

Scientific Method Key Terms

Term	Definition
Controlled experiment	Designed to test one variable at a time
Independent variable	Factor that changes between groups and can be selected by the experimenter (amount of fertilizer, a new cough drop etc)
Dependent variable	Factor that changes as a result of the independent variable (plant growth, time without coughing, etc)
Experimental group	Group that receives the independent variable
Control group	Does not receive the independent variable (used for comparison to determine if independent variable truly has an effect)
Constants	Factors that remain the same between all groups in an experiment (type of plant, amount of water, age of participants, gender, diet, etc)
Hypothesis	A suggested answer to a question (the new cough drop will allow people to go longer without coughing than those people not receiving the cough drop)
Data	Has to be measurable (height, growth, time without coughing etc.)

Pointers for answering short answer questions:

- Be sure to create a specific hypothesis (it is hypothesized that the new cough drop will help people go longer without coughing than....)
- When asked to compare experimental to control group be sure to specify which group is which (experimental gets the new cough drop while the control group does not)
- When asked for constants, give factors that ALL groups have the same (age, gender, diet, duration of experiment)
- When asked for data that supports the hypothesis, be specific (those who had the new cough drop went 5 hours without coughing on average while those without it only went 2 hours on average)