

# **Physics 11A: Survey of Physics**

## **Week 1: Displacement, Velocity, Acceleration, Gravity**

AIR TRACK

## **Week 2: Motion in 2 Dimensions**

BALL DROP  
SIMULTANEOUS FALL  
SHOOT THE MONKEY  
BALLISTIC CART

## **Week 3: Newton's Laws of Motion**

BLACKBOARD MECHANICS SET  
INCLINED PLANE (WITH FRICTION BLOCKS)  
SKATEBOARD REACTION CART

## **Week 4: Rotational Motion**

SPIN THE WINE GLASS  
SPINNING LARIAT  
MASS ON A SPRING

## **Week 5: Gravitation**

ETHANOL ROCKET

## **Week 6: Work and Energy**

BOWLING BALL PENDULUM  
BALLISTIC PENDULUM  
CAR JUMP  
CONSERVATION OF ENERGY DOUBLE TRACK

## **Week 7: Conservation of Energy**

BOWLING BALL PENDULUM  
BALLISTIC PENDULUM

CAR JUMP  
CONSERVATION OF ENERGY DOUBLE TRACK

**Week 8: Momentum**

NEWTON'S CRADLE  
ETHANOL ROCKET  
TENNIS BALL AND BASKETBALL  
AIR TRACK

**Week 9: Special Relativity**

SPARK CHAMBER

**Week 10: Implications of Relativity**