

# Make a Sundial



The picture shows a simple **sundial** you can make out of whatever you can find. Then you can tell what time it is by the shadow cast by the sun.

You can see that it is easy to make a sundial.

First you need to be in an area that gets a clear view of the sun so you will see the shadow.

The picture shows using a pencil stuck into a chunk of modeling clay to cast a shadow that moves as the earth rotates and will show you the passing of time.

## gnomon

A gnomon (/ˈnoʊmən, ˈnoʊmən/, from Greek γνώμων, gnōmōn, literally: "one that knows or examines") is the **part** of a **sundial that casts a shadow**. The term is used for a variety of purposes in mathematics and other fields.

You could use a stick, a rod, a skinny pipe stuck into soft ground for your gnomon or anything you use your imagination to find.

For the time markers, the picture shows using rocks, but use your imagination again for your time markers – maybe marbles, small figures, Lego blocks, or your brothers, sisters, and friends if they are willing to stand still all day!

To **calibrate** your sundial you will need a watch or clock.

Begin calibrating your sundial at the start of an hour – for example 9:00 a.m.

Set up your gnomon and see which way the shadow is pointing, and at 9:00 a.m. place your first time marker on the shadow cast by the gnomon.

At the start of the next hour - in this case 10:00 a.m. - set your second time marker. Notice how far the shadow moved in one hour.

Why did the shadow move? You can search online and find out more fun facts about **sundials, rotation of the earth**, and many topics related to **earth, sun and sundials**.

Continue placing time markers at the start of each hour and you will have created a way to tell time without a watch or clock!

In the picture the first rock/time marker was placed at 9:00 a.m., and the last rock/time marker was placed at 4:00 pm.

If you leave your sundial set up overnight, you can check it out the next day and know what time the sundial is showing you.

If your friend also made a sundial, you could call them up and say “let’s ride our bikes when the shadow is at the fourth rock!”

There many ways you can build a more permanent sundial, and you can find instructions online. Maybe you would like to make a sundial to place in your yard or garden.

After making your sundial and doing a little research you can then refer to yourself as a Gnomon – because you are “One that knows or examines.”