

The Earth Guided Notes

Quick Links: Use the following links to move to other sections of the notes.

- [Landforms](#)
- [Weathering and Erosion](#)
- [Shaping the Surface](#)
- [Spheres of Earth](#)
- [Heat Transfer](#)
- [Heat Transfer Through Earth Advanced](#)

Landforms Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

1. Take On the World!

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. Model It

Focus Question: How is a map an example of a model?

- What do topographic maps model?
- Why are models beneficial for scientists?
- "Models have limitations." What does this mean?

Complete the table about different types of models used in science.

Type of Model	Description	Examples	Limitations
Physical Model			
Mathematical Models			

Visual Models			
Computer Simulation Models			

- Describe and give an example of a scale model.

3. This Land Is Your Land

Focus Question: What are some types of landforms on Earth's surface?

Complete the table to describe various landforms on Earth.

Type of Landform	Description
Mountain	
Glacier	
Lake	
Plain	
River	
Dune	
Plateau	
Delta	
Coastline	

4. Salt Life

Focus Question: What types of landforms are located in Florida?

- Why does Florida have so many sinkholes?
- List and describe two examples of landforms that exist in Florida.
- Lakes, swamps, and wetlands are considered landforms. What is a wetland?

5. Practice Like a Scientist

- List two landforms that are located at the Grand Canyon.

- List two landforms that are located in Laganas Bay in Greece.

6. Summary and Assessment

Stop. Set a timer for two minutes and review your notes. Next, in 20 words or less, write a summary to describe what you learned in this lesson. Challenge: Use at least three key terms from the lesson in your summary.

Summary

Weathering and Erosion Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

1. Weathering and Erosion

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. Weathering

Focus Question: How does weathering change Earth's surface?

- What is weathering?
- How are physical and chemical weathering different?

Complete the table to describe types/causes of physical weathering.

Type of Physical Weathering	Description
Changes in Temperature (frost wedging)	
Plant and Animal Activity	

Abrasion	
----------	--

Complete the table to describe types/causes of chemical weathering.

Type of Physical Weathering	Description
Carbon Dioxide	
Oxygen	
Acid Rain	

3. Erosion

Focus Question: How does erosion change Earth's surface?

- What is erosion?
- What is deposition?
- Give an example of how water can erode Earth's landforms.
- How can each of the following cause erosion:
 - Ice:
 - Gravity:
 - Wind:

4. Special Effects

Focus Question: How is Earth's surface built up and torn down through weathering and erosion?

- How can tree roots cause weathering?
- What is a hoodoo, and how does weathering help form hoodoos?
- What is the main difference between weathering and erosion?
- List two ways that Earth can be built up by weathering/erosion/deposition.
- List two ways that Earth can be torn down by weathering/erosion/deposition.

5. Here's the Breakdown

Focus Question: What are the similarities and differences between weathering and erosion?

Complete the table by recording three real-life examples of erosion and weathering.

Process	Three Real-life Examples
Erosion	
Weathering	

6. Summary and Assessment

Stop. Set a timer for two minutes and re-read/review your notes.

Imagine that you are teaching a second-grade student about this lesson. In a way that a second grader would understand, list three key ideas from this lesson.

Three Key Ideas

Shaping the Surface Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

1. Shaping the Surface

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. Deposition

Focus Question: How do erosion and deposition shape Earth's surface?

- How is a delta an example of erosion and deposition working together?
- List five factors that can affect the rate of erosion or deposition:
 -
 -
 -
 -
 -
- How is a dune an example of erosion and deposition working together?

3. Erosion and Deposition by Waves

Focus Question: How do waves shape Earth's surface?

- Describe how erosion and deposition by waves affect coastlines.

4. Erosion and Deposition by Ice

Focus Question: How do glaciers shape Earth's surface?

- Describe how glaciers cause erosion.
- Describe how glaciers cause deposition.

5. Erosion and Deposition by Gravity

Focus Question: How does gravity shape Earth's surface?

- Describe how gravity causes erosion.
- Describe how gravity causes deposition.

6. Erosion and Deposition by Wind

Focus Question: How does wind shape Earth's surface?

- What is deflation?
- Explain how dunes are formed by erosion and deposition.

7. Discovering Florida's Land

Focus Question: What kind of landforms can be found on Earth, and how do they appear in Florida?

- Give one example of erosion that occurred in the formation of Florida.
- Give one example of deposition that occurred in the formation of Florida.

