**The Scientific Method**

Independent vs. Dependent Variable Practice

**Instructions:** For each example below identify the independent variable (IV), the dependent variable (DV). Write it on the lines provided. This is an independent activity; complete it without the help of others!

\*\*Remember: IV: The variable being *manipulated* by the experimenter.

DV: The variable being *measured* by the experimenter.

1. Dr. Parker wants to examine whether a new drug increases the maze running performance of older rats. Just like aging humans, older rats show signs of poorer memory for new things. Dr. Parker teaches two groups of older rats to find a piece of tasty rat food in the maze. One group of rats is given the new drug while they are learning the maze. The second group is not given the drug. One week after having learned the maze he retests the rats and records how long it takes them to find the rat food.
   * IV: The presence or absence of the drug.
   * DV: The length of time it takes the rats to reach the food.
2. A researcher wanted to study the effects of sleep deprivation on physical coordination. The researcher selected 25 year-old male college students and deprived some of the subjects to either 24, 36, or 45 hours of sleep.
   * IV: The length of time the subjects were sleep deprived.
   * DV: The physical coordination skills of the subjects.
3. A researcher wanted to know whether the number of people present would influence subjects' judgments on a simple perceptual task. In each case the other members of the group gave an incorrect answer. The researcher then noted whether the subject conformed to the group decision.
   * IV: The number of people present in the group.
   * DV: If the subject conformed with the groups incorrect answer.
4. A researcher is curious to find out what effect classical music has on people’s level of relaxation (as measured by heart rate). He suspects that listening to classical music will make people feel more calm and relaxed. He lets one group listen to classical music for one hour. He lets another group sit in a quiet room for one hour (i.e they hear no music). After one hour, he monitors the heart rate of each participant to measure their level of relaxation.
   * IV: The classical music being played.
   * DV: Level of relaxation, or heart rate.