

TREWORGY PLANETARIUM

QUADRANT BUILDING ACTIVITY

In this activity, students can make a simple quadrant and use it to measure an angle.

Supplies needed for this activity are:

- 1 plastic protractor (or “Seaport Quadrant” template on heavy paper / cardstock)
- 1 plastic drinking straw
- 1 piece of string, 12” long
- 1 metal weight (bolt/washer/paperclip)
- 2 small pieces of tape
- Scissors

Directions for building a quadrant are as follows:

1. Tie one end of the string to the metal weight.
2. Feed the other end of the string through the hole in the protractor and tie a knot.
3. Tape the straw along the flat side of the protractor.

To use the quadrant to measure an angle:

1. Look through the straw at a fixed object.
2. Once sighted, use your finger to pinch the line against the protractor.
3. The angle that the line measures up against is the “zenith angle”.
4. NOTE: If using a plastic protractor, you must subtract the zenith angle from 90 degrees to get the angle of the object. If using “Seaport Quadrant” template, no additional math is needed.



