

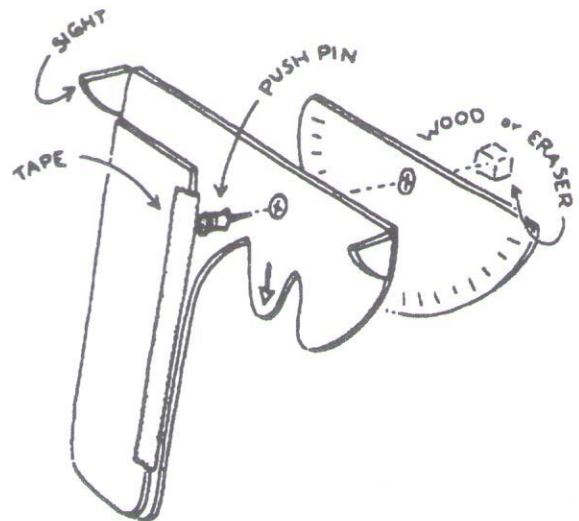
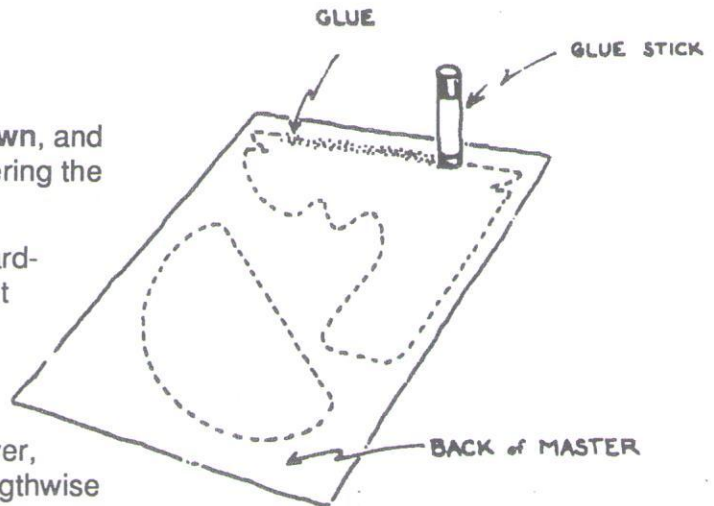
Making and Using Height-O-Meters*

You will need

- 1 Height-O-Meter outline sheet
- 1 Height-O-Meter instruction sheet
- 1 push pin
- 1 small piece of wood or pencil eraser
- 1 sheet of thin cardboard or posterboard (8-1/2" x 11")
- a ruler, scissors, and glue stick to share with other students

To Make Your Height-O-Meter

1. Place the Height-O-Meter outline sheet **face down**, and smear glue evenly on the back of the master, covering the heavy lines.
2. Stick the Height-O-Meter outline sheet to the cardboard sheet, pressing and smoothing it. Then cut out the two parts of the Height-O-Meter.
3. Lay the handle piece **printed side up**. Using a ruler, fold the two sights so they are pointing straight up. Fold the handle up and over, along the fold line. Tape the handle together lengthwise to strengthen it.
4. Assemble the Height-O-Meter by inserting a push pin through the tack marks of the handle piece, the half-disk, and into a small piece of wood or pencil eraser. Work the push pin around to enlarge the holes so the disk swings freely.



To Use Your Height-O-Meter

Hold the Height-O-Meter in one hand, and sight along the top edges of **both sights** so they line up with an object. Pinch the half-disk against the handle piece and read the object's height in degrees.

To Calibrate Your Height-O-Meter

Place a piece of masking tape on the wall at eye level. Step back to the middle of the room, sight on the center of the tape, and see if the Height-O-Meter reads close to zero. If it is more than one or two degrees off, place a paper clip on the half-disk and adjust it so the Height-O-Meter reads zero when pointed horizontally.

* Adapted from *Height-O-Meters*, a teacher's guide in the *Great Explorations in Math and Science* series. For more information, write to: GEMS, Lawrence Hall of Science, University of California, Berkeley, CA 94720, or call (415) 642-7771.

Fold over and tape so this writing is hidden.

SIGHT

Fold

NAME _____

HEIGHT  METER

Fold

SIGHT

tack
mark

Eye Level _____ m

POINTER



Fold

Fold

Fold

Fold

HEIGHT  METER

tack
mark

SCALE
(in degrees)

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