Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Scientific Method***

* The scientific method is a \_\_\_\_\_\_\_\_\_\_\_ of steps that a \_\_\_\_\_\_\_\_\_\_\_ follows in \_\_\_\_\_\_\_\_\_\_ to solve a \_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ a question.

**Steps in Scientific Method**

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 2. Form a hypothesis, 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

4. Analysis you data, 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 6. Communicate your results

* Steps in Scientific Method
  + Recognize the \_\_\_\_\_\_\_\_\_\_\_ (observation)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: is a possible, testable answer or explanation
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: CONTROLLED procedure designed to test a hypothesis
  + \_\_\_\_\_\_\_\_\_: observations made while conducting the experiment
  + \_\_\_\_\_\_\_\_\_\_\_\_: study the collected data and see if you answered your question to your hypothesis
  + \_\_\_\_\_\_\_\_\_\_\_\_: your results
* Example – Doggie issues
* Experimental Design – When you \_\_\_\_\_\_\_\_\_\_\_ an experiment, you must design what \_\_\_\_\_\_\_\_\_\_ you will follow and this is called your \_\_\_\_\_\_\_\_\_\_\_\_.
* Imagine you want to investigate how salt affects the boiling point of water.
* First you must think about \_\_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (size of beakers, amount of water, method of heat, and amount of salt.

* Next you decide your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variables.
* **Independent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the factor that you \_\_\_\_\_\_\_\_\_\_\_ in order to find out what will happen. In this experiment, you will vary the amount of salt you put in each beaker.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable** is the variable that can be affected by \_\_\_\_\_\_\_\_\_\_\_ in the independent variable. In our experiment, the dependent variable would be the boiling point of the water.
* **Control and Experimental Groups**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ group is a group used as a \_\_\_\_\_\_\_\_\_\_\_\_\_ of comparison. (normal conditions)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ group is the group that is \_\_\_\_\_\_\_\_\_\_\_\_ to changes in the independent variable. (change)
  + \_\_\_\_\_\_\_\_\_\_\_: each repetition of an experiment. Repeating experiments lets scientists check their results
* **Bioengineering** – is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_ in the fields of \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The developments help people stay \_\_\_\_\_\_\_\_\_\_\_\_\_, grow \_\_\_\_\_\_\_\_\_, and make other \_\_\_\_\_\_\_\_\_\_\_\_\_\_ they need.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are developed to help doctors \_\_\_\_\_\_\_\_\_\_\_\_ diseases and other medical \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Ex. CAT \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_ machines, \_\_\_\_\_\_\_\_\_\_\_ for diabetes
* \_\_\_\_\_\_\_\_\_\_\_\_\_ that help people with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* ADAPTIVE DEVICES
  + It is a device that is \_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_, for use by a disable person.
  + Example would be a \_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_ computer for a person who could not type for some reason
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ lights when the doorbell rings for a person who could not hear
* ASSISTIVE DEVICES
  + Is any kind of \_\_\_\_\_\_\_\_\_\_\_\_ that helps a disabled person with \_\_\_\_\_\_\_\_\_\_ life.
  + Examples would be \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* BIOFUELS
  + \_\_\_\_\_\_\_\_\_\_ made from recently \_\_\_\_\_\_\_\_ things.
  + \_\_\_\_\_\_\_\_\_\_\_\_ is added to gasoline to reduce the use of \_\_\_\_\_\_\_\_.
  + You can make ethanol from tough \_\_\_\_\_\_\_\_\_\_ plants like \_\_\_\_\_\_\_\_\_\_\_.
* BIOENGINEERING IN AGRICULTURE
  + Bioengineers work to improve \_\_\_\_\_\_\_\_\_\_\_\_\_ crops
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ are used to kill weeds that choke out crops
  + Use the \_\_\_\_\_\_\_\_\_\_ from good plants to make stronger, healthier \_\_\_\_\_\_\_\_\_\_.