



Explore

Stage

1

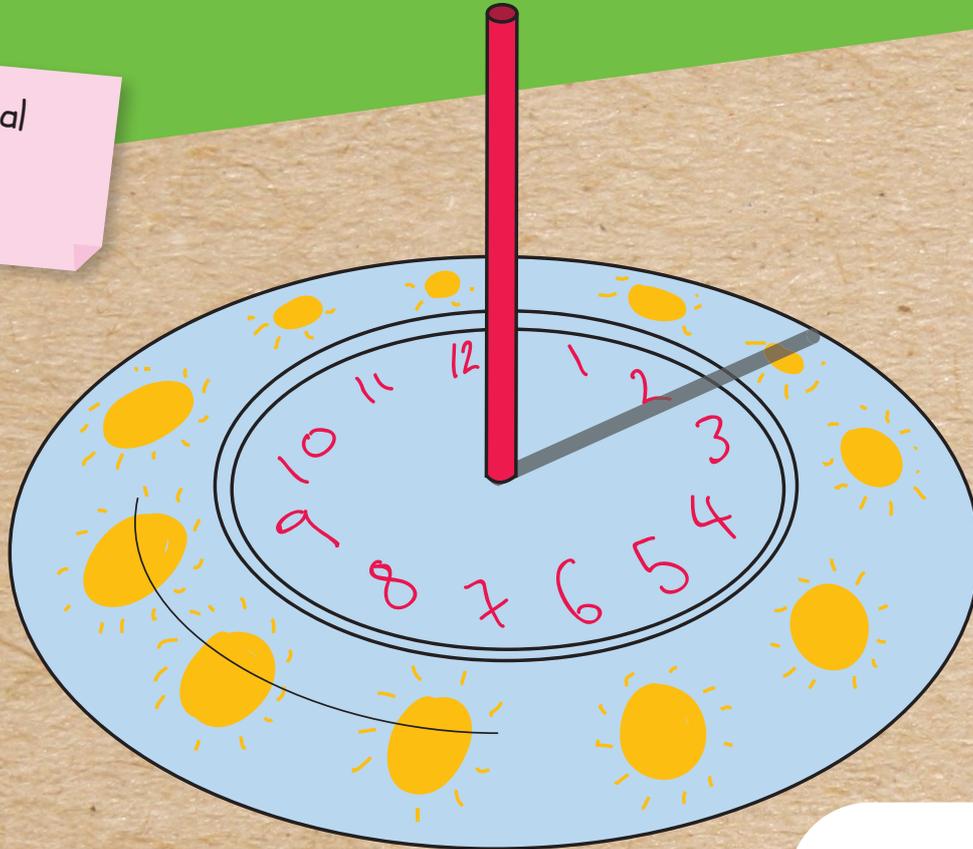
45 mins



Skills builder

Signs from the sun

For virtual meeting



Aim of activity

Make a sundial to help you keep track of the time and show you the way to go.

What you'll get out of it

- Discover how shadows can be helpful.
- Create a sundial.

What you'll need

- A torch or could use light from screen
- Paper
- Pens
- A straw or pencil
- Play-dough (a small ball) ← or sticky tack
- Paper plate (optional) or circle of paper

Check out the [adaptation ideas](#) on the Girlguiding website for help.



WE DISCOVER, WE GROW

Girlguiding



Explore

In steps 1 and 2, girls can do it in their own space.

In step 3 to 6 a leader can show how her shadow moves, then girls test it out.

What to do

1 Let's find out what your shadow can do! Get into a space where you can see it. Can you get your shadow to:

- Jump?
- Clap?
- Wiggle?
- High five or shake hands with someone else's shadow without touching them?

2 Now you're going to find out how light changes your shadow. Turn off the lights and close any blinds or curtains.

3 Take turns to strike a pose! Your leader will shine a torch to see how your shadow changes while you're in different positions, including shining the light over your head.

4 Everyone else, look at how the shadow changes as the light moves around it. What happens when the torch goes over the girl's head? The shadow becomes small and is right under her. This is like the sun going high in the sky in the middle of the day. When the torch is next to the girl her shadow is bigger. This is like the sun moving lower in the sky in the morning or afternoon.

5 Next, your leader will move the light to one side of the girl as if it's morning. Then over her head like it's the middle of the day. Then over to her other side to show where the sun is in the afternoon. Try calling out 'morning' 'middle' and 'afternoon' at each point.

6 Before clocks and compasses were invented, people used the light from the sun to make a sundial, so they could tell the time and know which way to go. Chat about why explorers would need to know this.

7 Now you're going to make a sundial! As a group, take a sheet of paper or paper plate and draw a big cross in the middle. Write 'east' on the right and 'west' on the left, 'north' on the top and 'south' on the bottom. Using the picture on the front of this activity card, draw a big circle around your cross. Add in the numbers around your circle, like a clock, with number 12 being at the top.

8 Put some play-dough in the middle of the cross. Stick a straw in it.

9 Pretend the torch is the sun and move it round your sundial to watch how the shadow of the straw changes.

10 If you were using the sun, you could tell the time anywhere. Do you think this would be useful on an adventure? How?

Take it further

Make a sundial at home and find somewhere sunny to put it. Ask an adult to make sure north matches the real north and see how the shadow falls on it.

In steps 7 and 8, explain how to make the sundial step by step. Whilst girls are making their sundials, let's chat about the adventures we've been on or want to go on.