inquisitive

GRADE 4 · EARTH AND SPACE SCIENCES · FAST PATH

Unit: Earth’s Systems: Processes that Shape the Earth

Lessons in unit: 5 · 18 days · 470 min total · Sessions up to 30 min · ↳ Time-saving teaching move · ★ Checkpoint

1. Has Earth Changed?	DAY 1 · 30 MIN	DAY 2 · 30 MIN	DAY 3 · 30 MIN
PHENOMENON QUESTION **How can a slice of cake be like Earth's surface?** **OUTCOME** **I can describe one way we know the Earth's landscape has changed over time.** **TIME** **3 days · 30 min per day** **90 min total**	5 MIN Activity 1	**PREP** Set out 4–6 colors of clay, small fossil objects and a plastic knife for each pair.	5 MIN Activity 8
	5 MIN Activity 2	10 MIN Activity 5	10 MIN Activity 9 ★
	15 MIN Activity 3	5 MIN Activity 6	10 MIN Activity 10 ★
	5 MIN Activity 4 ↳ Partners explain all three answers orally instead of drawing or writing them.	15 MIN Activity 7 ↳ Use pre-portioned clay kits so pairs can start layering immediately; retain the fossil inserts, cross-section and earthquake model.	5 MIN Activity 13

2. Weathering

PHENOMENON QUESTION
How does the weather affect Earth?

OUTCOME
I can describe a process that weathers rocks.

TIME
4 days · 15–30 min per day
85 min total

DAY 4 · 25 MIN

PREP Set out a rock and hand lens for each student.

- 5 MIN — Activity 1
  ↳ Partners answer all three questions at the same time; collect two examples instead of a full class round.
- 10 MIN — Activity 2
- 10 MIN — Activity 3

DAY 5 · 30 MIN

PREP Set out two matching plastic bottles with caps, water and a marker; arrange freezer access.

- 15 MIN — Activity 4
- 5 MIN — Activity 5
  ↳ Partners explain the photos and diagram; check one explanation together instead of repeating every response as a class.
- 5 MIN — Activity 6
- 5 MIN — Activity 7 · Setup and predictions ★

DAY 6 · 15 MIN

SCHEDULE Allow overnight freezing after Day 5. Observe the frozen bottle before leaving it to melt.

- 15 MIN — Activity 7 · Frozen observations and explanation ★

DAY 7 · 15 MIN

SCHEDULE Allow the observed ice to melt fully before this session.

- 10 MIN — Activity 7 · Melted observations and explanation ★
- 5 MIN — Activity 10

3. Erosion

PHENOMENON QUESTION
Why is the land always changing?

OUTCOME
I can explain how one type of erosion process moves weathered rocks.

TIME
3 days · 30 min per day
90 min total

DAY 8 · 30 MIN

- 10 MIN — Activity 1
- 5 MIN — Activity 2
- 10 MIN — Activity 3
- 5 MIN — Activity 4
  ↳ Use one quick, labeled cartoon panel to explain wind erosion; share with a partner instead of presenting to the class.

DAY 9 · 30 MIN

PREP For each group: three trays, damp sand, four books or blocks, water, a cup and a recording device. Provide Activity 8 recording pages.

- 5 MIN — Activity 5
- 10 MIN — Activity 6
- 15 MIN — Activity 7 · Plan, predict and prepare the fair test

DAY 10 · 30 MIN

- 15 MIN — Activity 7 · Test all three slopes
- 10 MIN — Activity 8 ★
- 5 MIN — Activity 11

4. Mapping Patterns

PHENOMENON QUESTION
Where are the highest and lowest points on Earth?

OUTCOME
I can describe the pattern of some of Earth's features.

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

DAY 11 · 30 MIN	DAY 12 · 20 MIN	DAY 13 · 25 MIN	DAY 14 · 25 MIN
10 MIN Activity 1	10 MIN Activity 4 ↳ Partners explain all four map answers orally instead of writing separate sticky notes.	15 MIN Activity 6	20 MIN Activity 8 ★
5 MIN Activity 2	10 MIN Activity 5 ↳ Project both mapping websites and operate the controls while partners identify locations and explain their evidence.	10 MIN Activity 7	5 MIN Activity 11
15 MIN Activity 3			

5. Living With Earth's Hazards

PHENOMENON QUESTION
How can we keep safe when natural disasters happen?

OUTCOME
I can identify one natural hazard and describe a solution that might help reduce its impact on humans.

TIME
4 days · 20–30 min per day
105 min total
Assessment: Anchor Maps and Autogradable Summative Assessments are not included within this pacing guide.

DAY 15 · 30 MIN	DAY 16 · 30 MIN	DAY 17 · 25 MIN	DAY 18 · 20 MIN
10 MIN Activity 1 ↳ After the slideshow, partners discuss all three questions; collect one question from each group instead of a full class discussion.	5 MIN Activity 4 ↳ Keep students in their existing table groups and assign hazards directly after the design brief.	25 MIN Activity 7 ★	15 MIN Activity 8 ★
10 MIN Activity 2	15 MIN Activity 5		5 MIN Activity 11
10 MIN Activity 3 ↳ Project and read the four hazard links once; partners discuss each hazard's effects instead of taking turns reading.	10 MIN Activity 6		