I can...

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# Measurement & Calculations

*Define* SI base units for time, length, mass, and temperature.

*Explain* how adding a prefix changes a unit.

*Compare* the derived units for volume and density.

*Express* numbers in scientific notation.

*Use* dimensional analysis to *convert* between units.

*Define* and *compare* accuracy and precision.

Use significant figures and rounding to reflect the certainty of data.

*Use* percent error to *describe* the accuracy of experimental data.

*Create* graphs to reveal patterns in data.

# Interpret graphs.

*Define* density and explain its significance in science.

# Chemical Foundations

Compare and contrast the atomic models of Democritus and Dalton.

# Define an atom.

# Distinguish

between the subatomic particles in terms of relative charge and mass.

*Explain* the role of atomic number in determining the identity of an atom.

**Define** an isotope and **explain** why atomic masses are not whole numbers.

**Calculate** the number of electrons, protons, and neutrons in an atom given its mass number and atomic number.

*Explain* the relationship between unstable nuclei and radioactive decay.

# Characterize

alpha, beta, and gamma radiation in terms of mass and charge.

**Trace** the development and **identify** key features of the periodic table.

*Explain* why elements in the same group have similar properties.

**Identify** the four blocks of the periodic table based on electron configuration.

*Compare* period and group trends of several properties.

*Relate* period and group trends in atomic radii to electron configuration.