# Waves and Optics

## Wave Motion
- Beat Xylophone
- Beats Generator
- Bell in a Vacuum
- Circular Vibrational Modes
- Doppler Frisbee and Ball
- Longitudinal Wave Machine
- Microwave Doppler Beats
- Projection Ripple Tank
- Ropes and Spring Attached to Wall
- Shive Wave Machine
- Shive Wave Machine Pulley Driver
- Slinkys
- Sound Wave Interference
- Speaker Twirl
- Standing Waves on a String

## Wave Motion
- Tunable Tuning Forks with Resonant Cavities
- Tuning Forks with Ames Tube

## Acoustics
- Beer Bottle Tones
- Fourier Synthesizer
- Limits of Human Hearing

## Instruments
- Breaking a Beaker with Sound
- Chladni Plate
- Kundt's Tube
- Organ Pipes
- Rubens Tube
- Singing Rod
- Singing Corrugated Tube
- Sonometer with Suspended Weights

## Geometrical Optics
- Converging Lens Mechanical Model
- Corner Cube Reflector
- Fiber Optics
- Glass and Glycerine Trick
- Mirage with Parabolic Mirrors
- Parabolic Mirror Ignites Flash Paper
- Refraction Tank
- Separation and Recombination of White Light
- White Light Spectrum with a Prism
- Whiteboard Optics

## Photometry
- Bichsel Boxes
- Spectrum of a Blackbody

## Diffraction
- Laser Pinhole Diffraction
- Laser Single Slit Diffraction
- Poisson Spot
- Babinet's Principle with Slit and Thin Wire

## Interference
- Dichroic Filter
- Laser Double Slit Interference
- Laser Multiple Slit Interference
- Newton's Rings
- Source Point Interference
- Soap Film Interference

## Color
- Artificial Sunset
- Color Mixing

## Polarization
- Anti-reflection with Quarter Wave Plate
- Calcite Birefringence
- Corn Syrup Polarization Rotation
- Faraday Rotation
- Polarization by Reflection
- Polaroid Filters
The Eye

Modern Optics
- Dynamic Light Scattering
- He-Ne Laser
- Hologram Example
- Spatial Filtering