

PARENT MASTERY GUIDE CHEMISTRY

FIRST TERM

The student will

- *investigate the characteristics of matter.
- *explore the interactions of matter and energy.
- *compare and contrast various models of the atom as they emerged historically, from the Greeks to the modern electron-cloud model.
- *investigate the basic organization of the modern periodic table, including atomic number and atomic properties.
- *describe models of the atom in terms of orbital, electron configuration, orbital notation, quantum numbers, and electron-dot structures.
- *investigate the composition of the nucleus so as to explain isotopes and nuclear reactions.
- *relate the spectral lines of an atom's emission spectrum to the transition of electrons between different energy levels within an atom.

SECOND TERM

The student will:

- *investigate chemical bonding
- *analyze chemical reactions
- *explore the mathematics of chemical formulas and equations
- *investigate the characteristics of solutions.
- *investigate the characteristics of acids and bases.