

Science Process

What is a dependent variable?
Where does it belong on a graph?

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What is an independent variable?
Where does it belong on a graph?

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In an experiment, what does
"control" mean?

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Define:
Hypothesis

Science Process

Define:
Observation and inference

Science Process

F

Science Process

G

Science Process

H

An independent variable is changed or manipulated by the scientist to see how it affects other variables.

It's the horizontal (x) axis on a graph.

A dependent variable responds to changes in the independent variable. It is usually the variable that the scientist is interested in measuring or studying.

It's the vertical (y) axis on a graph.

A hypothesis is a proposed explanation for a phenomenon.

Sometimes the word hypothesis also refers to a prediction about the outcome of an experiment.

A control is a condition or variable in an experiment which is not changed. It's "controlled" to keep it from messing up the experiment.

For example, if you are studying how fast different cars can reach 60 mph, you need to control the road to make sure it's dry for all your tests.

Answer F.

Observation: Something you can directly sense or measure. (Ex: The cashier at Kroger is smiling.)

Inference: A guess or conclusion about the meaning of your observations. (Ex: The cashier is feeling happy... or, the cashier has been trained to smile all the time.)

Answer H.

Answer G.