Elizabethtown Area School District
Scope & Sequence - Quick Reference

Department: Science

Course: Chemistry

Grade Level(s): 11

Unit Title	*General Topic(s)*	*Pacing*
1. Introduction to Chemistry	• Lab skills needed to collect data • Use data to create graphs • Conclude relationships from data • Dimensional analysis	10-12 blocks
2. Matter	• Classify matter • Phase changes • Chemical vs. physical changes/properties • Evidence of a chemical change	10-12 blocks
3. Atomic Theory	• Historical atomic theories • Atomic structure • Isotopes • Nuclear decay particles and equations • Radioactive half-life calculations	5-7 blocks
4. Quantum Theory	• Identification of elements using emission spectra • Replicate various emission spectra • Electron configurations • Valence electron	5-7 blocks
5. Periodic Table	• Use the periodic table to determine various trends of properties of elements - valence electrons, electronegativity, size, ionization energy • Connect trends of elements to chemical behavior	5-7 blocks
6. Chemical Bonding	• Determine types of bonds between elements • Draw various notations to represent bonded molecules/compounds	10-12 blocks

	● Determine the polarity of molecules/compounds using bond type and molecular geometry ● Use bonds to determine chemical properties	
7. Chemical Reactions	● Classify reactions ● Balance reactions ● Predict products of reactions	10-12 blocks
8. The Mole and Stoichiometry	● Avogadro's number and moles ● Calculate molar masses ● Determine relationships between mass, moles, and Avogadro's number ● Determine mole ratios from balanced chemical reactions ● Stoichiometry ● Percent composition of compounds	10-12 blocks
9. Chemical Nomenclature	● Write chemical names from formulas ● Write formulas from chemical names	3-5 blocks
10. Gases	● Relationships between the temperature, pressure, and volume of a gas. ● Determining how the number of molecules affects the temperature, pressure, and volume of a gas ● Relationships between various measuring systems, i.e. for temperature and pressure.	4-6 blocks

The high school is on a block schedule, so the 2nd half of the year would repeat the above sequence starting near the end of January. These units may be done in different orders due to lab equipment and supplies.