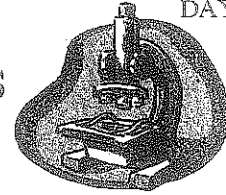


# THE NATURE OF SCIENCE NOTES



## I. What is Science About?

A. Science is a way of \_\_\_\_\_

- Many of the \_\_\_\_\_ we know today were discovered by \_\_\_\_\_ in the past.
- We can use the \_\_\_\_\_ provided by \_\_\_\_\_ past research as a resource from which to learn old \_\_\_\_\_ and create new \_\_\_\_\_.
- Imagine if you science had never existed and you had to learn EVERYTHING on your own.

B. Science is a way of \_\_\_\_\_

- Science is all about looking at situations \_\_\_\_\_. This means that we should not accept information at face value but \_\_\_\_\_.
- \_\_\_\_\_ is presenting the information, are they looking at all the possible \_\_\_\_\_, what other \_\_\_\_\_ might we ask about the subject?

C. Science is a way of \_\_\_\_\_

- Once we have an idea we would like to \_\_\_\_\_, the scientific method gives us a method of \_\_\_\_\_ to use in answering the question.

Step 1: **Observation** - observations should be \_\_\_\_\_ and \_\_\_\_\_.

Step 2: **Purpose**- the question of \_\_\_\_\_, what you are trying to \_\_\_\_\_

Step 3: **Hypothesis**- an \_\_\_\_\_ to work from, an educated guess which stems from your \_\_\_\_\_

Step 4: **Procedure** - \_\_\_\_\_ to do the experiment, should include \_\_\_\_\_ instructions.

- An experiment should include 2 set ups:
  - 1) \_\_\_\_\_ - standard set up against which the experimental set up is compared.
  - 2) \_\_\_\_\_ - same as the control with the experimental variable.

- Experimental variable – (independent variable) the one condition in the experiment that \_\_\_\_\_ between the \_\_\_\_\_ and \_\_\_\_\_ set up.

Step 5: Results-

- \_\_\_\_\_ - actual information collected  
\_\_\_\_\_ - interpretation of data (graphs, data tables)

Step 6: Conclusions- Report your \_\_\_\_\_. Did your data \_\_\_\_\_ your hypothesis? What are some \_\_\_\_\_ in your experiment?

- THE SCIENTIFIC METHOD IS A \_\_\_\_\_

D. THREE KINDS OF RESEARCH

- 1) \_\_\_\_\_ - data collection, surveys
  - 2) \_\_\_\_\_ - compare the data collected by different studies
  - 3) \_\_\_\_\_ - a designed experiment with a control and experimental set up
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