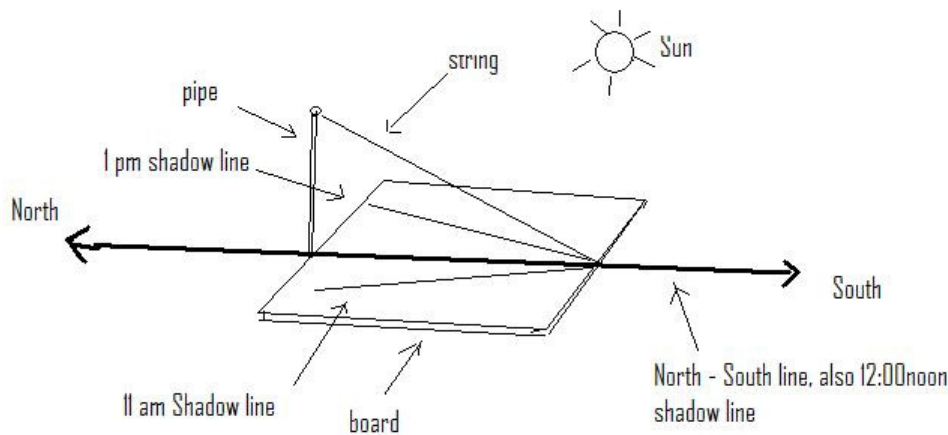


Sundial Project

Requirements:

1. Something people can put together themselves within less than an hour.
2. Could be accurate to 1 or 2 minutes
3. Be instructive



Components:

An accurate true North true South long string is strung along the grass. Dials will be placed on the string to be oriented on the local meridian.

A vertical pipe of specified height is placed adjacent to the line. A level is used to insure vertical.

A board of predetermined dimensions is given to the participants who will draw hour lines at certain angles on the board. This can be done just using a ruler, a pencil and some instructions. (protractor not required).

The board with hour lines drawn on it is placed on top of the North-South string line, with its central hour line aligned with the center of the pipe. The pipe is then hammered into the ground to a specified depth (which will be pre-marked on the pipe) so that the string hole at the top of the pipe comes to a specified height above the board.

A string is then strung from the hole at the top of the pipe to the bottom (south end) of the board where the central (12:00 noon) line is drawn.

The height of the pipe and length of the board have been predetermined so that the angle of the string with the ground will be the latitude of Branford. Participants will not have to do any calculations, they have been done in the design.

The string is now parallel to the earth's axis of rotation, which will be mentioned.

At exactly local noon the shadow of the line on the board will (hopefully) pass right down the middle line drawn on the board, i.e. the North – South line. Within 1 or 2 minutes afterwards, the observer should see that the shadow has moved off this line.

Lines will be drawn for 11:00, 11:15, 11:30 etc to 1 pm.

Note: A sundial gives “true” LOCAL time, which is not the same as our civil (clock time) Corrections have to be made for daylight savings time, longitude, and the position of the earth in its orbit around the sun. These will be explained. For June 20 – 21 local noon in Branford will be at 12:52 pm clock time.

Doing this at the Solstice has special meaning, which will be explained.