Name: Key Date: _____ Period: _____

# Graphing Skill #2: Labeling Axes

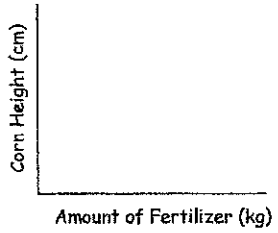
**When labeling your axes, keep 3 things in mind:**

- The independent (manipulated) variable is written along the horizontal axis (X axis)
- Dependent (responding) variable is written along the vertical axis (Y axis)
- Units on any variables should be included in parentheses ( ) following the axis title

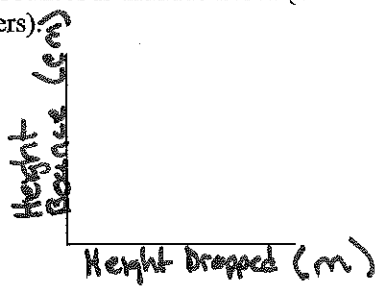
**Practice Problems**

For each experiment described below, write the independent and dependent variable on the appropriate axis. Be sure to include units when appropriate.

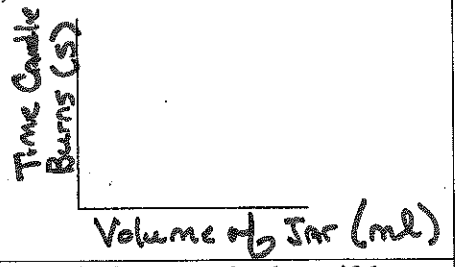
**SAMPLE:** A farmer wants to know if there is a relationship between the amount of fertilizer (in kilograms) she uses and how tall her corn grows (in centimeters).



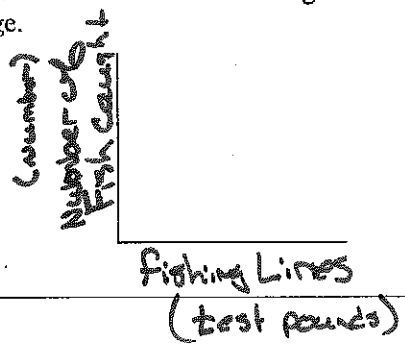

**Graph 1:** A ball is dropped from several distances above the floor (in meters) and the height it bounces is then measured (in centimeters).



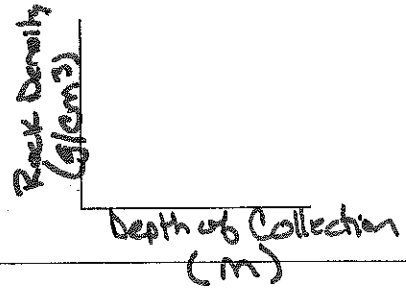

**Graph 2:** A candle was burned under glass jars of different volumes (in mL) to see if the volume of the jar affects the length of time (in seconds) the candle burns.




**Graph 3:** A fisherman used fishing lines of several different gauges (test pounds) and recorded the number of fish caught on each gauge.




**Graph 4:** Geologists wanted to know if there was a relationship between the density (in g/cm$^3$) of a rock and how many meters down it was collected from.



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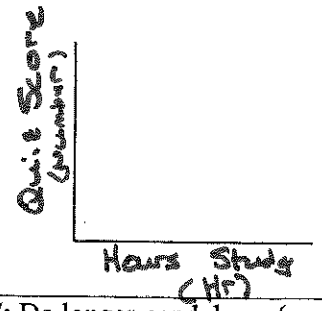
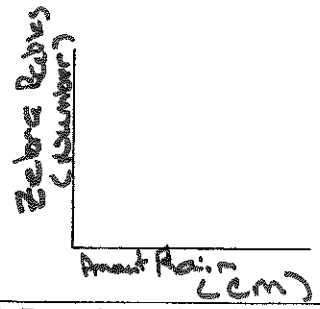
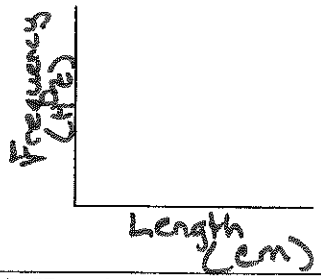
**Graph 5:** Is there a relationship between the numbers of hours a student studies and the score s/he gets on the weekly quiz?



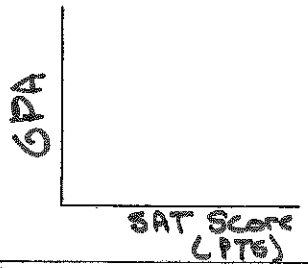

**Graph 6:** A scientist studied the relationship between amount of rain (in cm) and the numbers of zebra babies born each spring.



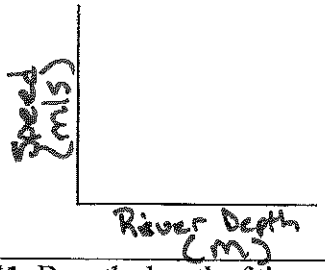

**Graph 7:** Do longer pendulums (measured in cm) have higher frequencies (measured in Hertz)?



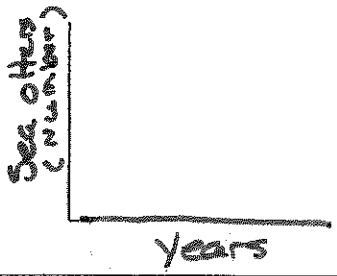

**Graph 8:** Does the grade point average that a student earns in college depend on his/her SAT score from high school?



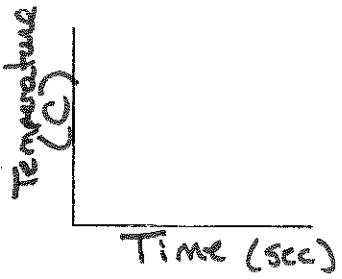

**Graph 9:** How does the depth of a river (in meters) impact its speed (measured in meters per second)?




**Graph 10:** Sea otters were counted over a several years to see if their numbers were decreasing over time.




**Graph 11:** Does the length of time an ice cube is in water (in seconds) affect the temperature of the water (in degrees Celsius)?




**Graph 12:** Does the amount of nitrogen in the soil (measured in kilograms) affect corn production (measured in kilograms)?