Activities (full instructions)

"Be the Earth" — every child an Earth

All children spread out, each wearing a "you are here" sticker, and spin SLOWLY in place together while the fixed lamp shines. As each child's face crosses the light they call the cycle together: "Sunrise!… noon!… sunset!… midnight!" Chant several turns; then ask what always comes after midnight, no matter how many spins. (Sunrise. Always. That is a pattern you can trust your life to.)

Lamp-and-globe model — the day's heart

Dark room. The owned bare-bulb lamp clamps at globe height as the sun; rice-grain Joe stands near the equator. Turn the globe slowly COUNTERCLOCKWISE (rehearse: from above the North Pole). Children put their eyes at globe level and watch Joe's sunrise arrive, his noon, his sunset, his night. Each child takes a turn as the narrator while another turns. **Sally sub-part:** add the second grain in California; sunrise strikes Joe first and Sally three hours of turn later — the phone call after lunch makes it personal. **Arrows sub-part:** sticky arrows for spin direction, sunrise side, sunset side; because the turn is one-way, the appearing and disappearing happen on opposite horizons, forever.

The sunset argue case

"The sun is setting" vs "we are turning away" — let both sides argue with the globe at hand. Land it: both describe the same event; only one names the true mover. Watching tonight's sunset with that sentence is the day's take-home.

SAFETY

Clear the floor lanes BEFORE lights-out; the clamp lamp's bare bulb runs hot — teacher's hands only, cord taped down. Swivel-chair spins are slow, one child at a time, a spotter behind. Never look at the real sun for the sky strip — note its place sideways-on.

Common Misconceptions

- "The sun moves across the sky" → the day's whole work; the globe and the chair both say otherwise.
- "Night is the sun turning off" → the lamp never dims; Joe just turns his back.
- "It's the same time everywhere" → the phone call settles it in one question.
- "The stars sweep past us" → the swivel chair: the ceiling "moved" too, and it never went anywhere.

STRETCH (ranch, adult-run, weather/luck-dependent)

(1) Real-sun shadow-stick tracking — the outdoor twin of the required indoor shadow-clock. (2) Star-trails night: a phone on a tripod at the North Star for an hour of long exposures — the children's own photograph of the sky wheeling. (3) Sunrise-point watch from one porch spot against a landmark. (4) A permanent fence-post sundial, mounted and calibrated with the kids.

Review Hooks

- Tonight: the draw-the-sky strip comes home filled in; the sunset sentence gets said at the window.

- All week: the evening moon found twice in one night — who lifted it?
- Notebooks: Joe's four moments around one drawn globe.

Prep-Ahead Checklist (night before)

□ test the blackout; tape cord runs □ clamp the OWNED bare-bulb lamp at globe height (do not buy one) □ toothpaste Joe (equator) + Sally (California) onto the globe; rehearse the counterclockwise turn □ build the shadow-clock: pencil upright in clay on the lazy Susan/stool, lamp fixed to one side; chalk/tape ready □ ceiling sticker-dot directly above the swivel chair □ sticky arrows cut □ line up the time-zone relative (world-clock backup) □ "you are here" stickers, one per child

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Opening Oration — The Sun That Never Rises

read aloud, 2–3 minutes • the globe with rice-grain Joe sits beside you, lamp off for now

PROP: the globe with a rice grain toothpasted on near the equator — introduce him as Joe. Turn the globe slowly at the marked moment.

"I am going to tell you something that sounds impossible, and by the end of today you will know it is true. Ready? **The sun never rises.** It never sets, either. It has never once moved across our sky. Not this morning, not any morning of your whole life."

"But you have SEEN it rise! You've watched it climb the sky and sink down orange behind the hills. So have I. So has everyone who ever lived — and for thousands of years, people believed their eyes: surely the sun circles around us. It took some very stubborn thinkers to discover the trick. Meet Joe." *(show the rice grain on the globe)* "Joe is standing on the Earth, just like you. Watch what happens to him." *(turn the globe slowly)*

"The Earth — this whole enormous ball we live on — is **turning**. Slowly. Smoothly. So slowly you cannot feel it, but it never stops. One full turn takes a day and a night: that is what a day IS. When Joe's patch of ground turns toward the light — that's his sunrise. When it turns away — sunset. The sun stood perfectly still the whole time. The GROUND did the moving. A sunset is really you, tipping slowly backward, away from a sun that never budged."

"Today you will BE the Earth and feel your own sunrise come around. You will give Joe a whole day with one turn of this globe. You will spin in a chair and discover why the stars wheel in circles every night. And this evening, when the sun goes down — you will know the secret almost nobody watching beside you knows: it isn't going anywhere. **You are.**"

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D-2 Supply List — Day and Night and the Earth's Rotation

Everything for the full 9:30–2 day. **Nearly everything is owned — total new spend ~$12.**

Already Have (owned / household)

☐	Item	Used in
☐	**Bare-bulb clamp lamp (owned — do NOT re-buy)**	The sun, all morning
☐	Globe	The lamp-and-globe model
☐	Rice + toothpaste	Joe and Sally
☐	A swivel chair	The star-spin experiment
☐	A pencil + a lump of clay + chalk/tape	The indoor shadow-clock
☐	A darkenable room	The whole model block
☐	Stickers ("you are here" + one ceiling dot)	Be-the-Earth + star spin

TO BUY

☐	Item	Qty	~Price	Why	Order ahead?
☐	Sticky arrows/dots pack	1	$4	Spin direction + opposite horizons	No
☐	Lazy Susan turntable	1	$8	The shadow-clock platform (or rotate a stool free)	No

Check-you-own-it notes

- The lamp is the same owned clamp lamp — Rule 9; check its bulb before session day.
- The phone call needs a relative two-plus time zones away lined up in advance; a world clock

is the backup, not the plan.

> Tick the box beside each item as it goes in the box. Anything flagged **order ahead** ships — buy it a week before the lesson.