

Mice and Cheese Experiment

In this experiment, two mice are being fed different amount of cheese and the scientist is trying to determine if giving one mouse more cheese will cause the mouse to grow bigger. Which one is the independent variable and which one is the dependent variable?

The independent variable (IV) is the variable that the scientist is changing and the dependent variable (DV) is the variable that the scientist is measuring. The independent variable affects the dependent variable, but the control variable is help constant so that the independent variable is the only variable being tested.

There are often many other variables in the experiment. Both exercise and rest are other variables that need to be considered. They should be held constant to test the effect of the independent variable on the dependent variable.



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Independent Variable

I-Shaped Cheese

Independent variable is the variable in an experiment that is manipulated by the scientist in order to see if it leads to different effects.

Dependent Variable

D-Shaped Scale-Weights

The dependent variable in an experiment is the variable that is measured or the result.

Independent variable affects the dependent variable

Larger I-Shaped Cheese increases weight of mouse shown by larger D-Shaped Scale-Weight

The independent variable is changed by the scientist to see if the dependent variable is affected. In any experiment, the scientist is trying to test if changing one thing causes the result to be different. So what is being changed is the independent variable and the result or outcome is the dependent variable.

Control (Constant) Variable

Constant C-Water

This is the variable that is held constant in the experiment.

Other Variables

Rest

Bed

Rest is another variable in the experiment, shown as the exercise wheel. Would the amount of rest affect the size of the mice? Should it be held constant in this experiment?

Exercise

Exercise Wheel

Exercise is another variable in the experiment, shown as the exercise wheel. Would the amount of exercise affect the size of the mice? Should it be held constant in this experiment?