



Solar Symbols

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Solar Symbols

OVERVIEW

The sun is key to life on earth. It provides warmth and light, allowing plants to grow and animals to thrive. The sun also determines the many different environments that we have on earth. As the earth moves around the sun we see seasons change, sunrises and sunsets.

Knowledge of the sun's patterns and the time of day is beneficial for planting and growing crops. Most plants grow best during a specific season. It's important to understand the amount of sunlight they will have during the day. For example, corn is a warm season crop, and needs warm weather to grow, because it can die if it gets too cold or is exposed to frost. On the flip side, Spinach is a cool season crop, meaning that it can withstand frost and cooler temperatures.

While the earth rotates around the sun, our seasons change along with the amount of sunlight we have each day. The earth rotates around the sun east to west, this is why the sun rises in the east and sets in the west. When this happens, we have a change in our seasons and the amount of sunlight we have each day. The earth is tilted on its axis, half of the earth is leaning more towards the sun with warm temperatures and long summer days. The other half of the earth has less sun, is tilted further away and is in the winter season with colder, shorter days.

The sun is an amazing tool that can be used to determine what time it is! By using shadows that the sun casts upon objects, we are able to tell the time of day based upon the movement of the shadows. In today's activity, you will create your very own sundial!



Sun- Large star in the center of the solar system; hot ball of glowing gases (75% Hydrogen 25% Helium) that is 9,941 degrees Fahrenheit with a core temperature of about 27 million degrees; current age is 4.5 billion years old

Sundial- an instrument showing the time by the shadow of a pointer cast by the sun onto a plate marked with the hours of the day; Egyptians, Greeks, and Romans used the Sundial as early as 1500 B.C.

Season- each of the four divisions of the year (spring, summer, autumn, and winter) are determined by specific weather patterns, temperatures, and daylight hours; created by the earth's changing position to the sun.



EXPERIMENT

The sun is an amazing tool that can help us determine what time it is! By using the shadows that the sun casts upon objects, we are able to tell the time of day based upon the movement of the shadows. In today's activity, you will create your very own sundial!



SUGGESTED MATERIALS

- Paper plate
- Pencil
- Tape
- Pen or marker

STEPS

Step 1: Poke the pencil in the center of the paper plate. Make sure to keep the pencil perpendicular to the plate. Then add tape to the bottom of the plate to secure the pencil.

Step 2: Go outside and place your sundial in a spot that is never in any shade. Mark where the shadow of the sundial is at and write the time next to the mark.

Step 3: Go out every hour after that and continue to mark the shadow and write the time.

You will notice when you put your sundial out the next day and check back on it the shadow will be at or near the same spot. How cool is that?!



Resources: [NASA Science SOLAR SYSTEM EXPLORATION](#) and [Seasons & the Sun: Crash Course Kids 11.1](#)

