Name: _____ Date: 9-14-18

Science 7

Scientific Method

Aim: I can use the scientific method to solve problems.

Do Now:

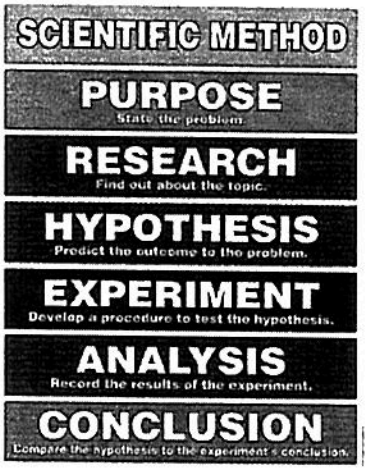
_____

_____

Notes:

The Scientific Method

- An Organized set of investigation procedures.
- Steps to answer a question



1. Problem

- Always in the form of a question.
- What do you want to solve?

2. Hypothesis

- An educated guess based on prior knowledge and research.
- A Suggested answer to the problem
- If...then...because...

3. Experiment

- Test if hypothesis is right or wrong
- Gather Materials
- Design Procedures

4. Observation

- The gathering of information by using one, some or all of your five senses.
- Two types of observations:

Qualitative Observation: Describes	Quantitative Observation: Measure/ Numbers
Examples: Miles is wearing a green shirt Avery is wearing pink sneakers	Examples: There a two teachers in this room. There are nine sinks in the room

5. Results

- Write down all data / observations that are made during the experiment.
- Create graphs, Charts and data tables

6. Conclusion

- A multi sentence statement that:
  1. Answers the question stated in the problem
  2. States if the hypothesis is right or wrong
  3. Explains the data

7. Repeat

- The entire experiment must be conducted again to be considered valid.
- Valid: proven to be logically true/legitimate
- To find any errors

Inference

- Possible explanation for an observation
- Based on experience and prior knowledge

Examples:

1. The boy's favorite color must be green because he is wearing a green shirt. — Actually his favorite color is blue.

2. Anna must be coughing because she has a cold — Maybe she just has bad allergies