Newton's Laws

Problem Set

Vernier Video Analysis

Item	Description	Activity/Resource
1	Newton's 1st Law	Problem Set 1-4
2	Newton's 3rd Law	
3	Inertial Balance Lab	What is the inertial mass of a mystery slug? VIDEO: Massing Astronauts in Space
4	Free Body Diagrams	All free body diagrams have a FEW forces on them. Problem Set Problem Set 5-23 (free body diagrams only)
5	Newton's Second Law	F = ma, using Newton's Second Law to generate equations from free body diagrams Problem Set 5-23 (equations for free body diagrams)
6	Applications of Newton's Second Law	Triangle of Power: Draw the free body diagrams, write the equations, solve the equaaaaaaaaaaations!
7	F = ma	horizontal ramp with force sensor on cart-measure F, m, and a confirm F= ma
8	Modified Atwood Machine	
9	Two Mass Lab: Ramp without Friction	
10	Atwood Machine (as a Demo)	If the total mass of an Atwood Machine remains constant, what is the relationship between the acceleration of the masses and the difference in the masses? linear graphing exercise
11	Friction	f = μn
12	Coefficient of Friction Lab	What are some factors that affect the coefficient of friction? modified Atwood machine block under cart-add rubber bands get force and acceleration from cart

	Friction Challenge	What is the coefficient of friction between a wood block and school desk?
	Three Mass Lab: Horizontal and Angled Track with Friction	
	Rescue Challenge	
	Additional Problems	
	Review	AP Classroom Multiple Choice Questions Newton's Laws Test Review Newton's Laws Test Review Answers
	Test	