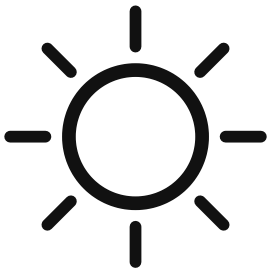
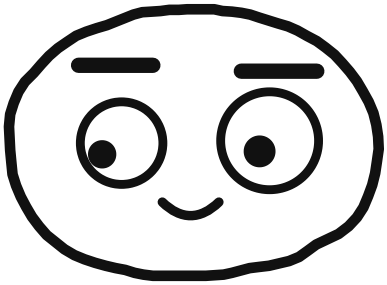
The Shadow Clock

Shadows move while you are not looking.

Name: _____ Today the sky is: _____





SHADOW

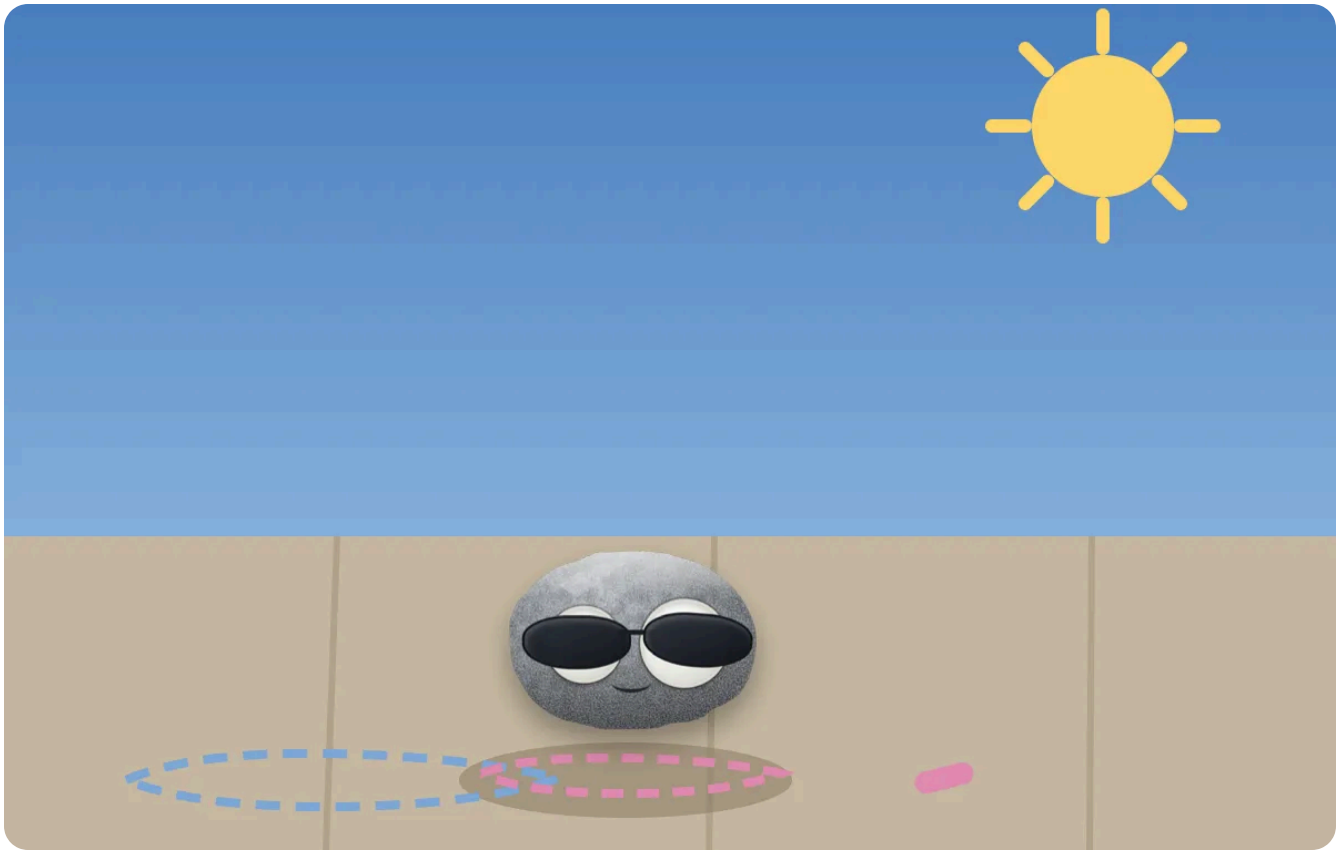
Colour the picture. Then trace the big word with a finger, and say it out loud.

GROWN-UP: WHILE THEY COLOUR

What do you think your shadow gets up to all afternoon while you are busy?

The Shadow Clock

You found your shadow on a sunny day. But does it stay where you leave it?



THE MISSION: GUESS FIRST, THEN GO LOOK

Stand on a sunny spot and notice what your shadow is touching: a crack, a leaf, the door. Now guess: after lunch, will it still be touching it? Say your guess out loud.

Come back after lunch, stand on the very same spot, and look. Your shadow slid away while you were busy. It moves all day, slow and quiet, and it never asks permission.

In the morning, your shadow is long and lazy, stretched way out to one side.

By noon it is short and small, hiding close to your feet.

By supper it is long again, on the other side. The sun crossed the sky, and your shadow kept track.

PROFESSOR WEATHER ROCK SAYS

People told time by shadows for thousands of years. A sundial is just a stick that pays very close attention.

Rocktivity Time!

Pick a door. Every door is a good one.

MOVE LIKE THE WEATHER

Be the sun crossing the sky. Start crouched down low on one side of the room, rise up slow as you walk, stand your tallest in the middle, then sink back down low on the other side. That whole trip takes the sun all day. You get to do it in ten seconds.

ASK THEM

“What do you think your shadow gets up to all afternoon while you are busy?”

THE ROCKTIVITY

In a dim room, shine a flashlight on a toy and slide the light slowly from one side to the other. Watch the toy's shadow swing around and stretch. You just gave that toy a whole day in ten seconds.

WHEN THE MORNING SUN IS OUT, TRY THIS

Stand on the sidewalk at breakfast and have your grown-up trace your shadow with chalk. Guess where it will be after lunch, and whether it will be longer or shorter. Then come back, stand on the same spot, and trace it again. Two chalk shadows, one you.

FOR THE GROWN-UP

Shadows move because the Earth is turning, which makes the sun cross our sky. A shadow always points away from the sun, so it swings through the day like a clock hand: longest in the morning and evening, shortest around midday. Your two chalk outlines are proof that the Earth moved, drawn on a sidewalk. Whatever they say the shadow gets up to, ask where it will be waiting at supper.

THE TRAIL CONTINUES

The sun that moved your shadow spent the whole trip warming things up. Go put one hand on a sidewalk the sun has been shining on, and one hand on a shady spot it never reached.

Hot and Cold knows what your hands will find.