Integrated Physics and Chemistry Systems Year-At-A-Glance

Term 1	Term 2	Term 3	Term 4
Unit 1: **Lab Safety and Measurement** 1. Lab Safety 2. Measurement and Lab Equipment 3. Scientific Method - Analyzing data, communicating valid conclusions. **Unit 2**: **Solutions** 1. Solutions Vocabulary 2. Factors Affecting Solubility **Unit 3**: **Atoms and the Periodic Table** 1. Atomic Structure 2. Placement of Elements and Valence Electrons 3. Properties of Periodic Groups/Families **Unit 4**: **Electrons** 1. Energy State Transitions 2. Wave Particle Duality **Unit 5: Bonding** 1. Ionic Compounds 2. Covalent Compounds	**Unit 5: Bonding,** *continued* 1. Ionic Compounds 2. Covalent Compounds **Unit 6**: **Chemical Reactions** 1. Types of Reactions 2. Conversation of Mass and Balancing Equations **Unit 7**: **Nuclear Chemistry and Environmental Impacts** 1. Uses for Nuclear Reactions 2. Environmental Impacts of Reactions **Fall Semester Review and Exam**	**Unit 8**: **Motion and Graphing** 1. Distance vs. Displacement and Motion Graphing 2. Speed and Graphing Speed 3. Acceleration **Unit 9**: **Force and Motion** 1. Newton's Laws Overview 2. Net Force of Motion 3. Force, Mass, and Acceleration 4. Conservation of Momentum **Unit 10**: **Energy** 1. Conservation of Energy 2. Transfer of Heat Energy	**Unit 11**: **Gravity and Gravitational Force** 1. Gravity 2. Universal Gravitation **Unit 12**: **Electricity and Magnetism** 1. Basics of Electricity 2. Electrical Circuits 3. Electromagnetic and Generators **Unit 13**: **Waves** 1. Wave Characteristics and Behaviors 2. Types of Waves **Unit 14**: **Renewable and Nonrenewable Energy** 1. Energy Transformations 2. Advantages and Disadvantages of Energy Sources **Science Career related to Chemistry and Physics** **Spring Semester Review and Exam**
Important Dates: Aug 19: Term Begins Sept 7: District Holiday *Sept 8 - 11: BOY Window* Sept 21: District Inservice Oct 8: Term Ends	**Important Dates:** Oct 9: Student/Teacher Holiday Oct 12: Campus Inservice Oct 13: Term Begins Nov 9: District Inservice Dec 18: Term Ends	**Important Dates:** Jan 4 - 5: Campus Inservice Jan 6 Term Begins Jan 18: District Holiday Feb 15: Campus Inservice Mar 8 - 12: District Holiday Mar 19: Term Ends	**Important Dates:** Mar 22: Term Begins Mar 25 and 29: District Holiday *Apr 26 - May 7: EOY Window* May 27: Term Ends