Name: _		
Name		



Lights on Pipes! WHICH SURFACE ABSORBS VISIBLE LIGHT THE BEST?

Problem

Which surface absorbs visible light the best: white-painted, black-painted or mylar-covered?

Research

Answer the following True or False questions:

True/False

True/False The emission of energy as electromagnetic waves is called radiation.

True/False Visible light is a form of radiation.

True/False A white object absorbs more light than a black object.

Identification of Variables

The more energy an object reflects, the hotter it becomes.

Identify the **Independent Variable**, **Dependent Variable**, **Constants** and **Control** of this experiment:

Independent Variable	
Dependent Variable	
Constants	
Control	

Hypothesis

If w	white-painted,	black-painted	and	myla	r-cove	ered	surfac	ces are	heated,	then
the _					su	rface	e will a	absorb	heat the	e best.
_	(white-painted /	black-painted / my	lar-co	vered)						

Conclusion

Complete the conclusion statement **after** collecting and analyzing the data.

THE SURF	ACE	WHICH	ARSORRS	HEAT	THE
REST IS					•

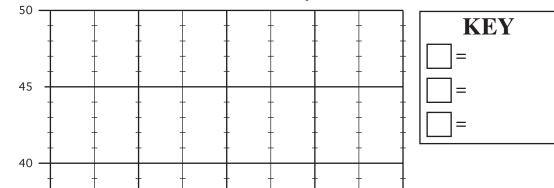
Data Collection and Analysis

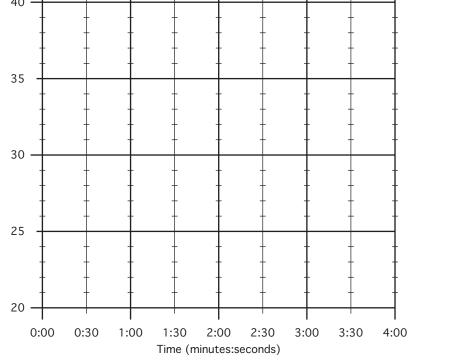
Directions: Record the temperature inside each pipe **every thirty seconds** over the course of four minutes. Once all of the data has been collected, make a **line graph** for each of the different pipes that shows how its temperature changed. You will need to make a symbol for each of the different pipes so that you will be able to tell them apart on the graph.

Hot Stuff Data Chart

SURFACE	(initial temperature) TEMPERATURE inside of pipe at TIME (minutes:seconds)								
SURFACE		0:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00

Hot Stuff Results Graph





Temperature (°C)