



ISM Physics 1 Pacing Chart

Text: Giancoli Physics

Week	Topic	Chapter	Lab
1 Aug 22 - 26	Measurement, Units, Motion in 1 Dimension	1, 2	Determining the average velocity of a falling ball
2 Aug 29 – Sep 2	Acceleration, Equations of Motion	2	Intro to Logger Pro
3 Sept 5 - 9	Introduction to Physics LE, Motion Graphs	2	Using Logger Pro to Analyze Motion of Dynamics Carts
4 Sep 12 - 16	Free Fall	2	Determining Free Fall Acceleration with Ball Drop Apparatus
5 Sep 19 - 23	Mixed Review of Kinematics in 1 Dimension		
6 September 26 - 30	Periodic 1		
7 Oct 3 - 7	Vectors and 2 D Motion Vector Addition	3	Using Force Tables to find Resultants
8 Oct 10 - 14	Projectile Motion Equations of Motion in 2 D	3	Finding Initial Velocity with Pasco Launchers
9 Oct 17 - 21	Relative Motion	3	
10 Oct 24 - 28	Mixed Review of Motion in 2 D		
11 October 31 – Nov 5	Periodic 2		
12 Nov 7 - 11	Newton's Laws of Motion Free Body Diagrams Normal Force, Tension, Friction	4	Use Logger Pro to Verify $F = ma$ Use Logger Pro to Determine Coefficient of Friction
13 Nov 14 - 18	Problem Solving	4	Forces on an Inclined Plane
14	Revision/EOT		

November 21 – 25			
1 Nov 28 – Dec 2	Begin Term 2 Uniform Circular Motion	5	Measuring Forces on a Turntable with Logger Pro
2 Dec 5 - 9	Roads and Friction Centripetal Acceleration	5	
3 Dec 12 - 16	Banked Roads	5	
	Winter Break		
4 Jan 2 - 6	Maximum and Minimum Velocities Loop the Loop Bucket on a String	5	Testing Minimum Velocities with Hot Wheels Smart Tracks
5 Jan 9 - 13	Periodic 1		
6 Jan 16 - 20	Work and Energy	6	
7 Jan 23 - 27	Conservation of Energy, Potential Energy	6	Testing Conservation of Energy with an Inclined Plane
8 Jan 30 – Feb 3	Work Energy Theorem	6	Testing The Work – Energy Theorem with Force Sensors and Motion Sensors
9 Feb 6 - 10	Non Conservative Forces	6	
10 Feb 13 - 17	Periodic 2		
11 Feb 20 - 24	Revision		
12 Feb 27 – Mar 3	Revision/EOT		
	Spring Break		
1 Mar 13 - 17	Begin Term 3 Momentum and Impulse		Measure Momentum/Impulse with Logger Pro and Force Sensors
2 Mar 20 - 24	Conservation of Momentum/Collisions	7	Predicting Velocities Post Collision with Dynamics Tracks

3 Mar 27 - 31	Collisions in 2 D	7	2D collisions with Steel Balls, Carbon Paper
4 April 3 - 7	Center of Mass	7	
5 April 10 - 14	Periodic 1		
6 Apr 17 - 21	Simple Harmonic Motion Mass Spring Systems	8	Determining Equations of Motion for a Mass/Spring System
7 Apr 24 - 28	Simple Pendulums		Determining the Period of a Simple Pendulum
8 May 1 - 5	Physical Pendulum		Determining the Period of a Meter Stick
9 May 8 - 12	Periodic 2		
10 May 15 - 19	Rotation Rotation Analogs of 1 D Motion Equations of Rotational Motion	9	Measuring Angular Velocity and Angular Acceleration
11 May 22 - 26	Dynamics of Rotational Motion/Torque	9	Determining Moment of Inertia of a Disk
12 May 29 – June 2	Static Equilibrium	9	Determine Static Forces on a Crane/Boom
14 June 5 - 9	EOY EXAMS		