Manager:
Scribe:
Presenter:
Date:

Measurement—A New Standard

Introduction

What is a meter, anyway? Actually, it used to be a particular bar made of platinum stored in a climate-controlled box in Paris. Now it's defined in terms of the speed of light in a vacuum, which is something that never changes. Who comes up with this stuff? Who's to say what unit is better: the foot or the meter? The mile or the kilometer? Well, it's just a matter of convention. The point is that all measurements are based on a *standard*. We do this so that people can compare measurements even if they're far away from each other in space or time.

For the purpose of this activity let's imagine that there are no standards of measurement. We'll come up with our own standards and see how they compare with what other groups come up with.

Group Activity

Create two new units for the measurement of length. One should be useful for measuring small things like fingernails or pencils. The second should be convenient for measuring desks, the area of a blackboard, or the volume of a room. We will use these units right here and now to make some measurements. Be prepared to convert your units into the units defined by other groups. Come up with a snappy abbreviation, too, so we don't have to write out long words on the board.

Use this space for describing your new units:

Using your units, make the following measurements:
length of the blackboard:
height of the blackboard:
area of the blackboard: (calculate this value; show the 2-D version of your unit)

length of textbook:
width of textbook:
height of textbook:
volume of textbook: (calculate this value; show the 3-D version of your unit)

Find a way to compare your measurements to those of other groups. Meet up with another group and convert your units into those used by the other group. Show a neat, detailed report of your results on the other side of this paper. Only one paper needs to be turned in for each group. The presenter will be asked to come up to the board, explain the new unit, give a measurement made with the unit and convert that measurement into some other unit of choice.