Puhsd Physics 1-2 Scope and Sequence 2014-15

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Unit 1: Mechanics **Energy** 1,2,3s & Storage Conservation Bar & Pie Charts **Motion** Velocity Acceleration Graphing Motion Maps **Forces** Newton's 1st Law Vectors Force Diagrams Statics Dynamics Atwood Machine **Momentum** Conservation • **Vocabulary & Literacy Strategies** • **Narrative, Graphical, and Mathematical Models** • **Utilization of Sensors to Collect Experimental Data** • **Computer Simulations**	**Unit 2: Mechanics** **Forces (cont.)** Newton's 1st Law Newton's 2nd Law Newton's 3rd Law Vectors Force Diagrams Statics Dynamics Atwood Machine Free fall **Energy** Kinetic, Potential, Elastic Conservation Bar & Pie Charts **Momentum** Inelastic Collisions Elastic Collisions Conservation Impulse • **Vocabulary & Literacy Strategies** • **Narrative, Graphical, and Mathematical Models** • **Utilization of Sensors to Collect Experimental Data** • **Computer Simulations**	**Unit 3: Circular Motion** **Projectile Motion** Vector Components Applying Newton's Laws **Torque** Lever Arm & Force Axis of Rotation Static Equilibrium **Angular Momentum** Moment of Intertia Rotation Angular Velocity Angular Acceleration Conservation **Circular Motion** Centripetal Force & Acceleration Universal Gravity Kepler's Laws (I and II) • **Vocabulary & Literacy Strategies** • **Narrative, Graphical, and Mathematical Models** • **Utilization of Sensors to Collect Experimental Data** • **Computer Simulations** • **Castles 'n Coasters Field Trip (or Magic Mountain, etc.)**	**Unit 4: Waves and Electricity** **Waves** Energy Transmission Mechanical Waves Sound Superposition **Electricity** Electrostatics Closed Loop Model Charge Flow and Sources of Charge Model Resistance Model Compressible Fluid Model Ohm's Law Kirchoff's Rules • **Vocabulary & Literacy Strategies** • **Narrative, Graphical, and Mathematical Models** • **Utilization of Sensors to Collect Experimental Data** • **Computer Simulations**