

Name: _____

Date: _____

The Scientific Method

- a set of procedures that scientists follow in order to gain knowledge about the world
- the steps involved in the scientific method vary widely among the different scientific disciplines

The Scientific Process

6 Key Steps

1. Question: a scientist proposes the problem that he wants to solve
2. Hypothesis: a potential answer to the question at hand
 - sometimes hypotheses look more like predictions
3. Experiment: ordered investigations that are intended to ~~prove~~ or ~~disprove~~ a hypothesis
 - important data come from performing an experiment
4. Observation: statement of knowledge gained through the senses or through the use of scientific equipment
5. Analysis: comparing the results of the experiment to the prediction posed by the hypothesis
 - based on the observations he made, the scientist has to determine whether his hypothesis was ~~correct~~
6. Conclusion: a statement of whether the original hypothesis supported or refuted the observations gathered

The Scientific Method usually employs all 6 of the steps mentioned, but the steps don't always occur in the same order. For example:

- repeat steps before any conclusion
- observation spawns initial question
- observations inspire more questions

The Scientific Method is fluid: steps can feed back and branch out from one another

EXAMPLE: Ordeal with the Internet

Please draw a FLOW CHART to describe the steps that branch out from the following observation in the video: **“My laptop isn’t receiving an Internet connection!”**

- be sure to include the terms: observation, question, hypothesis, experiment, evidence, analysis and conclusion (some words will be used more than once).

...because my router was off