

Vision and light reflections: catch the speed of light



Make a human sundial

*this experiment must be conducted on a sunny day

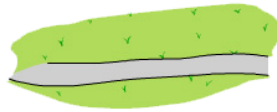
Objective

Understand how shadows are made with a light source; the earth's rotation on its axis causes the sun to move in the sky, helping us to track time through light

Materials



sidewalk chalk



driveway or other
open space



camera
(optional)



tape measure

Instructions

1. mark the area with an x where you will stand each time you trace your shadow
2. have an adult or friend trace your shadow at least various times throughout the day (morning, midday and late afternoon)
3. note the time of day each tracing was made
4. record your observations of each shadow tracing (long and skinny? Short and wide?)
5. note the approximate location of the sun in the sky at each tracing
6. measure and record the length of each shadow
7. using the camera, take photos to record your observations
8. create a hypothesis (educated guess) about why your shadow changes throughout the day

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