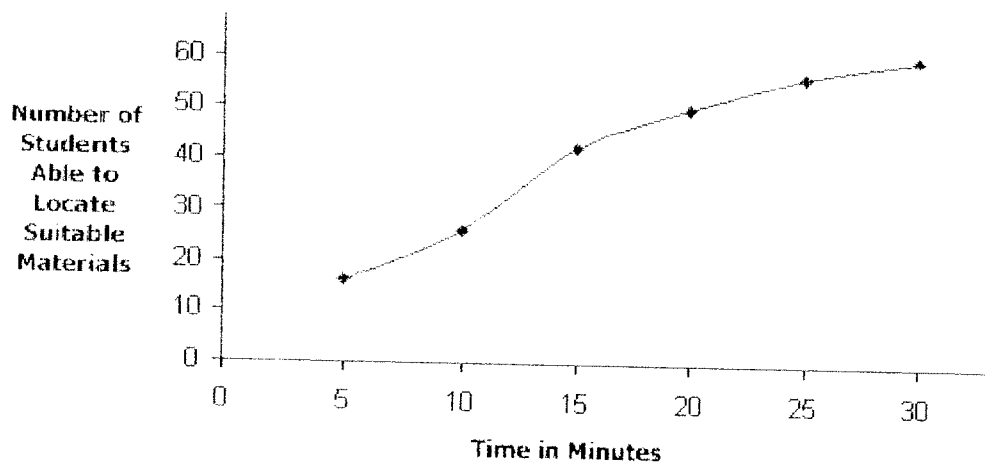


Name _____ Hour _____ Date _____

Unit 1 Test Review

1. What are the three main branches of science?
2. List at least one sub-branch of each branch of science.
3. List the steps of the scientific method in order and briefly describe each one.
4. Contrast a scientific method and a scientific law. Give an example of each.
5. When can scientific theories be changed or replaced?
6. Be able to define all vocabulary terms for the unit.
7. On the graph below, what is the independent variable and what is the dependent variable?

Time Needed to Locate Suitable Library Materials



**Experiments:
Identifying Variables and Groups**

In each of the examples, identify the **independent variable** and **dependent variable** as well as which participants make up the **experimental group** and which make up the **control group**.

Remember:

Independent Variable = What the **investigator** manipulates; the particular treatment or condition the **investigator** is most interested in the effects of

Dependent Variable = What is measured or observed; the "**data**" collected in the experiment

Experimental Group = Those participants **exposed** to the independent variable

Control Group = Those participants treated just like the experimental group EXCEPT they are not exposed to the independent variable; the group with which the experimental group can be **compared**

1) Of 100 individuals with moderate depression, 50 receive 8 weeks of a new cognitive-behavioral therapy, while the other 50 are placed on a waiting list for 8 weeks. At the end of the 8 weeks all 100 are given psychological tests to assess their level of depression.

Independent Variable: _____ Dependent Variable: _____

Experimental Group: _____ Control Group: _____

2) A biopsychologist is studying the effects of anabolic steroids on the aggressive behavior of female rats. 24 female rats receive daily injections of a placebo (fake drug), while 24 others receive daily injections of the steroid. Round-the-clock videotapes of the communal cages of all rats allow all aggressive encounters to be counted and timed.

Independent Variable: _____ Dependent Variable: _____

Experimental Group: _____ Control Group: _____

3) An industrial psychologist is interested in whether lowering the temperature in a packing room will increase productivity (number of products packed). Workers in two equivalent packing rooms participate in the study. One room is maintained at 65 degrees, the other room is left at the usual company temperature of 76 degrees.

Independent Variable: _____ Dependent Variable: _____

Experimental Group: _____ Control Group: _____

4) Big Pharma Drug Company is conducting research of their new drug Attendomax to improve the note-taking behavior of college students diagnosed with Attention Deficit Hyperactivity Disorder. Fifty of the students receive capsules contain Attendomax, another fifty receive capsules which look the same but actually contain the drug Ritalin which has been used for many years. All students attend the same series of lectures and have their notes collected afterwards. Notes are scored for completeness and accuracy.

Independent Variable: _____ Dependent Variable: _____

Experimental Group: _____ Control Group: _____