

# Science Reference Sheet

## The Scientific Process

<b>Choose a Problem</b>	State the problem as a question
<b>Research your Problem</b>	Read, get advice, and make observations
<b>Develop a Hypothesis</b>	Make a prediction about what will happen
<b>Design an Experiment</b>	Plan how you will test your hypothesis
<b>Test your Hypothesis</b>	Conduct the experiment and record the data
<b>Organize your Data</b>	Create a chart or graph of your data
<b>Draw Conclusions</b>	Analyze your data and summarize your findings

## Science Process Skills

<b>Observing</b>	Using the five senses to learn about an object or event, or to collect information about an object
<b>Classifying</b>	Placing objects or events into groups based on common characteristics
<b>Measuring</b>	Determining the length, area, volume, mass, or temperature to describe and quantify objects
<b>Communicating</b>	Describing an object or event to another person
<b>Inferring and Predicting</b>	Guessing or drawing a conclusion about an object or future event based on observations
<b>Controlling Variables</b>	Studying how attributes vary by manipulating variables
<b>Representing Data</b>	Organizing measurements to make your information easier to use and interpret
<b>Experimenting</b>	Putting all the process skills together in one activity

# Periodic Table of the Elements

**Legend:**

- Alkali metals (Orange)
- Alkaline earth metals (Yellow)
- Transition metals (Pink)
- Lanthanide series (Light Blue)
- Actinide series (Purple)
- Poor metals (Light Green)
- Nonmetals (Green)
- Noble gases (Cyan)
- Solid (C)
- Liquid (Br)
- Gas (H)
- Synthetic (Tc)

Atomic masses in parentheses are those of the most stable or common isotope.

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Note: The subgroup numbers 1-10 were adopted in 1984 by the International Union of Pure and Applied Chemistry. The names of elements 112-116 are the Latin equivalents of those numbers.