Name: **Date:**

Instructions: Read the passage carefully. Then, answer the questions that follow.

Understanding Weathering and Its Impact on Earth

Weathering is a natural process that slowly breaks down rocks and other materials on Earth. It can happen in two main ways: ***physical weathering*** and ***chemical weathering***.

Physical weathering breaks rocks into smaller pieces without changing what they're made of. This can happen when water gets into cracks, freezes, and expands, causing the rock to split. Wind can blow sand that scrapes against rock surfaces in a process called ***abrasion***. Hot and cold temperatures can also make rocks crack as they expand during the day and shrink at night.

Chemical weathering changes the actual materials in a rock. One type of chemical weathering is called ***oxidation***. This happens when oxygen reacts with iron in the rock, creating ***rust*** (***iron oxide***), which weakens the rock. Another example is ***acid rain***, which forms when pollution mixes with moisture in the air and falls to Earth. This acidic water can dissolve certain minerals in rocks, breaking them down even more. Water alone can also change minerals over time and make the rock soft or crumbly.

Weathering is important because it helps make ***soil***, which plants need to grow. It also shapes the land into things like mountains, valleys, beaches, and caves. Weathering even helps recycle old rocks by turning them into smaller pieces like sand.

Just remember: weathering breaks rocks down where they are. ***Erosion*** is what moves those broken pieces to new places.

👉 **"Weathering stays, erosion goes away."**

Together, weathering and erosion constantly reshape Earth's surface and support the environments where plants, animals, and people live.

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Name: **Date:**

Open-Ended Questions: Understanding Weathering

1. In your own words, explain the main difference between physical weathering and chemical weathering.

2. What is abrasion, and how does it affect rocks during the weathering process?

3. Describe what happens during oxidation and explain why it is considered a type of chemical weathering.

4. According to the passage, why is weathering important for life on Earth? Give at least two reasons.

5. What does the phrase "Weathering stays, erosion goes away" help you remember?

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Name: **Date:**

Weathering Vocabulary Matching

Instructions: Draw a line from the word to its definition on the right.

Word	Definition
Weathering	A chemical reaction where oxygen reacts with iron to form rust.
Abrasion	The process that breaks down rocks into smaller pieces.
Oxidation	The movement of broken rock pieces from one place to another.
Chemical Weathering	When rocks are worn down by rubbing or scraping.
Physical Weathering	Rain that contains acids from air pollution and can damage rocks and buildings.
Erosion	Breaking down rocks by changing what they're made of.
Acid Rain	Breaking rocks into smaller pieces **without** changing what they're made of.

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ANSWER KEY FOR OPEN-ENDED QUESTIONS

1. In your own words, explain the main difference between physical weathering and chemical weathering.
Physical weathering breaks rocks into smaller pieces without changing what they're made of. Chemical weathering changes the materials in the rock into something new.

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2. What is abrasion, and how does it affect rocks during the weathering process?
Abrasion is when sand or wind scrapes against the surface of a rock, wearing it down. It is a type of physical weathering that breaks rocks into smaller pieces.

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3. Describe what happens during oxidation and explain why it is considered a type of chemical weathering.
Oxidation happens when oxygen reacts with iron in a rock, forming rust (iron oxide). This weakens the rock and changes its composition, which makes it a type of chemical weathering.

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4. According to the passage, why is weathering important for life on Earth? Give at least two reasons.
Weathering helps create soil, which plants need to grow. It also shapes the land into features like mountains, valleys, beaches, and caves. Additionally, it recycles rocks by breaking them into smaller particles like sand.

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5. What does the phrase "Weathering stays, erosion goes away" help you remember?
It reminds us that weathering breaks rocks down in the same place, while erosion moves the broken pieces to new locations.

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Name: **Date:**

ANSWER KEY FOR WEATHERING VOCABULARY

Word	Definition
Weathering	A chemical reaction where oxygen reacts with iron to form rust.
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