



5.4.3 Practice: The Scientific Method

Practice Assignment

World History Sem 1 (2012) (S1771136)

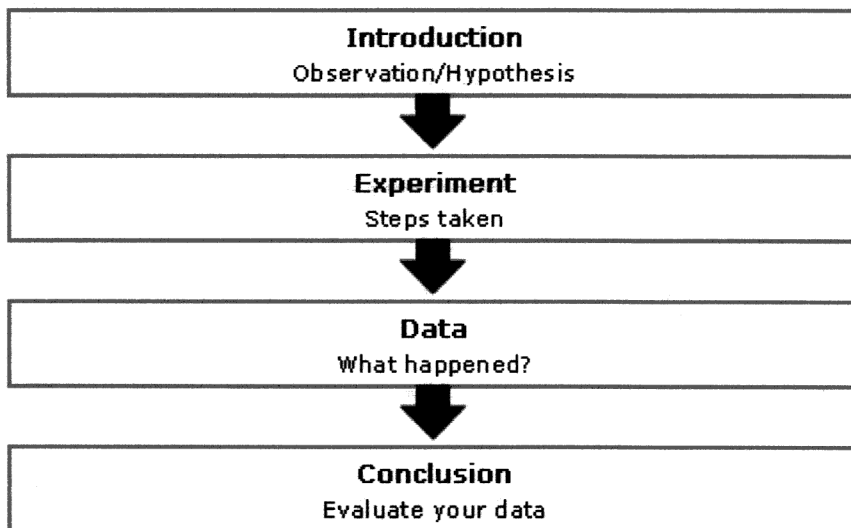
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Points possible: 20

Due date: / Date: _____

Assignment

In this activity you will describe the steps in the scientific method and then outline a possible experiment that follows those steps.



1. Imagine that you are a scientist. Propose a hypothesis that you would like to prove and outline the experiments you think would prove your theory.

Water + salt has a lower boiling point.

Experiment! Starting at 70°C , increase the temperature of water with 100g of table salt by 1°C every minute. Record the temperature at which it starts boiling. Repeat 2 more times. And repeat 3 times with water with no salt.

2. First make an observation and state the hypothesis that you are going aim to prove.

Observation: Salt is put on icy roads.

Hypothesis: If table salt is added to water, its boiling point lowers.

3. Next make some predictions based on your hypothesis.

If I add table salt to water,
its ~~boiling~~ freezing point will lower.

4. Outline an experiment that can prove or disprove your hypothesis.

1. Add 100g of table salt to 1L of water,
2. Starting at 30°C , lower the temperature of the ~~water~~ solution by 3°C every 5 minutes,
3. Record the temperature when the solution starts freezing.
4. Repeat steps 1-3 2 more times.
5. Repeat steps 1-4 without adding salt to the water

5. Describe your experiment:

What was your hypothesis?

If table salt is added to water, then
the solution's freezing point will lower.

How did your experiment prove or disprove the hypothesis?

If the water + salt solution had a lower freezing point than the control, ~~in~~ then the experiment ~~proves~~ proves the hypothesis true, If not, then it proves the hypothesis false.

What evaluations can you draw from this experiment?

- Adding table salt to water may lower its freezing point.
- Putting salt on icy roads may ~~the~~ help melt the ice.