

GP2051

## Wooden Sundial (Pk/12)

Reorder Number

GP2051

1.2



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**MORE IDEAS...**

On a sunny day, go outside and mark a spot on the grass where you will stand. Do this at various hours and each time, mark where your shadow is in the morning, mid morning, noon, mid afternoon and late afternoon. See the changes at each time you try this.



Research sundials through history to see how they varied in size, shape and markings on the dials.



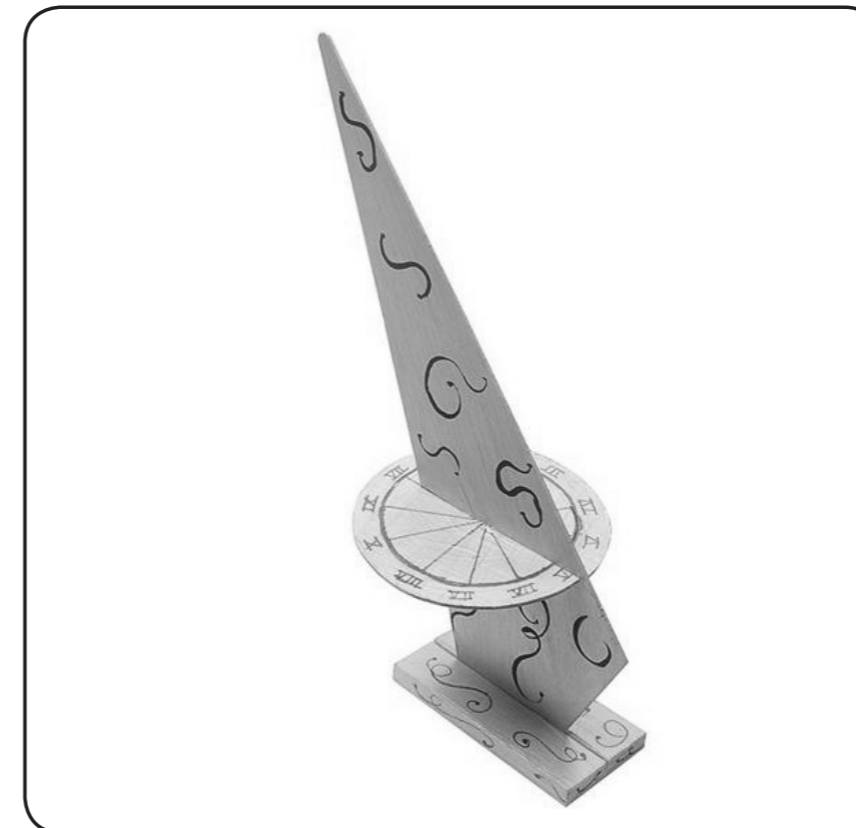
Record where the sun's shadow is at your home at varied times of the day. When is your backyard in the sun and when is it in the shade. Make a notation of these changes in the position of shade in the yard.

**Wooden Sundial (Pk/12)**

PLEASE READ ALL INSTRUCTIONS BEFORE STARTING

**YOUR KIT CONTAINS:**

- Wood Sundial Parts
- Paint
- Brushes



**AGE GROUP: 6 and up**  
**PROJECT TIME: 30 minutes**

**YOU WILL NEED:**

- Containers for Water
- Paper Towels
- Permanent Markers (Optional)
- A Sunny Day

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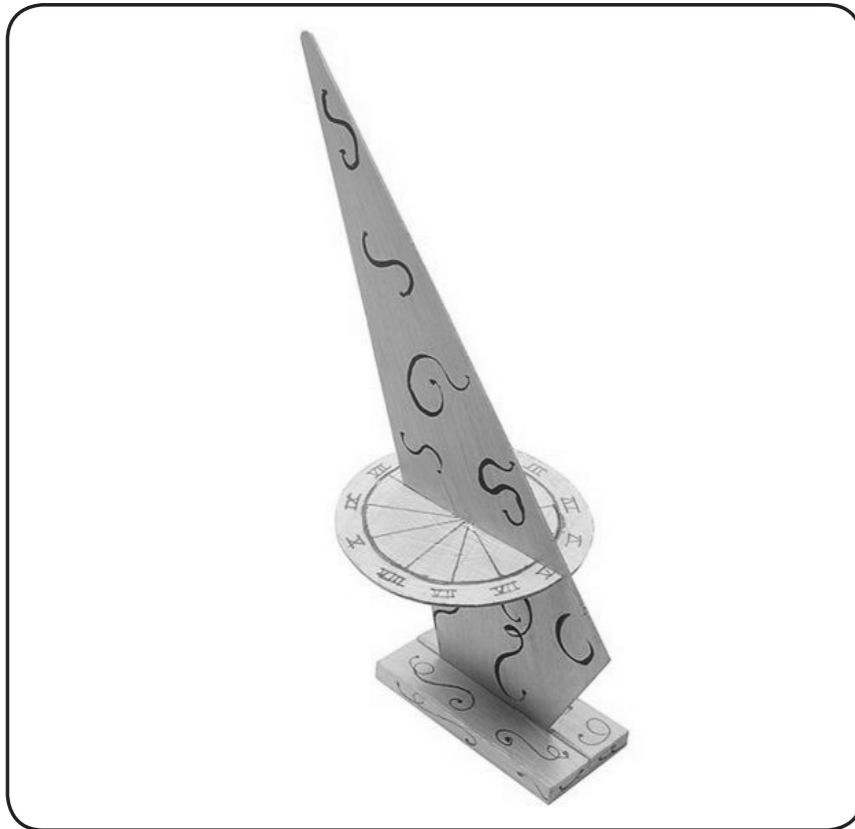
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Teaching Activities Inside

**INSTRUCTIONS:**

1. Assemble the sundial by slipping the circle shape into the groove on the tall piece. Put the flat edge of this into the wood base to hold it upright.
2. Paint the sundial in the design of your choice.
3. Allow to dry.
4. After drying, you may wish to add marks for the clock by using a permanent marker.

**SUNDIAL INFORMATION:**

A sundial is a device which measures the time by the position of the sun. The sun casts a shadow on the wood piece and you can watch the shadow progress to different positions throughout the day. In order to display the correct time, the sundial must be aligned with true north (the earth's axis), not the magnetic north pole. The sundial shows local solar time, which still needs to be corrected for daylight savings, angle of longitude and the position of your location within your time zone.

In ancient times, the time was measured by the shadows of a tree or large rock. The first clock was probably made by putting marks on the ground around a stick or tree where the shadow would show. This shadow stick was called a gnomon which is Greek for the "one who knows". The Egyptians built tall stone towers called "obelisks" also known as "Cleopatra's needle".

As the earth turns on its axis, the sun appears to move across the sky. The clockwise direction of the sun: This comes about because the sun's shadow in the morning is on the west side of the sundial. At noon it moves to north and in the afternoon it is in the east. This motion progress is clockwise, like the hands on the clock. Try this experiment.

A sundial reads by shadows. The shadow casting object is the gnomon. This sundial is a horizontal sundial and the gnomon casts a shadow onto the flat surface. All sundials must be aligned with the axis of the earth's rotation to tell the correct time. The style should point to the celestial north.