the topic and previous experiments
- **HYPOTHESIS** — Form a scientific explanation or testable answer to the question
- **EXPERIMENT** — Design a controlled experiment to test the hypothesis
- **DATA** — Collect and analyze observations, measurements and other information during expt.
- **CONCLUSION** — Use data as evidence to determine if hypothesis was supported
- **REPORT** — Communicate experimental design and results of the experiment to others

definitions

scientific method
An organized way of finding answers to scientific questions using data from observations & experiments

observation
Using the senses to gather information in a careful orderly way

inference
Logical interpretation or conclusion based on observations

dependent variable
The observed variable that changes in response to the independent variable

independent variable
The one variable that is changed by the experimenter

hypothesis
Suggested, testable answer to a scientific question

quantitative data
Numerical data obtained by counting or measuring during an experiment

qualitative data
Descriptive information obtained from experiments that cannot be counted or measured

controlled experiment
Experiment in which only one variable is changed

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