

Unit I Study Outline

Scientific Method

Make observation → Ask question

Develop hypothesis

Test hypothesis (make experiment)

Independent variable, dependent variable, control group, experimental group

Analyze data

Draw conclusions

Lab safety

Scientific notation

Standard notation to scientific notation, scientific notation to standard notation

Measurements need a quantity and a unit

SI Units of Measurement

Base Units

Length (m), mass (kg), temperature ($K = 273 + ^\circ C$), time (s), electric current (A)

Notes on temperature Celsius $0\ ^\circ C \rightarrow$ freezing, $100\ ^\circ C \rightarrow$ boiling

Derived Units

Volume (cubic meter, cm^3)

Density (kg/m^3)

Metric prefixes

Kangaroos hop down mountains drinking chocolate milk

Limits of measure

Precision versus accuracy

Presenting Data

Line graphs

Direct versus inverse proportion

Bar graphs

Circle graphs

Data tables