Day and Night

The sun stands still — the Earth quietly turns us into the light and out again

The Big Idea

*The Earth makes one slow, smooth turn — one **rotation** — every ~24 hours, spinning around its **axis** like a wheel on a pin. That one turn IS the whole day-night cycle: **sunrise** is your patch of ground turning into the light, **sunset** is you turning away. The sun never moves at all.*

Because the turn runs one way (counterclockwise, seen from above the North Pole), the sun always appears on one horizon and disappears on the opposite one — and places to the east meet the light first, which is why clocks in Florida say morning three hours before California's do. Even the stars tell the story: photographed all night, they wheel in circles around the North Star — because it is US turning beneath them.

A sunset is really you, tipping slowly backward away from a sun that stayed put.



Fig. 1 — one turning ball, half in day and half in night — and the two proofs below: the spinning chair's circling ceiling, and the stars wheeling around the one still pole star

Words to Know

rotation
the Earth's slow, steady, one-way turn

axis
the line — the pin — the Earth turns around

sunrise
the moment your ground turns INTO the light

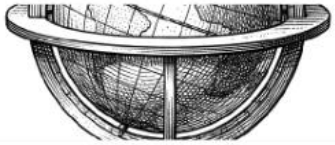
sunset
the moment you turn away — the sun never moved

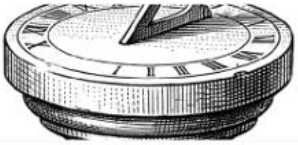
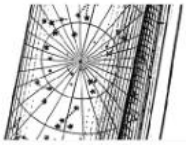
horizon
where the sky meets the ground — sunrise on one, sunset on the opposite

time zone
clocks set to when the turn brings each place its morning

Watch For This in Everyday Life

- Watch a sunset — *"say out loud what is really moving."*
- Find the evening moon, then look again later — *"who lifted it higher?"*
- Ask someone far east or west what their clock says *right now*.



rotation

rotation

axis

axis

sunrise

sunrise

BFSU D-2

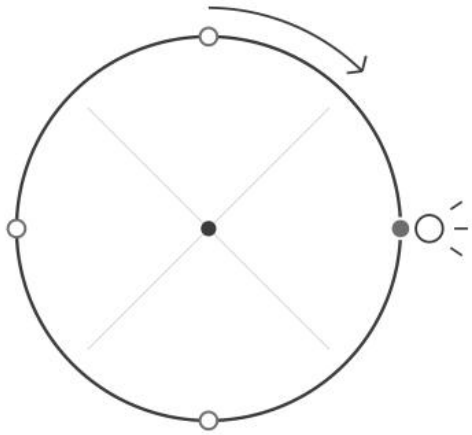
The My-Day Wheel

One turn of the Earth is your whole day

WORKSHEET

1 · Put your day on the turning wheel

The wheel is the Earth, the pin at the centre is its axis, and the lamp side is the sun. Draw a line from each routine picture to its place on the wheel — wake-up goes where the light first arrives.





wake up



lunch



dinner



sleep

2 · Guess first, then circle what really happened

Rice-grain Joe on the globe

When Joe faces AWAY from the lamp, it is his…

(morning) (night)

The two grains

Sunrise reaches Florida-Joe and California-Sally…

(at the same moment) (one before the other)

