

# DEPENDANT & INDEPENDENT VARIABLES

## IDENTIFY THE INDEPENDENT AND DEPENDENT VARIABLE :

1. Plants that get regular watering grow taller.
  - a) Independent variable : water  
Dependent variable : plants growth.
  - b) Independent variable : smoking  
Dependent variable : lung cancer
  - c) Independent variable : head start  
Dependent variable : grades
  - d) The amount of chromium increased or not increased

## IDENTIFY THE INDEPENDENT AND DEPENDENT VARIABLE :

2. People who smoke cigarettes have a higher incidence of lung cancer.
  - a) Independent variable: head start  
Dependent variable: grades
  - b) Independent variable: water  
Dependent variable: plants growth.
  - c) The amount of chromium increased or not increased
  - d) Independent variable: smoking  
Dependent variable: lung cancer

## IDENTIFY THE INDEPENDENT VARIABLE FOR THE HYPOTHESIS:

3. Fertilizer will increase the rate of grass growth
  - a) Special cream or no special cream
  - b) Rate of grass growth
  - c) Fertilizer or no fertilizer
  - d) Retardant or no retardant
4. Variables
  - a) all the parts of the experiment that remain the same during an experiment
  - b) factors that might change in an experiment
  - c) observation that is in numbers
  - d) test scores

## IDENTIFY THE INDEPENDENT AND DEPENDENT VARIABLE :

5. At-risk children attending head start programs get better grades in reading in second grade.
  - a) Independent variable: smoking  
Dependent variable: lung cancer
  - b) Independent variable: water  
Dependent variable: plants growth
  - c) Independent variable: head start  
Dependent variable: grades
  - d) The amount of chromium increased or not increased
6. Hypothesis
  - a) Test scores
  - b) Testable explanation of a question or problem (educated guess)
  - c) It is a process that is used to answer questions about the world
  - d) Observation that is in numbers
7. Quantitative
  - a) Rate of hair growth
  - b) Observation that is in numbers
  - c) Rate of grass growth
  - d) Test scores

8. Independent variable

- a) All the parts of the experiment that remain the same during an experiment
- b) Independent variable: head start  
Dependent variable: grades
- c) The part of the experiment that is being changed or manipulated to see if it has an effect.
- d) Independent variable: smoking  
Dependent variable: lung cancer

9. Dependent variable

- a) The part of the experiment that you measure. It changes based on the effect of the Independent variable.
- b) All the parts of the experiment that remain the same during an experiment
- c) Independent variable : smoking  
Dependent variable : lung cancer
- d) Independent variable : head start  
Dependent variable : grades

**IDENTIFY THE DEPENDENT VARIABLE FOR THE HYPOTHESIS:**

10. Drinking extra water before a test will improve test scores

- a) marital status
- b) extra water or no extra water
- c) test scores
- d) grades

**IDENTIFY THE DEPENDENT VARIABLE FOR THE HYPOTHESIS:**

11. Fertilizer will increase the rate of grass growth

- a) Number of cavities
- b) Rate of grass growth
- c) Proximity of surface water
- d) Rate of hair growth

12. Qualitative

- a) Using your senses (look, touch, smell, describe) to gather information
- b) Observation that is in numbers
- c) Testable explanation of a question or problem (educated guess)
- d) Observation in the form of words

**IDENTIFY THE INDEPENDENT VARIABLE FOR THE HYPOTHESIS:**

13. Hair will grow faster if a special cream is applied

- a) Special cream or no special cream
- b) The age of the person using the cream
- c) The length of hair before application
- d) The color of the cream being used

14. Observation

- a) Using your senses (look, touch, smell, describe) to gather information
- b) Observation that is in numbers
- c) Observation in the form of words
- d) Testable explanation of a question or problem (educated guess)

**IDENTIFY THE DEPENDENT VARIABLE FOR THE HYPOTHESIS:**

15. Hair will grow faster if a special cream is applied

- a) size of the hair bulb
- b) rate of hair growth
- c) angle of the hair root
- d) size of their hair bulb

**IDENTIFY THE INDEPENDENT VARIABLE FOR THE HYPOTHESIS:**

16. Drinking extra water before a test will improve test scores

- a) The time of day the test is administered
- b) The difficulty level of the test
- c) The type of test taken
- d) Extra water or no extra water

17. Scientific Method

- a) Testable explanation of a question or problem (educated guess)
- b) It is a process that is used to answer questions about the world
- c) Observation that is in numbers
- d) A procedure that will test the hypothesis

**IDENTIFY THE INDEPENDENT VARIABLE FOR THE HYPOTHESIS:**

18. A steel alloy will be stronger if the amount of chromium is increased

- a) Strength of the steel alloy
- b) Retardant or no retardant
- c) The amount of chromium increased or not increased
- d) The part of the experiment that you measure. It changes based on the effect of the Independent variable.

19. Example of dependent variable

- a) Independent variable: water  
Dependent variable: plants growth.
- b) In an experiment, a water flea is given caffeine to see how much it increases the little booger's heart rate. Caffeine is What?
- c) It is a process that is used to answer questions about the world
- d) If one studies for a test, the grade on the test will be better. Grade is what?

20. Example of independent variable

- a) Independent variable: water  
Dependent variable: plants growth.
- b) It is a process that is used to answer questions about the world
- c) In an experiment, a water flea is given caffeine to see how much it increases the little booger's heart rate. Caffeine is What?
- d) If one studies for a test, the grade on the test will be better. Grade is what?