

I. State the Problem

- a clear statement about what you are trying to solve

II. Gather Information

- read books, articles, ask-questions - talk to other people
- Qualitative Observations - color, shape, type of material, smell, texture, sound
- Quantitative Observations - "size" - l, w, h, weight, temperature,

III. State a Hypothesis -

- educated guess
- predicts a possible answer to your problem
- If..... then.....

IV. Perform an Experiment

- list of equipment
- a written procedure to follow

V. Record + Analyze the Results

- draw pictures, recording machine, diagrams, photographs, graph, data table

VI. Conclusion -

- statement that accepts/ rejects or is inconclusive in regards to the hypothesis
- make recommendations for further study or possible improvements

VII. Communicate the Results

- publish it, talk to peers, presentations

Inference - an explanation for an observation that requires prior knowledge

Inference - VS - Observation

- Inference - involves the brain
- Observation - involves the 5 senses