BFSU D-2

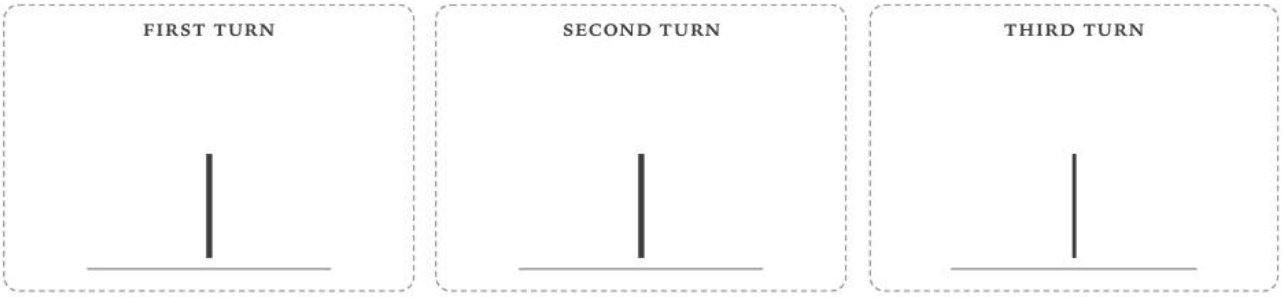
The Shadow-Clock Record

The lamp never moved — you turned the world

WORKSHEET

1 · Draw where the pencil's shadow pointed, turn by turn

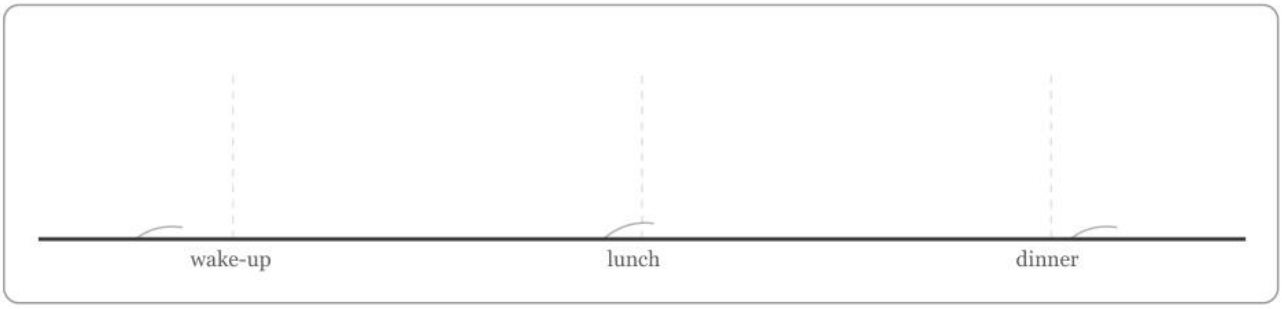
Each box shows the pencil standing on the turntable. After each turn of the platform, draw the shadow you saw — which way it pointed, and how long it was.



Tell a grown-up: did the lamp ever move? Then who moved the shadow?

2 · The draw-the-sky strip — a take-home observation

At wake-up, lunch, and dinner today, look where the sun stands (NEVER look straight at it). Colour a small sun into the strip at each height you saw.



Was the sun really climbing and sliding — or were you slowly turning under it? Say the true answer out loud.

BFSU D-2

We Are the Ones Turning

the lesson's song — sing it, then say what it means

SONG

Verse 1

They say the sun comes up at dawn,
They say it sets and then it's gone.
But watch it careful, watch it slow —
The sun's not going anywhere. Oh no!

Chorus

Rotation! Axis! Sunrise! Sunset!
One whole turn and one whole day.
Rotation! Axis! Sunrise! Sunset!
The sun is not going anywhere — we are the ones turning away!

Verse 2

Round and round on a line through the poles,
No real axle, no squeaks, no holes.
Just the steady way the whole world goes,
Twenty-four hours from your head to your toes.

(Chorus)

Verse 3

We turn toward the east, so that's where it shows,
And out in the west is where it goes.
Opposite sides, and it's always the same —
Sunrise and sunset, that's the game.

Verse 4

Somebody's breakfast is somebody's night,
Somebody's dark is somebody's light.
All at once on the turning ball,
One sun shining on us all.

(Chorus ×2)

Tag (spoken, kids): "Rotation... axis... sunrise... SUNSET!"

How to use it. Play the recording once while everyone just listens. Play it again and join in on the chorus only — that is the part carrying the lesson. By the third time most children have the chorus. Then close the binder and ask what the words actually mean; a child who can sing it and explain it has the idea for good.