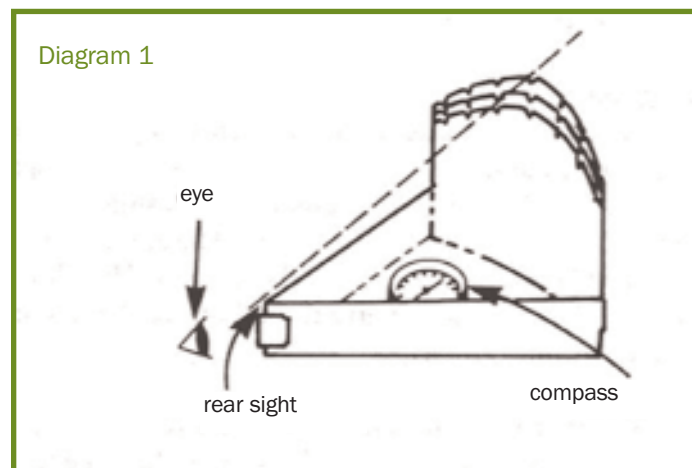


# Constructing and Using a Solar Pathfinder

## Constructing a Solar Pathfinder:

1. Glue the sun locator ([Activity Sheet A](#)) onto a thin sheet of cardboard.
2. After the glue has dried, cut out the two sections of the sun locator along the solid lines.
3. Cut the top section of the sun locator along the line that most closely represents your latitude.
4. Assemble the sun locator as shown in [Diagram 1](#). Bend the edges of the bottom section upward along the dotted line. Bend all tabs upward or over along the dotted lines.
5. Fit the top section along the curved edge of the bottom section. Tape all tabs in place.
6. Center the compass on the mark on the base of your sun locator. Align the compass needle with true north by turning the sun locator.
7. Affix level to the underside of the sun locator, optional.
8. Your sun locator is complete.

## Using the Solar Pathfinder:



1. Choose a site to analyze.
2. Realign the compass with true north. Your sun locator is now aimed toward true south. Hold the locator level. One option is to affix a small level to the underside of the solar pathfinder. While one student holds the pathfinder, the others may give verbal directions to keep it level. Keeping the locator level and aligned in this direction, lift it to your eye so that you are looking through the rear sight. Caution: Never use your sun locator to look directly at the sun. Permanent eye damage can result.
3. The curved top of the sun locator represents the sun's lowest path in the sky in your area (winter or December 21). The sun will not drop lower in the sky than this line, so objects masked by your locator will never shade your site.
4. However, objects in front of you that appear above the curved top will create shading problems at your site. Starting at 9 a.m. on your locator, observe the objects that will shade your site during winter. On [Activity Sheet B](#), sketch these objects in their correct positions and proportions within and around the lower half of the solar window. Continue sketching until you reach 3 p.m.
5. Complete [Activity Sheet B](#) by sketching any remaining objects within and around the upper half of the solar window in their correct positions and proportions. Be sure to sketch eaves, awnings, or other objects that you see.
6. Repeat Steps 1–5 for two other potential sites.