Stick Around

Make a simple sundial or sun clock and watch the shadow from its stick or rod, called a gnomon, move around on the ground to tell time. The angle of the shadow produced by the sun will change as the earth rotates, or spins, and changes from day to night. So stick around to watch the shadows, and the time, change—it’s time well spent!

What to Do: Find a sunny location in your yard and push the stick into the ground. On the hour, mark the time of day on the piece of paper and place a stone or marker on the spot where the shadow strikes the ground. Again, one hour later, record the time and mark the shadow with a stone. Continue these steps until you have a completed and marked (calibrated) sun clock.

What happens: The shadow cast by the sun on the gnomon, or stick, will change angle and length as the sun moves from east to west in the sky.

Although the sun appears to be moving from East to west, it is really the Earth that is moving, or revolving, around the sun. Besides orbiting, or circling, the sun, the earth also spins on its axis, or turns like a top. It is this spinning, or rotating, in relation to the sun that makes it possible to record the time, and night and day.

In the morning, the shadow will be long and narrow and will point to the west. At noon, when the sun appears at its highest point, the shadow will be short and will point north in the northern hemisphere (but south in the southern hemisphere). In the afternoon, the shadow will be directed toward the east.

You Need
• stick
• pencil
• paper
• stones or other markers