

# The Sundial

A sundial is an instrument used to tell time by the position of the sun. The sun casts a shadow from the sundial's style on the face of the dial. The shadow will fall on the correct time when the sundial is positioned correctly. The ancient Egyptians had some of the oldest sundials.



## Procedure

1. Cut on the dotted line from the edge of the paper to the last dot on each side of the sundial.
2. Fold along the solid line at the bottom of the sundial with the line on the outside. Flatten the fold back out.
3. Fold along both up and down lines. Flatten these lines back out also.
4. Our latitude is  $37.5^{\circ}$  N. Fold in on the slanted line that is marked  $37^{\circ}$ N. With the latitude line folded, fold along the bottom line of the sundial and slant it until the latitude line is flat with the bottom half of the sheet, as shown.
5. Tape it in place like the picture, so it stays slanted.
6. Put your pencil through the hole at the top center of the sundial with the eraser beneath the sundial and the pointed end sticking out as shown.



## Observations

- Take the sundial outside on a sunny day. Using a compass, see which direction is north.
- Turn the sundial so the pencil points due north.
- If the direction for the sundial is unclear, turn it so that the time under the pencil's shadow is correct (subtract 1 hour if it is daylight saving time).
- You can estimate that the half hour is halfway between 2 numbers.
- Check your sundial daily for a week and see how accurate it is.