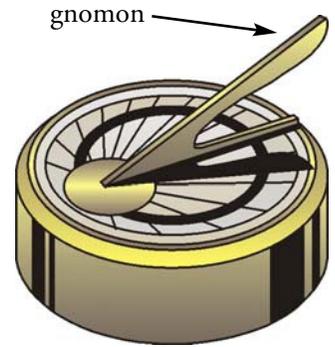




Time Before Clocks: Solar Time

Background: Before clocks and watches were invented, people used the rhythms of nature as signals of the passage of time. Activities were planned around the rising and setting of the sun, the cycle of the moon, and the changing of the seasons. The sundial dates back to around 1500 B.C.E. in Egypt and was also used in Ancient Greece and Rome. Sundials enabled people to tell the time of the day by showing the position and length of a shadow. The sun shines on a centerpiece called a gnomon (pronounced no-mon). The shadow of the gnomon moves around the face of the sundial, thus giving the hour of the day. Telling time by sunlight meant that the length of the hour changed according to the season. The hours would be longer during the summer and shorter in the winter. This timepiece also had a big disadvantage because of its reliance on the sun shining brightly enough to cast a visible shadow. In this activity participants create their own sundial.



Materials:

Simple sundial pattern sheet
Scissors
Glue or scotch tape
Compass
Sundial

Instructions for Activity:

1. Use the sundial included in the kit as a demonstration object to show participants what a sundial looks like and how it works before participants create their own.
2. Cut out the dial plate and the gnomon (pronounced no-mon) patterns.
3. Cut a slit into the dial plate along the dotted line.
4. Fold along the lines of the gnomon as marked on the pattern.
5. Slide the folded gnomon into the slit in the dial plate. Use glue or scotch tape to stick the gnomon flaps to the bottom of the dial plate.
6. Take your sundial to a sunny place. Place it on a flat surface, and turn it until the 12 o'clock mark is facing north (a compass is helpful in this step).

Additional Activity Ideas: There are many different types of sundials. To learn more about different sundials visit The North American Sundial Society's website at www.sundials.org.