**UNIT 1: MOTION: An Accelerated Topic**

**Giant slide – Physics 500**

**Graphical Analysis – Air rocket**

**Terminal Velocity**

**UNIT 2: FORCE: May the Net Force Be With You**

**Force – Hooke’s Law – Push Truck**

**Coefficient of friction lab – Hovercraft**

**Spoons – Bungee jump**

**UNIT 3: MOTION: Getting Out of Line**

**Where am I – Addition of Force Vectors**

**Balloon Rockets – Resolution of Forces**

**Parking on a hill – Weight of World – Vector Bowling**

**Etch-a-Sketch**

**UNIT 4: MOTION in Two Dimensions**

**Forces on a ball – Ramp jump**

**Centripetal force labs – Measuring # of g’s**

**Tops, spinners – Universal Gravitation**

**UNIT 5: Momentum and Energy: Starting & Stopping**

**Collisions on Air Table, Egg Drop**

**Super ball, center of mass, cantilever**

**Bag of Nails – elastic/inelastic – non-inertial frame**

**UNIT 6: ENERGY: The Final View of Motion**

**Pile Driver – Mechanical Equiv. of Heat**

**How Fast can You Work – Loop to Loop**

**Ballistics Pendulum – Dart Gun Lab**

**Alka-bomb – efficiency – Bullet-resistant vest**

**UNIT 7: ELECTRICITY AND MAGNETISM**

**UNIT 8: WAVES: Useful Disturbances**

**Powers of Ten – Wave machine**

**Waves on a string – Hot sounds**

**Polarization – Diffraction - Holography**

**UNIT 9: LIGHT: The Stuff We See With**

**Stereoscope – 3-D red-blue glasses**

**Reflection – Images, images, images**

**Draw your face – Ripple Tank – Curved Mirror**

**Magic Cylinders - kALEIDOSCOPE**

**UNIT 10: LIGHT: Getting Bent into Shape**

**Snell’s Law – Refraction**

**Lens lab – Fiber Optics**

**Retro-reflector – Flickercard**

**Did Dick Hide Mary’s Pen – Eye dissection**