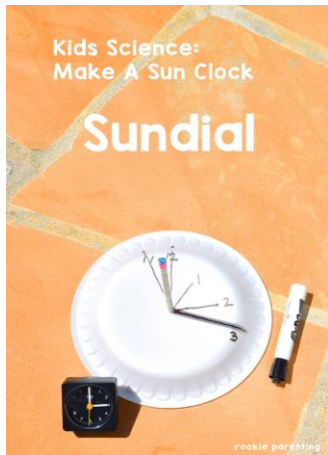


Make A Sundial



WHAT WE NEED:

- Paper plate
- Pen or pencil
- Marker
- Clock
- Marker

STEPS:

1. Find a spot in an open outdoor area that receives sunlight during the day without being blocked by buildings, trees, poles, etc.
2. Make a small hole in the center of the paper plate and insert one end of the pencil into it.
3. Place the plate and pencil at the outdoor spot you found securely. Tape it down if needed so that it won't move or get knocked down accidentally.

4. Every hour on the hour, use the marker to draw the shadow of the pencil and write down the time.
5. Do this throughout the day until night time when you can't see the shadow any more.
6. Now you have a sundial!

WHY: A sundial can tell time by the relative position of the sun and the shadow it creates. As the sun appears to move across the sky, the shadow creates different **hour-lines**.

The sun appears to move because the Earth **revolves (rotates)**. The Earth rotates once in about 24 hours with respect to the sun. At any one time, one side of the Earth faces the sun and receives sunlight while the other side sits in the shadow and doesn't receive any sunlight.

As the Earth rotates, the location where you are changes relative to the sun. When the sun's position changes, you will notice that the length of the shadow also changes. In the morning, the shadow gets shorter and shorter as noon time approaches. In the afternoon, the shadow becomes longer and longer. It is the longest at sunset.

<http://www.rookieparenting.com/make-a-sundial/>