

PHYSICS LABS/INVESTIGATIONS SEMESTER ONE

CONCEPT	LAB	MATERIALS
Preconceptions	Tricycle	string, tricycle
Observation/Physical Properties	Matter Investigation	boxes of stuff: magnet, compass, wire, toys, etc..
Observation	Gyro Investigation	gyroscopes, tops
Scales of Measurement	Stump the Teacher	misc.
Experimentation/ Speed	"Moving On Down"	ramps, cars, CBLs, motion detectors, stopwatches, meas tape, meter sticks, surfaces, lubricants
Graphing Motion	Graphing Motion	CBLs, motion detectors
Motion	Science Sleuths Day At Races	videodisc
Acceleration	Interactive Physics Acceleration	laptops
Kinematics	Rolling Ramp	ramps, balls, meter sticks, stopwatches, tape, stand
Gravity	G Lab	balls, books, motion detectors, photogates, CBLs, laptops, calculators, weight
Motion/acceleration	Yellow Light Project	laptops, stopwatches, tape, cars (real)
Science in Society	Traffic Study	laptops
CONCEPT	LAB	MATERIALS
Relative Motion	Relative Motion Interactive Physics	laptops,
Vectors	Vector Lab: Mapping, Riverboat, Race	compasses, large paper, tractors, stopwatches, meas tape, meter sticks, protractors, stand
Projectile Motion	Projectile (Ball on Table Target)	curved ramps, balls, meter sticks, cup, tape, weight, ringstand
Projectile Motion	Firing Squad	nl II demo, cannons, catapults, toy guns, protractors, tape, meter sticks
Forces	Newton's Laws Investigation	carts, halls carriages, pulley ramps, elastics, cup, coin, card, weight, string
Air Resistance	Terminal Velocity Interactive Physics	laptops
Air Resistance	Terminal Velocity Filters/Balloons	motion detector, cbl, accelerometer, filters, sand, balloon, weight
Forces/Friction	Friction Lab	ramps, scales, surfaces, bricks, protractors, cbl, force detectors, lubricant, blocks, weights
Forces/Acceleration	Science Sleuths Traffic Accident	videodisc
Forces/Motion	Midterm Lab	filters, stopwatch, tapeair
Momentum	Collisions Lab	airtrack, air table, pool table, puck, force detect, motion detect, cbl, tape

Basic Measuring/Lab Equipment:

Meter Sticks, Metric Measuring Tape, Rulers, Protractors, Drawing Compasses, Graphing Calculators, Calipers, Compasses, Scissors, graph paper, Index Cards, Clipboards, Scotch Tape, Duct Tape, Masking Tape, Stopwatches, Weight Sets, Electronic Balances (4kg accurate to .1 g), Hot Plates/Steam Generators, Scales, Ring Stands, Clamps, String, Clay, Lab Pros with: Motion Detectors, Accelerometers, Force Sensors, Microphones, Voltage/Amp Probes, Pressure Sensors, Light Sensors, Temp Probes, tool kits, knives.

PHYSICS LABS/INVESTIGATIONS SEMESTER TWO

CONCEPT	LAB	MATERIALS
Energy	Transformation of Energy Lab	penguin race, radiometer, toys in space, radio, vandergraaf, static wheel.
Work	Work Investigation	weights, carts, ramps
Work/Advantage	Simple Machines Lab	pulleys, scales, weight, ramps, sticks, stands, levers, gears, axles, wheels, ruler
Machines	Science Sleuths Moving Monument	videodisc
Energy	Energy Lab (Ball)	balls, hot/cold water, elastics, poppers, ice, meter sticks, motion detector, cbl
Elastic	Energy Lab/Elasticity	elastic springs, balls, stands, meter sticks
Energy(Mechanical, Heat, Electrical, Light, Fuel, Bio)	Energy in A Week Project	internet
Heat/Energy	Energy In A Shower Project	hot water, shower
Energy/Machines	Rube Goldberg Competition	rube Goldberg devices, misc equip (mousetrap)
Energy Transformations	Energy In Automobiles	automobile demo
Electromagnetism	Compass Investigation	wire, magnet, batteries, compass
Electricity	Circuits Lab	wire, magnet, batteries, electric car kit, voltage meter, circuit kit, resistors, electric kit
Heat	Heat Investigation	metal objects, hot/cold water
Specific Heat/Phase Changes	Specific Heat Lab	metal shot, calorimeter, metal objects, ice, thermometer, cbl, temp probe, stopwatch, Styrofoam.
Energy	Science Sleuths Energy Mystery House	videodisc
Heat/Cooling	Newton's Law of Cooling Lab	surfaces, cups, covers, hot/cold water, coffee, cocoa
CONCEPT	LAB	MATERIALS
Pressure	Pascal's investigation	Pascal law kit, syringes, buoyancy kits, weights, scales, cbl, pressure sensor
Bernoulli's Principle	Paper Airplane Lab	wind tunnel, paper, stopwatch, tape, balsa wood
Simple Harmonic Oscillators/Hooke's Law	SHO Lab (pendulum/spring)	weights, pendulum clamp, springs, slinkies, motion detector, cbl, meter stick, stopwatch, string
Waves/Circles	Interactive Physics Periodic Motion	laptops
Wave Motion	Slinky Lab	slinkies/springs, tape, meter sticks, stopwatch
Wave Motion	Ripple Tank Lab	lights, ripple tanks, laptops, metersticks, water, overhead projector
Circular Motion	Circular Motion investigation	string, washers, straws, tape, stopwatches
Forces/Circular Motion/SHO/Energy	Amusement Park Lab	vertical/horizontal accelerometers, springs, stopwatches, bags
Sound Waves	Tuning Fork Investigation	tuning forks, washers, cups, string, sound tubes
Sound/Harmonics	Resonance Lab	1L cylinders, glass/metal/PVC tubes, tuning forks, metersticks, tape, water, sound detectors, CBLs
Sound/White Noise	Science Sleuths Noises In School	videodiscs
Sound/Music	Music Lab	keyboard, oscilloscope, music instruments
Color	Light Color Investigation	color kits, filters, diffraction gratings, polarized lenses,
Light Brightness	Light Bright Lab	lights, light sensors, cbls
Spectrum	Light Spectrum Lab	light bulbs, spectroscopes
Spectrum	Science Sleuths Fogged Filters	video disc
Refraction/Reflection	Mirror/Lenses Lab	mirror kits, lenses kits, meter sticks, lens holders, candles, light sensors, cbls
Diffraction/Interference	Laser Lab	lasers, gratings, holders meter sticks