

Material Needs

Attenuation

NEEDS PER GROUP

Calculator (TI83 Plus)

Labpro with link to connect to calculator

Light Sensor (set to 150,000LUX)

8 – 16oz cups (can be shared with 2 to 3 groups) with concentrations of food colored water at 100% (10 drops to start), 50%, 25%, 12%, 6%, 3%, 1.5%, No dye

1 bottle of food coloring



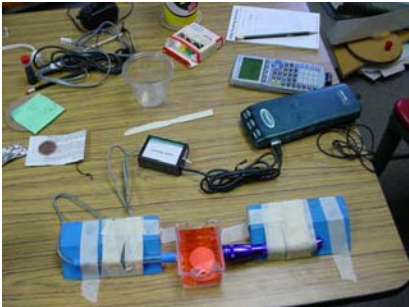
Roll of masking tape

Sugar packet Holder (available at Walmart bar code number 75034 19250, clear, 8cmx5.5cmx5cm)



Mini Mag Flashlight (AA size)

Two blocks of wood with a 30degree cut, 15 cm x 8cm x 4cm



2-L pop bottle for water transport

Spectra

Per Person or in pairs

1 handheld spectroscope

From Science Kit - <http://sciencekit.com/default.asp>

VW1652500

Spectroscope, Quantitative Analysis (QA)



2" x 2" square of liquid crystal (cut this down from the following stock – order need quantity – this is also from Science Kit)

WW3072375

(68 - 77°F) (6" x 12" sheet)

UV Beads or Cards

Demo Material Needed:

1 Variable Transformer

1 100W light bulb

Light fixture (see diagram)



Spectra Discharge Tubes and transformer (H₂, He, N₂, Ne, Na)

Construct Half-dozen IR Detectors – see APPENDIX A for construction details

UV Investigation

PER GROUP

UV Probes

Calculator, link cable

Labpro

UV Beads or card

Central Stores in quantities to allow choice of investigation

Various sunglasses – some with and without UV protection?

Various sunblock – different vendors and SPF

Roll of plastic wrap

Selection of cloth from old clothing – 100% cotton, 50/50 blend, wool, synthetic

Access to water

Humidity

Per Group

Relative Humidity Probe – BE SURE THAT THERE IS A DIN TO BTA ADAPTER _
IF NOT GET ONE!

Temperature Probe

Labpro

Calculator with link cable

Light fixture (see previous picture)

250W IR bulb (in picture)

Clamp/ring stand arrangement to hold bulb 30 to 40 cm above probes in box

Plug strip or extension cords (access to electricity for groups)

2 #3 Stoppers with hole and slit on one side (see diagram)

1 8cup Gladware Container with holes on lid for stoppers

Bowl or sink with ice to immerse Gladware container



Climate Demo

Per group of 5

1 Clear Spaghetti Holder (opening on top can accommodate a fist)

1 16oz Ziploc bag for each of the following colors of marshmallows – pink, green, orange, white (any four different colors are OK)

1 bag of mini MMs (16oz?)

Plastic gloves