Make a 'Big Dipper Star Clock'

What's This Activity About?

You don't need a watch to tell what time it is at night, as long as you can find the Big Dipper. Long before digital watches or even grandfather clocks, people used the sky to tell time at night. Follow their example and build a star clock that you can use to tell time by the stars.

Materials:

- Star Clock patterns
- Scissors
- Brass prong fasteners
- Single hole punch, push pin or sharp pencil to make hole in center of star wheel

Setting Up the Activity: You will need to copy the Star Clock patterns onto cardstock. Each participant should receive one each of the inner and outer wheels. Each participant will also need a brass fastener and access to a pair of scissors and a tool to make holes in the center of the star wheels.

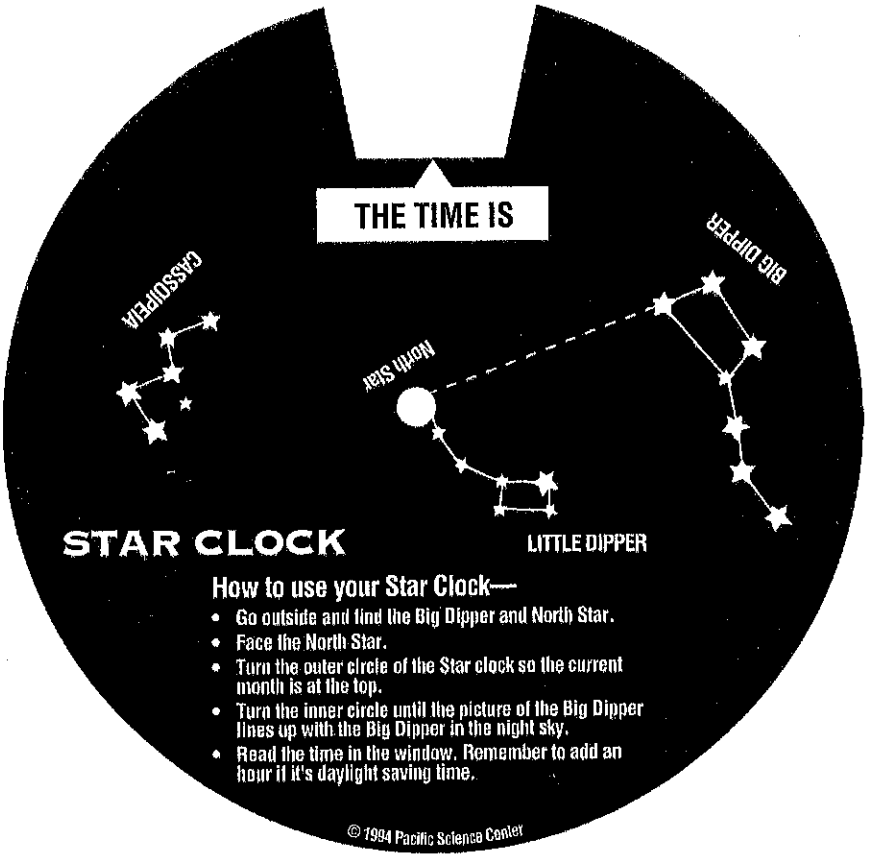
Make the Star Clock:

1. Carefully cut out the 2 circles from the patterns.
2. Punch a hole in the middle of each circle.
3. Put a brass fastener through the two holes. The black circle with the notch and the words "THE TIME IS" should be on top.
4. Make sure the wheels can turn smoothly around the fastener. You may have to make your holes a little bigger if they don't.

Using the Star Clock: Do this when the sky is pretty clear. First, help participants find which way is north and have them face north and see if they can find the pattern of seven stars that make up the Big Dipper or the five that make up Cassiopeia (look at the star clock to remind how this group of stars look). Then, have participants go through the following steps to read the time:

1. Turn the outer circle of the Star Clock so that the current month is on top.
2. Turn the inner circle until the picture of the Big Dipper on the star clock lines up with the Big Dipper in the real sky. To check if you are right, see if the Little Dipper and Cassiopeia are lined up the right way too.
3. Now read the time in the window. That's roughly the time, provided that you are on standard time. If you are on daylight savings time when you are making the observation, add an hour.
4. Check your "star time" against a modern watch or clock. How close did you come?

Star Clock Inner Wheel



Star Clock Outer Wheel