Cheatography

Physical Science Intro Cheat Sheet

by thomas711 via cheatography.com/27853/cs/9652/

Science Skills

- Observing
- Measuring
- Organizing
- Classifying
- Hypothesizing
- Predicting
- Analyzing
- Inferring
- Modeling

Specialized Fields in Science

- **Biochemistry**
  - Biology+chemistry
- **Organic Chemistry**
  - Most substances that contain carbon
- **Inorganic Chemistry**
  - Most substances that don't contain carbon
- **Mechanics**
  - Study of Motion of Objects
- **Thermodynamics**
  - Heat + its properties
- **Nuclear Physics**
  - Processes in the nucleus of an atom
- **Astrophysics**
  - Celestial bodies
- **Acoustics**
  - Sound + its properties
- **Optics**
  - Light + its properties

Physical Science

Formulas

- **Area (cm^2)**
  - L x W
- **Volume (cm^3)**
  - L x W x H or B x H
- **Volume(Irregular shape) (cm^3)**
  - V(displaced liquid, mL)= V(object, cm^3)
- **Density**
  - g / cm^3

Measurements

- **Volume**
  - Amount of space in an object
- **Density**
  - Arrangement of particles in a substance, how closely packed they are in a specific amount of space. Heavy/Light have to do with density
- **Mass**
  - Amount of matter in an object
- **Temperature**
  - Average amount of kinetic energy of the particles in a substance, Hot/Cold

Metric / SI

- **English system**
  - Used in USA
- **S.I - International System of Units**
  - Standard used worldwide
- **Metric Staircase**
  - K-h-da-UNIT-d-c-m

Scientific Experiments

Scientific Method

- **State the Problem**
  - Ask a question about the problem to learn about/solve
- **Background Research**
  - Textbooks, internet, scientific journals, encyclopedias, newspapers
- **Formulate a Hypothesis**
  - Suggest a solution to the problem
- **Design an experiment**
  - Organized process designed to test hypothesis. List all materials and procedure in correct step-by-step order
- **Collect + Organize Data**
  - Detailed charts, graphs, models, drawings
- **Analyze Data**
  - Study data carefully
- **Draw a Conclusion**
  - Is the hypothesis right or wrong? Restate it. Based on analysis of data.

Physical Science

> Study of non-living things. Matter+Energy

Chemistry

> Matter + its changes

Physics

> Study of all forms of energy, changes among forms

Specialist

> Person studying a specific field of a subject

Specialization

> Work in one part of a subject

Constant

> Factor that remains unchanged

Independent Variable

> You control; adjustable

Dependent Variable

> Stimulus that we don't change but is changed by other variables

Control

> Part of experiment that remains unchanged to compare the results

Scientific Method

> Series of steps used to investigate a scientific question; steps can be skipped or repeated

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