CORE Chemistry topics

2025-2026 School Year

Unit	Days	Dates	Workbook pages	Standards & Key Ideas (NYS Chemistry Core Curriculum)
Atomic Structure	6	Sept 3–10	1-24	*Key Idea 2.1*: Matter is made up of particles; atoms are the smallest unit. *Key Idea 3.1*: Modern atomic theory; nucleus, electrons, orbitals.
Periodic Table	6	Sept 11-19	77-96	*Key Idea 3.1f–3.1j*: Periodic trends (electronegativity, ionization energy, atomic radius), classification of elements.
Bonding	6	Sept 22-Oct 1	97-116	*Key Idea 5.2*: Chemical bonding (ionic, covalent, metallic, intermolecular forces), physical properties related to bonding.
Chem-Math	9	Oct 3-16	45-56	*Key Idea 1.1c, 1.2, 3.2*: Mole calculations, percent composition, empirical/molecular formulas, dimensional analysis.
Matter & Energy	9	Oct 17-29	57-76	*Key Idea 2.1, 2.2, 2.3, 3.2*: Phases of matter, physical/chemical changes, energy transfer, heat, specific heat, gas laws.
Solutions	5	Oct 30 - Nov 6	117-134	*Key Idea 2.2, 3.3*: Concentration (molarity, ppm), solubility, factors affecting rate of dissolving, colligative properties.
Kinetics & Equilibrium	7	Nov 7-21	135-156	*Key Idea 3.4, 5.2*: Collision theory, reaction rates, reversible reactions, Le Chatelier's Principle, entropy, enthalpy.
Acids & Bases	6	Nov 24-Dec3	173-192	*Key Idea 3.5*: pH, properties of acids/bases, indicators, neutralization, titrations, Arrhenius vs. Bronsted definitions.
Redox & Electrochemistry	6	Dec 4-10	157-172	*Key Idea 3.4, 3.6*: Oxidation numbers, redox reactions, electrochemical and electrolytic cells, half-reactions, voltaic cells.
Organic Chemistry	7	Dec 11-19	193-214	*Key Idea 4.1*: Organic functional groups, naming, reactions (substitution, addition, esterification, polymerization).

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Nuclear Chemistry	5	Jan 5-9	215-232	*Key Idea 3.7*: Types of radiation, nuclear decay, fission/fusion, half-life calculations, risks and benefits of nuclear energy.
Regents Review	5	Jan 12-16		
Regents Week		Jan 20-23		