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Earth's Orbit & Rotation Activity for Kids

Sundial DIY

 Duration: **30-60 min**

 Difficulty: **Easy**

 Cost: **\$0 to \$5**

Build a device that uses Earth's rotation to tell time.

Material List

- 1** Paper plate
- 1** Glue stick
- 1** Bendy straw
- 1** Compass
- 1** Pair of scissors
- 1** Roll of tape
- 1** Sharpened pencil
- 1** Sundial face printout [Link to download](#)

Instructions

- 1** Cut out the sundial and glue it to a paper plate.
 - 2** Poke a hole through the center of the plate using the pencil.
 - 3** Push the straw through the hole, and tape the short end underneath to hold it in place.
 - 4** Take your sundial outside on a sunny day at noon and place it in a flat, sunny area.
 - 5** Point the sundial north using the compass, and tilt the straw slightly north so it casts a longer shadow.
 - 6** Observe the sundial over a few hours. The shadow of the straw tells you the time!
- Tip:** If you are in the Southern Hemisphere, anywhere the above instructions say north, you should use south.

How It Works

The sun shining down on the straw creates a shadow on the sundial. In the Northern Hemisphere, the shadow points toward the west in the morning. Around noon, when the sun is close to overhead, the shadow is short and points north. When the sun is low at the end of the day, the shadow points east. The sundial simply labels each hour that goes by as the Earth rotates. Remember that even though it appears that the sun is moving across the sky, it is really Earth that is rotating!