

Science Reference Sheet

The Scientific Process

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

Science Process Skills

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