How To...

Day 5: Human Sundial

Make the most of (possibly) the last of the sunny weather.

Observe what changes over time, marking your shadow with chalk over the course of the day at regular intervals. What do you notice?

Instructions

Step 1 – Choose a sunny day!

Step 2 – Find a wide-open spot that will be sunny all day. Driveways and playgrounds usually work well. Make sure you have enough space in all directions around you. If there are trees or structures near the area you are considering, check the area in the morning, at mid-day, and in the evening to make sure that the area is not shadowed at any time of the day.

Step 3 - Place an 'X' on the spot that you want the person to stand, or find some other way to mark the area in a way that will last all day.

Step 4 – Use chalk to trace the shadows at least 3 times throughout the day. Morning, mid-day, and late afternoon and/or early evening are great times of day to trace shadows for these outdoor science experiments.

Optional steps to complete each time you trace your shadow for your sundial

- Use chalk to note the time of day that it was taken next to each tracing.
- Have children describe their shadows each time the take it. (long and skinny, short and fat, etc.) Have them record this observation in their science notebook or nature journal.
- Note the general location of the sun in the sky in your notebook when you make each tracing.
- Measure the length of the shadow each time you trace it and record it in your notebook.
- Ask your children to predict where their shadow will be and what it will look like at the next tracing time.
- Take photos and/or record all other observations in a scientific notebook. (optional)

Step 5 – Compare observations and formulate a hypothesis. Discuss why the shadow changes throughout the day and throughout the rest of the year. Explain that our earth spins on its axis in a day and makes its way around the sun in a year to produce the changes that we see in our shadows.

https://rhythmsofplay.com/human-sundial-shadow-science-experiment/