inquisitive

GRADE 5 · EARTH AND SPACE SCIENCES · FAST PATH

Unit: Space Systems: Stars and the Solar System

Lessons in unit: 5 · 21 days · 547 min total · Sessions up to 30 min · ↳ Time-saving teaching move · ★ Checkpoint

1. Hello Sun!

PHENOMENON QUESTION
How can we describe the sun?

OUTCOME
I can explain why the sun seems brighter than other stars.

TIME
4 days · 20–30 min per day
105 min total

DAY 1 · 20 MIN

PREP Bundle a ball, marble, pea, ruler and measuring tape or wheel for each team; reserve a 110 m outdoor space.

10 MIN — Activity 1

5 MIN — Activity 2
↳ Partners answer both questions; take one class response for each.

5 MIN — Activity 3 · Part 1

DAY 2 · 25 MIN

25 MIN — Activity 3 · Parts 2–4

DAY 3 · 30 MIN

15 MIN — Activity 4

5 MIN — Activity 5
↳ Record the class comparison of both images instead of separate group posters.

10 MIN — Activity 6
↳ Pairs research and agree one sticky-note definition, then compare with another pair.

DAY 4 · 30 MIN

3 MIN — Activity 7

10 MIN — Activity 8

15 MIN — Activity 9 ★

2 MIN — Activity 12

2. Day And Night—It's A Fine Line

PHENOMENON QUESTION
What is the terminator line, and why does it move?

OUTCOME
I can explain why we experience day and night, and can describe patterns of change.

TIME
3 days · 20–30 min per day
80 min total

DAY 5 · 30 MIN

5 MIN — Activity 1
↳ Record students' See–Think–Wonder ideas on one class chart.

15 MIN — Activity 2

10 MIN — Activity 3
↳ After group discussion, build one labeled class diagram from students' corrections.

DAY 6 · 30 MIN

10 MIN — Activity 4

20 MIN — Activity 5 · Parts 1–2 ★

DAY 7 · 20 MIN

5 MIN — Activity 5 · Part 3 ★

10 MIN — Activity 6

5 MIN — Activity 9

3. Casting Shadows Great and Small

PHENOMENON QUESTION
Why do shadows come in different shapes and sizes?

OUTCOME
I can describe the changes in a shadow's length and direction during the day.

TIME
6 days · 20–30 min per day
150 min total

DAY 8 · 30 MIN	DAY 9 · 25 MIN	DAY 10 · 20 MIN	DAY 11 · 20 MIN	DAY 12 · 30 MIN	DAY 13 · 25 MIN
10 MIN Activity 1	10 MIN Activity 3 · Part 2: sharing	10 MIN Activity 5	**SCHEDULE** Days 11–12 share one sunny calendar day: five visits at 0, 1, 2, 3 and 4 hours; 50 min teaching in total, plus elapsed waiting.	30 MIN Activity 6 · Part 4: readings 2–4 h	20 MIN Activity 7 ★
5 MIN Activity 2 ↳ Partners propose definitions; agree and record one class definition.	15 MIN Activity 4 ↳ Answer all five reverse questions orally in pairs instead of writing them.	10 MIN Activity 6 · Parts 1–2: preparation	20 MIN Activity 6 · Part 3: readings 0–1 h		5 MIN Activity 10
15 MIN Activity 3 · Parts 1–2: exploration					

4. Star Patterns

PHENOMENON QUESTION
Do stars move through space?

OUTCOME
I can explain why different stars and constellations are visible at different times of the year.

TIME
4 days · 25–30 min per day
110 min total

DAY 14 · 25 MIN	DAY 15 · 30 MIN	DAY 16 · 25 MIN	DAY 17 · 30 MIN
10 MIN Activity 1	20 MIN Activity 3	10 MIN Activity 5	10 MIN Activity 7
15 MIN Activity 2	10 MIN Activity 4	15 MIN Activity 6 ↳ Keep the research; exchange findings with another pair instead of separate class presentations.	15 MIN Activity 8 ★
			5 MIN Activity 11

5. Goin' Down!

PHENOMENON QUESTION
Why do objects near Earth fall down?

OUTCOME
I can explain how the direction of Earth's gravitational force acts on objects.

TIME
4 days · 17–30 min per day
102 min total
Assessment: Anchor Maps and Autogradable Summative
Assessments are not included within this pacing guide.

DAY 18 · 30 MIN	DAY 19 · 30 MIN	DAY 20 · 25 MIN	DAY 21 · 17 MIN
PREP Set out the four station kits; coil the bead strings in their jugs.	15 MIN **Activity 3 · Parts 3–5** Complete the mirror and plane stations with their Lab Data entries, then the group claim.	25 MIN **Activity 5 ★**	15 MIN **Activity 6** ↳ Give feedback orally with a partner, addressing every evaluation prompt.
10 MIN **Activity 1**	15 MIN **Activity 4**		2 MIN **Activity 9**
5 MIN **Activity 2** ↳ Partners discuss every image; collect one class example of the common movement.			
15 MIN **Activity 3 · Parts 1–2, 4** Complete the timer and bead stations with their Lab Data entries.			