8. Summary and Assessment

Use your notes to write a limerick about the content of this lesson. A limerick is a short poem consisting of five lines. The first, second, and fifth lines have seven to ten syllables and rhyme with each other. The third and fourth lines have five to seven syllables and rhyme with each other.

Shaping the Surface Limerick

Line 1:

Line 2:

Line 3:

Line 4:

Line 5:

Spheres of Earth Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

1. Spheres of Earth

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. Work the System

Focus Question: What spheres make up Earth's systems?

Complete the table to describe each of Earth's spheres.

Sphere	Description
Atmosphere	

Geosphere	
Hydrosphere	
Cryosphere	
Biosphere	

- The sphere that is sometimes called the lithosphere is the:

3. A Team Effort

Focus Question: How do Earth's spheres interact with each other?

Complete the table by giving an example of the spheres interacting with each other.

Spheres Interacting	Example
Atmosphere and biosphere	
Geosphere and atmosphere	
Biosphere and hydrosphere	
Cryosphere and biosphere	
Biosphere, hydrosphere, and atmosphere	

4. Experimenting with the Spheres

Focus Question: How can you design and carry out a scientific investigation to answer a question about the spheres using data, observations, and evidence?

- In an experiment conducted with rocks and water, which two spheres were represented in the experiment?
- Write a scientific question and identify the test and outcome variables.
 - Scientific question:
 - Test variable:
 - Outcome variable:

5. Practice Like a Scientist

- Write your notes, including anything unfamiliar to you about Earth's Spheres.

6. Summary and Assessment

Re-read/review your notes. Use facts and ideas from this lesson to write one sentence or phrase beginning with each letter of the word "spheres." One example is done for you.

S

P

Hydrosphere includes all the water on Earth

E

R

E

S

Heat Transfer Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

1. Heat Transfer

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. It's Getting Hot in Here

Focus Question: What is the difference between heat and temperature?

- Describe heat.
- Describe temperature.
- How are heat and temperature different?
- If the temperature of an object goes up, what happened to the kinetic energy of the particles?
- If the temperature of an object goes down, what happened to the kinetic energy of the particles?

3. Heat It Up

Focus Question: How is thermal energy transferred?

Complete the table to describe three types of heat transfer.

Type of Heat Transfer	Description
Conduction	
Convection	
Radiation	

- Give an example of radiation as part of Earth's system.
- Give an example of conduction as part of Earth's system.
- Give an example of convection as part of Earth's system.

4. Convection Currents and Weather

Focus Question: How does convection in the atmosphere relate to weather?

- Describe how convection creates wind.

5. Practice Like a Scientist

- Write your notes, including anything unfamiliar to you about heat transfer.

6. Summary and Assessment

Use your notes and write two questions that you think could be asked during your discussion-based assessment. Record your two questions below.

Questions

Heat Transfer Through Earth Advanced Guided Notes

Directions: Preview the notes before reading the lesson. As you read the lesson, fill in the guided notes.

**Only complete this section of notes if you are taking the course for advanced credit.*

1. The Wonder of Matter

Talk Like a Scientist: Record any key terms and definitions that are unfamiliar to you.

Key Term(s)	Definition(s)

2. What's the Matter?

Focus Question: How does thermal energy change matter?

- What happens to the molecules in matter when changing from a solid to a liquid to a gas?
- What happens to the molecules in matter when changing from a gas to a liquid to a solid?

3. Heat on Earth: The Atmosphere and Hydrosphere

Focus Question: How does thermal energy travel to Earth?

- What is radiant energy?
- What method of heat transfer occurs when air comes into contact with heated air or water?
- What method of heat transfer occurs when warm air rises and cool air sinks?
- How can thermal energy affect water on Earth's surface?

4. Earth's Hot Pocket: Heat in the Geosphere

Focus Question: How does Earth's core transmit heat?

- Define geothermal.
- List three ways geothermal energy makes its way to Earth's surface:
 -
 -
 -

- What powers processes that create earthquakes and mountains?

5. Dark Matter: Heat in the Biosphere

Focus Question: How do mushrooms use thermal energy to reproduce?

- Describe how mushrooms use convection to reproduce.

6. Summary and Assessment

Stop. Set a timer for two minutes and review your notes. Next, in 20 words or less, write a summary to describe what you learned in this lesson. Challenge: Use at least three key terms from the lesson in your summary.

Summary