

STARDOME OBSERVATORY & PLANETARIUM FACTS, RESOURCES AND ACTIVITIES ON...

INTRODUCTION TO SUNDIALS

Moving shadows have been used for millennia to track time during the day. Shadows cast by trees, hills, buildings, obelisks all provide a reliable moving shadow as the Sun moves across the sky.

Modern sundials have been used for many centuries to tell the time from sunrise to sunset based on a day divided into hours. The addition of a graduated face turns a wayfarer's aid into an accurate tool for daily living.

The hands on modern clocks move 'clockwise' because in the Northern Hemisphere the Sun's shadow on sundials moves in that direction. Sundial shadows move in the opposite direction (anticlockwise) in the Southern Hemisphere.

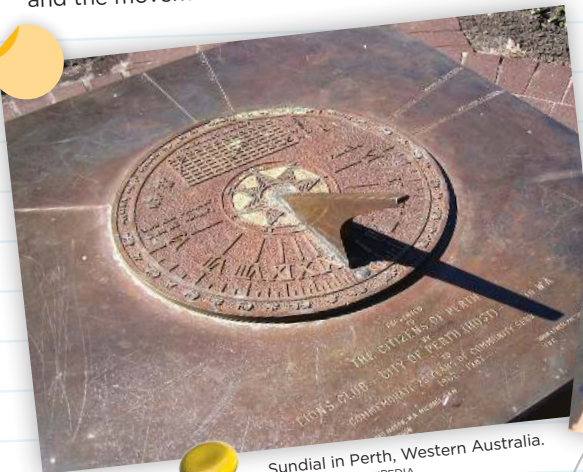
The Sun Clock Activity introduces children to the connections between clocks and the movement of the Sun across the sky.

What time is it during the day when there is no shadow?

Sundials are still good for telling the time.

DISCUSSION POINTS

Modern clock time comes from Sun time.



Sundial in Perth, Western Australia.
IMAGE CREDIT: WIKIPEDIA



Royal Oak Primary School sundial activity.
IMAGE CREDIT: ROYAL OAK PRIMARY SCHOOL

ACTIVITY... MAKE A SUN CLOCK

This introductory activity shows the relationship between clocks and the movement of the Sun across the sky. The easy-to-make sundial works straight away on a sunny day. Designed for New Zealand skies, there's no adapting, fiddling or difficult instructions.

RESOURCES REQUIRED:

- ⇒ A4 card or heavy paper
- ⇒ Scissors
- ⇒ Wool or cotton thread

Just print, cut out and fold the card then insert the thread. Further instructions are printed on each Sun Clock. The template provides three Sun Clocks per A4 page, reducing expenses.

SCIENCE CONTENT / CURRICULUM LINK

EXTEND THEIR EXPERIENCES AND PERSONAL EXPLANATIONS OF THE NATURAL WORLD THROUGH EXPLORATION, PLAY, ASKING QUESTIONS, AND DISCUSSING SIMPLE MODELS. SEEK AND DESCRIBE SIMPLE PATTERNS IN PHYSICAL PHENOMENA. SHARING IDEAS AND OBSERVATIONS ABOUT THE SUN.

It's easy to tell the time of day using the Sun.



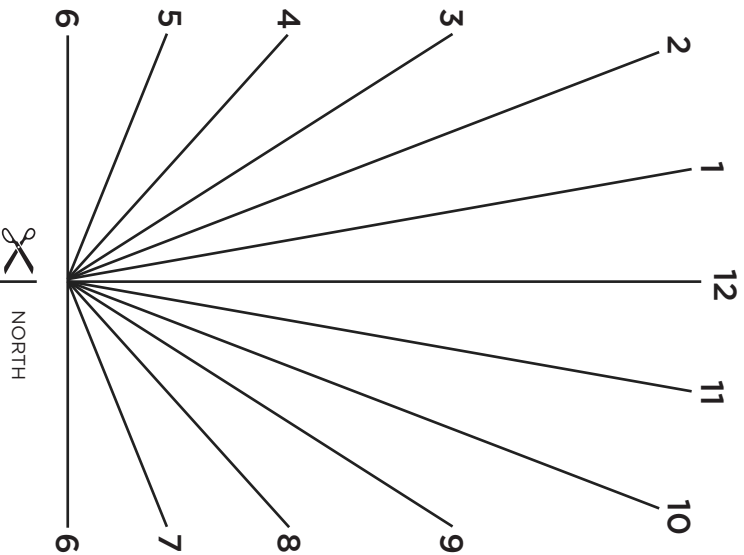


MAKE A SUN CLOCK



1. Cut the short notches at the top and bottom.
2. Fold along the dashed line and stretch the wool through the notches. The card should be at a 90° angle with the string inserted.
3. Make sure the string is pulled tight.
4. On a sunny day place the Sun clock on a flat surface facing north. Stay away from shadows from buildings and trees.
5. To find north, find out what the time is (minus 1 hour if it's Daylight Saving Time) and align the Sun Clock until the shadow of the string shows the correct time.
6. Now you can tell the time with the Sun!
7. To go back to the same spot and tell the time again, draw around the outside of the bottom half of the Sun clock and mark which way is north.

Fold here

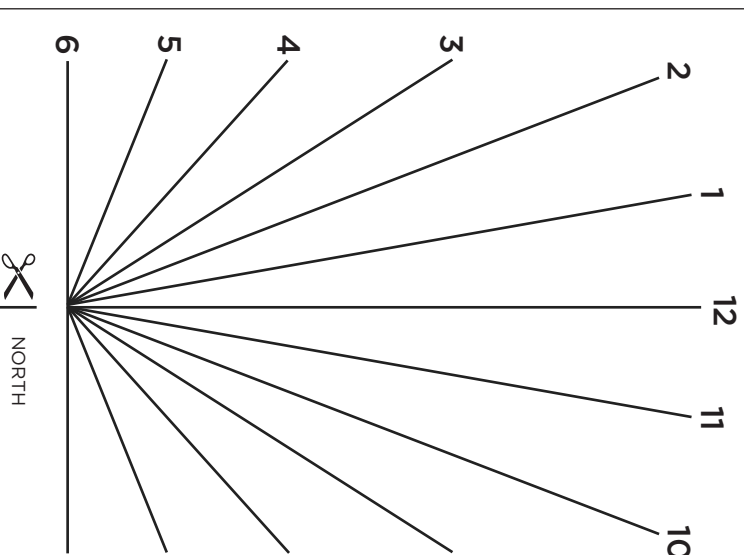


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