



Slow Changes to Earth Review

Week 24 — Friday | Weathering, Erosion, and Land Changes



Reading Time

This week we studied how Earth's surface changes slowly over millions of years through **weathering** and **erosion**. Weathering is the process of breaking rocks into smaller pieces through ice wedging, wind, temperature changes, plant roots, and chemical reactions. Erosion is the movement of those weathered particles by water, wind, glaciers, and gravity. These two processes work together to shape the landscapes we see today.

We conducted an erosion tray experiment to see how different conditions affect soil erosion. We tested bare soil versus soil with vegetation, and we tested light rain versus heavy rain. Our results showed that bare soil without plants erodes much faster than soil protected by vegetation. Heavy rain caused more erosion than light rain. These experiments help us understand why planting trees and grass is so important for preventing soil loss on hillsides and farmland.

We also explored the major forces of erosion. Running water, especially rivers and streams, is the most powerful erosive force on Earth. Wind shapes deserts by blowing sand into dunes. Glaciers carve deep valleys as they move slowly downhill. Gravity causes landslides when steep slopes collapse. Each force leaves its own mark on the landscape, creating unique features like canyons, valleys, beaches, and deltas. Understanding these slow changes helps us appreciate the incredible age of our planet and how the landscapes we see today were shaped over billions of years.



Reading Questions

1. What are the two main processes that slowly change Earth's surface?

2. What did your erosion tray experiment show about vegetation?

3. What is the most powerful force of erosion on Earth?

4. Explain how weathering and erosion work together to create a canyon. Describe each step in the process.



Vocabulary Grid

Write a definition or draw a picture for each word.



Weathering



Erosion



Ice Wedging



Sediment



Glacier



Vegetation

Weathering vs. Erosion Review Chart

Fill in the complete comparison chart.

Feature	Weathering	Erosion
What it does		
Does it move material?		
Main causes		
Time it takes		
Example from nature		

Forces of Erosion Matching

Match each erosive force with the landscape feature it creates.

Force of Erosion	Landscape Feature Created
Running water (rivers)	
Wind (desert sand)	
Glaciers (moving ice)	
Ocean waves	
Gravity (hillside collapse)	

Weathered vs. Fresh Rocks

Describe how rocks change as they go through weathering.

Draw a fresh, unweathered rock on the left.

Draw the same rock after millions of years of weathering on the right.

What happened to the rock over time? Describe the changes.

Science Journal: Slow Changes to Earth

Think about the slow changes you studied this week and how they affect the world around us.

Prompt 1: Think about your erosion tray experiment. What was the most surprising thing you learned? What would you like to test next?

Prompt 2: Look outside your window. Can you see any evidence of weathering or erosion happening around you? Describe what you see and how long you think it has been happening.

Prompt 3: Why is it important to understand slow changes to Earth? How does knowing about weathering and erosion help us protect our environment and build safer communities?

True or False — Circle Your Answer

- ☐ 1. Weathering breaks rocks into smaller pieces.
- ☐ 2. Erosion moves weathered material to a new place.
- ☐ 3. Weathering and erosion happen very quickly, usually in days.
- ☐ 4. Ice wedging is caused by water expanding as it freezes.
- ☐ 5. Running water is the weakest force of erosion.
- ☐ 6. Vegetation helps prevent erosion by holding soil together.
- ☐ 7. Glaciers carve valleys as they move downhill.
- ☐ 8. The Grand Canyon was formed by fast changes.

Fill in the Blanks

Word Bank: weathering erosion ice wedging sediment glacier sand dune running water vegetation

- 1. Breaking rocks into smaller pieces is called _____.
- 2. Moving weathered material is called _____.
- 3. Water freezing and splitting rocks is _____.
- 4. Small pieces of rock and soil are called _____.
- 5. A huge moving mass of ice is a _____.
- 6. Hills of sand formed by wind are _____.
- 7. The most powerful erosive force on Earth is _____.
- 8. Plants and grass that protect soil are _____.

★ Week 24 Checklist

Check off each concept you feel confident about.

Concept	I Understand This
I can explain the difference between weathering and erosion.	
I can name three types of weathering.	
I can describe four forces of erosion.	
I understand how vegetation prevents erosion.	
I can explain the results of my erosion tray experiment.	
I understand how slow changes shape landscapes over time.	