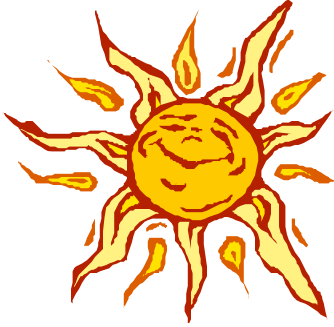


Measuring The Sun's Altitude With A Shadow Stick



Follow these directions for using a shadow stick to measure the altitude of the Sun:

Never Look Directly At The Sun

- Read the information on the **SunShIP** web site (<http://sunship.currentsky.com>) about shadow sticks and using shadows to measure the Sun's altitude,
 - Have a shadow stick available. The shadow stick should be straight and about 10 cm (4 inches) in length. You could use a pencil, or a wooden dowel, or even a stick as long as it is a straight piece.
 - Have a copy of the *Sun Altitude Measuring Sheet* and a copy of the *Sun Altitude Data Sheet*.
1. Enter the date and time for this measurement on the *Sun Altitude Data Sheet*.
 2. Take the shadow stick, the *Sun Altitude Measuring Sheet*, and a copy of the *Sun Altitude Data Sheet* outside and place the *Sun Altitude Measuring Sheet* on a flat surface.
 3. Hold the shadow stick straight up (vertical) and place it in the corner on the *Sun Altitude Measuring Sheet*.
 4. Turn the *Sun Altitude Measuring Sheet* under the shadow stick so that the Sun's shadow is parallel to the border of the page.
 5. Draw a line on the page the length of the shadow.
 6. Lay the shadow stick on the page so that it is parallel with the border at the bottom of the page.
 7. Draw a line along the pencil and place a mark at the end of the pencil.
 8. To complete the triangle draw a line to connect the end of the shadow and end of pencil lines.
 9. Measure the angle between the two lines as shown and record this angle as the altitude of the Sun on the *Sun Altitude Data Sheet*.



Measuring The Sun's Altitude With A Shadow Stick

Sun Altitude Measuring Sheet

5. Measure
This Angle

**Never Look
Directly At
The Sun**

4. Connect The End Points To Make A Triangle

2. Line Up Shadow With Border Of Page?

1. Put Shadow Stick Here 3. Lay shadow Stick Parallel With Border of Page



Measuring The Sun's Altitude With A Shadow Stick

Sun Altitude Data Sheet

Date of Observation	Time of Observation	Altitude of Sun	Time of Local Mid-Day