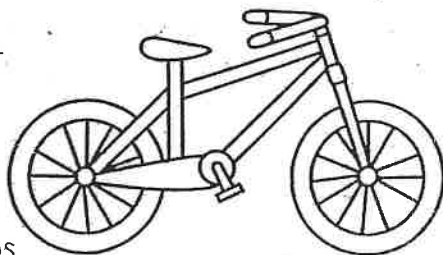


WHAT IS CHEMICAL WEATHERING?

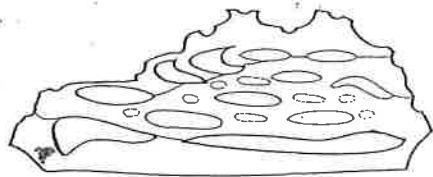
Believe it or not, rocks are changing everyday. These changes are so slow that you may not even notice them until something big happens. This is caused by weathering. Weathering occurs when rocks are slowly broken down into smaller pieces. Weathering may be chemical or mechanical, and can be caused by wind, water, plants, air, or acids.

Chemical weathering breaks down the chemicals that rocks are made of. When minerals are changed, you know that chemical weathering has taken place. Oxygen, carbon dioxide, and types of acid are agents of this type of weathering.

What would happen if you left a bicycle outside for a few years? More than likely, your metal bicycle would begin to rust. Rust forms when iron is in contact with moisture and oxygen for long periods of time. The oxygen in the air combines with metal. This weakens the bonds of the metal and it begins to soften. This type of chemical weathering is called oxidation. Rocks that contain iron can rust, just like your bicycle!



Limestone caves are also caused by chemical weathering. Rainwater mixes with carbon dioxide in the air. This water seeps through the soil on the ground and turns into acid. The acid slowly dissolves limestone underground. Over time, large caves may form.



WHAT IS MECHANICAL WEATHERING?

Rocks are constantly changing. Sometimes rock can be broken down and weathered without changing their chemical composition. Mechanical weathering changes the shape and size of rocks with physical forces.

In one form of mechanical weathering water gets into the small cracks or breaks in rocks. When the water freezes into ice it expands, putting pressure on the crack. This repeated process eventually forces the rock to break apart. The rock is still the same type of rock, it is just a different shape and size.



Salt wedging is another type of mechanical weathering. Some rain water is filled with dissolved salt. This water also fills the small cracks of rocks. When the water evaporates, salt crystals are left behind. As these crystals grow larger, they create a wedge, breaking the rock apart. These small openings in a rock may also be filled with the roots of a plant. As the roots grow larger and stronger, they eventually break apart the rock.



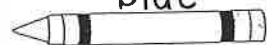
Temperature changes on land also weaken rocks in some locations. During the daytime, temperatures rise. This causes rocks to expand, or swell. In the cool of night, those same rocks shrink. Over time, this cycle of swelling and shrinking also affects the strength of rocks.

- | | |
|---|--|
| 1. What is the author's purpose for writing this passage?
A. To inform you about ways rocks can be weathered.
B. To persuade you to investigate weathering.
C. To entertain you with stories about breaking rocks. | 2. Which is not a method of mechanical weathering?
A. Rain
B. Plants
C. Soil |
| 3. True or False? Mechanical weathering weakens rocks.
A. True
B. False | 4. What is the meaning of the word shrinking in the last paragraph?
A. Staying the same size
B. Getting larger
B. Getting smaller |

Name: _____

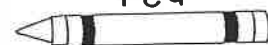
Directions: Using the passage, find the text evidence for each question. Underline the evidence in the passage with the assigned color, then write your answer.

blue



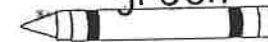
What is chemical weathering?

red



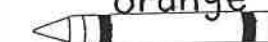
Name 3 agents of chemical weathering

green



Describe oxidation.

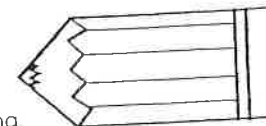
orange



How does the acid that forms limestone caves get into rocks?

Name: _____

Illustrate It.....



Directions Draw and color an illustration to show each type of weathering.

Freezing Water

Salt Wedging

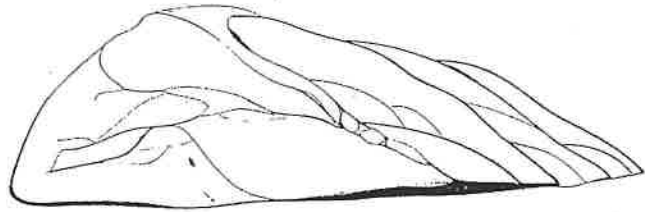
Oxidation

Limestone Caves

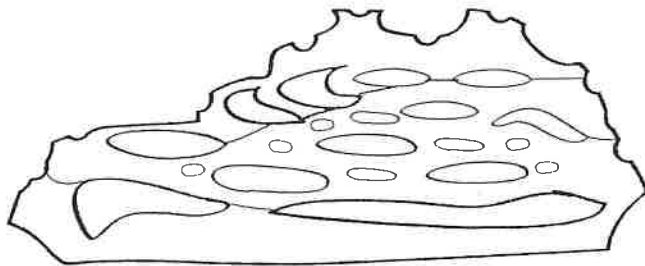
Cut out the flaps & give into your "book".

Directions: Write the definition for each type of weathering under each flap.

Mechanical Weathering



Chemical Weathering

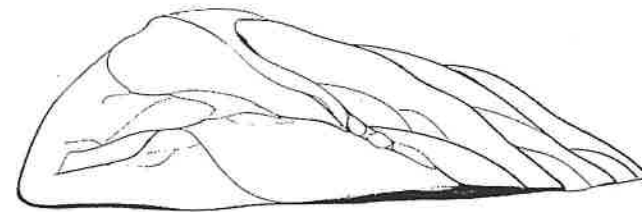


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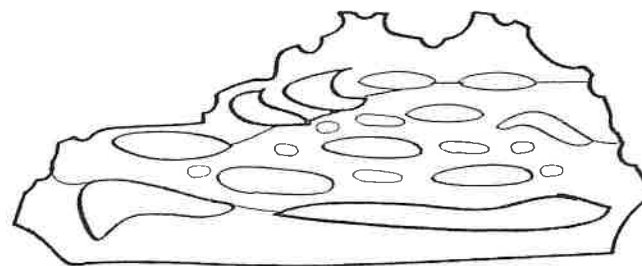
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Mechanical Weathering



Chemical Weathering



only give here