**Class Notes - Independent/Dependent Variables**

**Variable** - Something that **varies**.

In scientific experiments there are two variables:
- One that **YOU** change and one that is **measured**.

**Independent Variable** - “The Cause” (IV)
- The one thing that is **changed** in an experiment
- This variable makes one test “independent” of another test
- On a graph it is on the **x-axis** (along the bottom)

**Dependent Variable** - “The Effect” (DV)
- The **result** of the experiment
- What is measured
- This “depends” on what you **changed**
- On a graph, it is on the **y-axis** (along the vertical side)

*****The independent variable causes the dependent variable to change*****

In the following statements, identify the independent and dependent variables:

1. The temperature of the water was measured at different depths of the lake.
   - Two things varied in this statement.
   A. The first was the depths and
   B. the second was the temperature
   Plug these into the bolded statement:
   **The different depths cause the temperature to change.**
   *This is correct, because we know that the water temperature gets colder the deeper you go.
   IV: **depths**  DV: **temperature**

2. The amount of time you study will make a positive difference on your next test score.
   Two things are changed:
   A. Time spent studying
   B. Score on next test.
   **The time studying causes the score on the next test to change.**
   *This is correct, because we know the longer you study for a test, the higher your grade will be
   IV: **time studying**  DV: **score on next test**

3. Lemon trees receiving the most water produce the largest lemons

   The __________ causes the ______________ to change.
   IV: _______________  DV: _______________  C: _______________