

Supply List for Course 1 of the Weather and Climate Class for Teachers
July, 2013

Most of the write-ups will list a website or store where we found the hard to get parts, but our sources change each year. This is the most updated list as of July 8th, 2013.

Monday AM Activities

What's beyond the rainbow?

Rainbow glasses: www.rainbowsymphony.com www.3dglasesonline.com

Pyramex welding goggles with stationary lenses www.fullsource.com

IR plastic or gels for goggles: The IR plastic is listed in the write-up.

More affordable is to order two theatre gels (Palace Blue and Blood Red) and layer them together in the goggles www.stagespot.com

Ceramic IR bulbs (Zoo Med ReptiCare) www.amazon.com

Can energy be created or destroyed?

1 solar cell night light device with 1 AA rechargeable battery: Big Lots, Kmart, Target, Walmart

One AA battery analog clock: www.sierratradingpost.com

1 stopwatch: www.windycitynovelties.com

One AA battery incandescent flashlight: www.orientaltrading.com

One AA battery fan: www.thewarmingstore.com

What's the difference between red light and blue light?

Phosphorescent paper: www.papilio.com

One red LED light & One blue LED light www.amazon.com

What is energy?

1 balloon car • 1 pull-back race car • 1 popper • 1 groan tube • 1 physics flyer
www.orientaltrading.com

Can you "see" thermal radiation?

Ceramic IR bulbs (Zoo Med ReptiCare) www.amazon.com

Can you "see" beyond the rainbow?

Pyramex welding goggles with stationary lenses www.fullsource.com

IR plastic or gels for goggles: The IR plastic is listed in the write-up.

More affordable is to order two theatre gels (Palace Blue and Blood Red) and layer them together in the goggles

Cyan, magenta, and yellow gel filters www.stagespot.com

Would you get a sunburn on Mars?

• Ultraviolet-detecting beads—UV Beads: www.teachersource.com

Monday PM Activities

In an Alaskan summer, the sun is up 24 hours a day. Why isn't it hotter?

One solar powered grasshopper www.dealextreme.com

Why does it get colder on clear nights than on cloudy nights?

Non-contact pocket Infrared thermometer www.harborfreight.com

How does the earth cool itself off?

World map placemat www.ouraycolorado.com

Non-contact pocket Infrared thermometer www.harborfreight.com

What is the "greenhouse effect"?

Non-contact pocket Infrared thermometer www.harborfreight.com

How does the atmosphere keep the earth warmer?

Four identical pieces of glass (You can use glass from the same size picture frames or have it cut at a glass store. Spray one side of one glass plate with flat black paint.)

4 clear rubber feet on the bottom of each piece of glass as spacers www.uline.com

Non-contact pocket Infrared thermometer www.harborfreight.com

Why is it tropical in the tropics?

One large inflatable Earth www.herffjones.com

One solar powered grasshopper (You will have to add leads.) www.dealextreme.com

Multimeter and alligator clips www.harborfreight.com

Tuesday AM Activities

Why do clouds form in the afternoon?

2" PVC pipe cap: Home Depot or Lowes

Does air weigh anything?

2 Fizzkeepers for 2 liter bottles www.jokari.com

How can gravity make things go up?

Cheap, thin (.3 to .5 mil, at most!) black plastic garbage bags: Ace Hardware

If hot air rises, why is it cold in the mountains?

Tire valve to fit in cap of bottle (Tire stores or Ace Hardware)

Bike pump with pressure gauge www.amazon.com

LCD aquarium thermometer www.petco.com

Marshmallow Mashers

1 pump cap (Fizzkeeper) www.jokari.com

Peep Poofer

VacuVin container for coffee www.vacuvin.com

Website to monitor sounding data:

Here you can find plots and numerical data for soundings all over the world.

<http://weather.uwyo.edu/upperair/sounding.html>

Check out the address below for more on sonde observations.

www.cmmmap.org/learn/weather/measuring25.html

Tuesday PM Activities

Why are clouds white?

Ultrasonic misters www.tmart.com

Do cities affect the weather?

Tire valves to fit in the cap of 2 liter bottles (Tire stores or Ace Hardware)

Air freshener (Glade Powder Fresh) (Target, Grocery stores)

Bike pump with pressure gauge www.amazon.com

How can freezing make something warmer?

Sodium acetate reusable heat pack www.branders.com

Why are clouds white?

One ultrasonic mister www.amazon.com

Why can warm air “hold” more moisture than cold air?

Hand boiler toy www.officeplayground.com

Wednesday AM Activities

How does the spin of the earth lead to the spin of a storm?

Round stepping stone pan www.hobbylobby.com (Paint the inside white.)

Ceramic IR bulbs (Zoo Med ReptiCare) www.amazon.com

Model display turntable that rotates at approximately 3 rpm. www.hobbytown.com

Why do storms form along fronts?

Large clear rectangular container (Beauty organizer) www.bedbath&beyond.com

Wednesday PM Activities

Wedges Light – Full game can be viewed at: <http://cmi.princeton.edu/wedges/>