

Physics Circus:

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INTRODUCTION

Laser Music
Top Secret: Perpetual Motion
Mirage: Optical Illusion

MECHANICS:

Table Cloth Pull
Bike Wheel Ang. Mom.
Curve ball
Soda Density
Hammer Hand & Lead Brick
Cantilevered Blocks
Raw Egg Spin
Raw Egg Toss
Tug of War
CMS of Texas

VACUUM:

Balloon & Marshmallows
Evacuated Sphere Pull

SOUND:

Singing Rod?
Helium Balloon

SINGING TUBE:

Singing Tube Arpeggio
Vacuum Effect
Bernoulli Effect w/ paper
Bernoulli & Ping Pong Ball

TRUMPET:

Harmonic Tone Series
Model Discrete Frequencies
Scales and Harmonic Series:
High & Low notes
Piccolo & E-flat comparison

TIMBRE* OF INSTRUMENTS:

*Pronounced like timber, but means different
Harmonic Fingerprint
Trumpet vs. Clarinet
Computer Timbres

INTERFERENCE

Octave, 5th, 4th, 2nd, ...
Tuning Forks
Visual Analog: Same or Different?
Beats, & Computer Beats
Doppler Effect;
how to measure interference

NAME THAT TUNE:

Bugle Calls
Wm Tell Overture. Composer?
(Not Tonto)
Star Spangled Banner
In The Mood
Woody Woodpecker *or*
Malcom Arnold Quintet
Handel Fireworks *or*
Mozart Concerto
Star Wars Tape

LIQUID NITROGEN:

Rubber band & Plastic Tube
Banana Hammer
Liquid Air in test tube
Superconductivity
E&M Ring Jumping
Instant Ice Cream
Memory Wire

E&M:

Pickle Light bulb
Hot Dog Fuse
Tesla Coil
Magnet & Copper Tube
Disks in Mag Field

FINALE: Bed of Nails

EQUIPMENT:

Overhead Projector

Laser Setup

Cantilevered Blocks

Rope: Tug of War

Hair Dryer & Ping Pong Ball

Memory Wire

Slinky

Spring or Rope

Tuning Forks

Singing Tube

Singing Rod & Rosin

He Balloons

Cut Paper Holes

Visual Int. Handout

Visual Int. Overheads

Trumpet

Clarinet

Tape Recorder: Star Wars Tape

Toothpicks

PERISHABLES:

Liquid Nitrogen

Bananas (3)

Apple (2)

Pickle (2)

Hot Dogs (2)

Marshmallows

Egg (3) Hard & Soft

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