

Chemistry I Curriculum Map

| | August | September | October | November | December | January |
|---|--------|---|---|--------------------------------|--|------------------------|
| Essential Questions | | How can matter be described, qualified and quantified, Chapters 1 - 5 | How are chemical reactions described, illustrated, and classified. Chapters 6 - 8 | | How can reactant or product quantities be predicted. Chapters 9 and 10 | |
| Content in terms of essential concepts and topics | | Chemistry an Introduction, Measurement and calculations, Matter and Energy, Chemical foundations: Elements, atoms and Ions, Nomenclature. | Chemical Reactions: An introduction, | Reactions in Aqueous Solutions | Chemical Composition, | Chemical Quantities. |
| Standards/Skills i.e., processes and skills emphasized Indiana Academic Standards plus MCSC skills | | 1.1, 1.2, 1.6, 1.8, 1.32, 1.38, 2.3, | 1.2, 1.3, 1.9, 1.10, 1.11, 1.40, 1.41 | 1.2, 1.4, 1.1 | 1.2, 1.12, 1.13, 1.16, | 1.2, 1.12, 1.13, 1.15, |
| Product/Assessments It is assumed that teachers will assess students with traditional tests. | | Density Lab, Calorimetry Lab, Average Atomic Mass | Performance exam on Law of Conservation of Mass in a Chemical Reaction. | Solubility Lab | Percent Composition Lab, Empirical Formula Lab | Percent Yield Lab |

Chemistry I Curriculum Map

| | February | March | April | May |
|---|--|---|---|--|
| Essential Questions | How can the behavior of matter be predicted. Chapters 11 and 12. | What is the impacted of physical changes on the phases of matter. Chapters 13 and 14. | How can measured amounts of solutes/solvents predict new physical properties. Chapter 15 How do external factors affect the dynamics of a system. Chapter 16. | How are acids and bases defined and how do they interact. Chapter 17. What are the results of electron transfer. Chapter 18. |
| Content in terms of essential concepts and topics | Modern Atomic Theory, Chemical Bonding. | Gases, Liquids and Solids | Solutions, Equilibrium | Acids and Bases, Oxidation Reduction Reactions and Electrochemistry |
| Standards/Skills i.e., processes and skills emphasized Indiana Academic Standards plus MCSC skills | 1.2, 1.28, 1.33, 1.34, 1.35, 1.36, 1.37, 2.6 | 1.2, 1.15, 1.26, 1.30, 1.31 | 1.2, 1.4, 1.5, 1.8, 1.15, 1.17, 1.18, 1.26 | 1.2, 1.8, 1.19, 1.22, 1.25, 2.5 |
| Product/Assessments It is assumed that teachers will assess students with traditional tests. | Flame Test, Molecular Modeling | Boyles Law Lab, Charles Law Lab, Molar Volume Lab | Beer's Law Lab, Iodine Clock Lab, Equilibrium K_{sp} Lab | Titration Lab, K_a Lab, Electrochemical Cell Lab |