

Physics 4A: Mechanics

Week 1: Measurement, Estimation, 1D Kinematics

AIR TRACK
BALL DROP

Week 2: Vectors, 2D Kinematics

SIMULTANEOUS FALL
SHOOT THE MONKEY
BALLISTIC CART

Week 3: Dynamics & Newton's Laws

BLACKBOARD MECHANICS SET

Week 4: Newton's Laws

INCLINED PLANE (WITH FRICTION BLOCKS)
SKATEBOARD REACTION CART
CAR JUMP

Week 5: Gravity, Work and Energy

BOWLING BALL PENDULUM
BALLISTIC PENDULUM
CONSERVATION OF ENERGY DOUBLE TRACK

Week 6: Conservation of Energy

Week 7: Momentum and Collisions

NEWTON'S CRADLE
ETHANOL ROCKET
TENNIS BALL AND BASKETBALL
CENTER OF MASS

LEANING TOWER
ROLLING UPHILL ILLUSION

Week 8: Rotations about fixed axes

SPIN THE WINE GLASS
SPINNING LARIAT
MASS ON A SPRING
ROLLING DISK/HOOP/SPHERES
SPINNING STOOL
BIKE WHEEL GYRO

Week 9. General Rotations

SPINNING STOOL
BIKE WHEEL GYRO

Week 10. Statics