ISM AP PHYSICS C PACING CHART

TEXTBOOK: Halliday,Resnick and Walker'sFundamentals of Physics, 10th Edition

TOPIC	CHAPTER	WEEKS	LABS
AUGUST, SEPTEMBER			
Measurements and Units Review, Algebra and Calculus Review	1	1	
Kinematics in 1 Dimension Motion, Displacement, Velocity, Acceleration, Graphing Motion	2	2	LAB : Using Logger Pro to Produce Graphs of Constant Velocity and Accelerated Motion DEMO: Free Fall in Vacuum LAB : Ball Drop With Stopwatch LAB : Ball Drop With Logger Pro LAB : Video Analysis of Ball Drop
Vectors, Motion in 2 and 3 D Projectile Motion	3, 4	2	LAB : Projectile Motion With Pasco Projectile Launchers LAB : Projectile Motion With Marble Launcher LAB : Video Analysis of Projectile Motion DEMO: Monkey-Hunter
OCTOBER			
Force and Motion Newton's Law's	5, 6	4	LAB : Testing F=ma with Vernier Force Sensor LAB : Determining Coefficient of Friction With Vernier Force Sensor LAB : Determining Coefficient of Friction with Motion Sensor LAB : Atwood Machine 1 LAB : Atwood Machine 2 LAB : Testing Newton's 2nd Law with Inclined Plane and Motion Sensor LAB : Determining Drag Force with Motion Sensor LAB : Testing Hooke's Law
NOVEMBER			
Work and Energy Conservation of Energy Potential Energy Graphs	7, 8	4	LAB : Determining Work Using Logger Pro Force Sensor and Motion Sensor- Data Analysis-Area Under Graph LAB : Testing Conservation of Energy During Ball Drop LAB : Testing Conservation of Energy with Cart and Inclined Plane

			LAB : Measuring Kinetic and Potential Energy of a Mass-Spring System
DECEMBER			
Center of Mass, Linear Momentum Conservation of Linear Momentum Collisions in 1 and 2 D	9	2	LAB : Measuring Momentum using Cart – Track System and Motion Sensor LAB : Inelastic Collisions LAB : Elastic Collisions LAB : 2 D Collisions with Video Analysis
JANUARY			
Rotation, Rolling Motion Rotational Kinematics Rotational Dynamics, Torque	10, 11	4	DEMO: Comparing Motion of Sphere, Ring, and Cylinder Rolling Down Incline LAB : Rolling Motion with an Inclined Plane LAB . Determining Moment of Inertia with Pulley- Mass System LAB : Determining Moment of Inertia with Pasco Rotational Motion System
FEBRUARY			
Simple Harmonic Motion Gravitation	13, 15	4	LAB : Determining Period of a Simple Pendulum LAB : Determining the Value of g with a Simple Pendulum LAB : Determining The Period of a Physical Pendulum LAB : Potential and Kinetic Energy in a Mass-Spring System LAB : Determining The Spring Constant of a Mass-Spring System
MARCH			
Coulomb's Law, E Fields, Gauss's Law Electric Potential, Capacitors	21, 22, 23	3	Lab: Creating Charge by Induction with an Electrophorus Lab: Creating Charge by Friction Demo: Van De Graf Generator Lab: Building and Testing for Charge with an Electroscope Demo: Using LoggerPro and Faraday Cage to Measure Static Electric Charge Lab: Mapping E fields with Pasco Conductive Paper

APRIL			
Circuits, Ohm's Law, Kirchoff's Law's RC Circuits B Fields, Motion of Charges in B Fields Ampere's Laws, Induction, Faraday's Law Maxwell's Equations	26, 27, 28	4	Lab: Determining Resistivity Demo: Proper Use of Voltmeters and Ammeters Demo: Using Multimeters Lab: Using Voltmeters and Ammeters Lab: Using Logger Pro to Measure Voltage and Current Lab: Building a simple Circuit 1 Lab: Building a Simple Circuit with a DPST Switch Lab: Determining the Resistance of a Light Bulb Lab: Mapping the B Field of a Bar Magnet Lab: Mapping the B field Around a Current Carrying Wire Demo: Vernier Magnetic Field Sensor Lab: Using Logger Pro to Measure B fields Around a Wire
MAY			
AP EXAMS			