

CHEMISTRY PACING SCHEDULE

Title:

Quarter I: (Adjust unit timelines as needed within the quarter).

UNIT I - History and Nature of Science:

(Should be incorporated now and throughout the course –
See the Inquiry document with Appendices)

I.A.B.C.D.All

UNIT II -Overview of Content, Skills and Processes of Science, and Introduction to Chemistry-----1 - 2 weeks

Investigation A – Review of skills, math concepts, etc.

Investigation B – Intro to Chemistry

UNIT III – Introduction to Structure of Matter -----6 weeks

II.A.12 Investigation A - Intro to Classification of Matter

II.A.5, 6, 13 Investigation B – Intro to Bonding – ionic, covalent, naming

II.A.1, 7, 8, 9, 10 Investigation C – Intro to Atomic Theory

II.A.15, 16, 17 Investigation D – Intro to Solubility – polar and non-polar

II.B.1 Investigation E – Intro to Symbols and Formulas and Equations

Quarter II:

UNIT I – Structure of Matter Expanded -----1 week

II.A.2 Investigation A – Periodic Table

II.A.3, 4 Investigation B – Periodic Table Expanded

UNIT II – Chemical Reactions-----4 weeks

II.B.1 Investigation A – IUPAC nomenclature

II.B.2, 6, 15, 17, 18, 19 Investigation B – Oxidation/Reduction reactions

II.B.12, 13 Investigations C - Electrochemistry

UNIT III – Energy Transformations-----3 weeks

II.B.4; II.C.1 Investigation A – Law of Conservation of matter and Energy

II.A.12, 13; II.B.9 Investigation B – Physical and Chemical Changes

II.A.16; II.B.7 Investigation C – Molar Mass

Quarter III:

UNIT I – Chemical Reactions - Enhanced-----6 weeks

II.B.7 Investigation A – Stoichiometry - molarity

II.B.8, 16 Investigation B – Energy in Chemical Reactions

II.B.6 Investigation C – Organic Compounds

II.B.6, 12, 13, 14 Investigation D – Exothermic/Endothermic Reactions

UNIT II – Energy Transformations-----1 week

II.C.3 Investigation A – Fossil Fuels/Power

II.C.3 Investigation B – Applications

UNIT III – Earth Structure and Processes-----1 week

III.A.1 Investigation A – Intro to thermodynamics

III.A.1 Investigation B - Thermodynamics Enhanced

Quarter IV:

UNIT I - Structure of Matter Enhanced-----5 weeks

- II.A.11 Investigation A – Gas Laws – limiting reactions
- II.B.11 Investigation B – Mole of a Gas – Gas Stoichiometry
- II.B.5 Investigation C – Acids and Bases
- II.B.9, 10, 11 Investigation D - Equilibrium

UNIT II – Energy Transformations Enhanced-----2 weeks

- II.C.5 Investigation A – Radioactivity
- II.B.3; II.C.2 Investigation B – Nuclear Chemistry – fission/fusion
- II.C.4 Investigation C – Electromagnetic Spectrum

I.B.1 UNIT III – Design and Conduct an Original Experiment-----1 week