

Name: _____ #: _____

Changes to the Earth Rock Journaling

Estimated Time: 20-30 minutes**Age range:** 4th Grade**What you need:**

- A pencil
- A rock
- Student Activity page or a piece of paper
- coloring utensils (optional)
- How to Journal Video (optional)

New Words

Weathering- the natural process of the breaking down of rocks and minerals.

Scientists and naturalists (people who study nature) use an activity called "**journaling**", to observe and learn more about the world around them. When journaling, scientists **try to capture with detail what they are observing**. This can be done using drawings, words, numbers and more. In this activity you will be getting up-close and personal with a rock of your choosing. Not only will **you be practicing the scientific skills of observation and journaling**, but **hopefully you will discover more about the history of your rock!**

Let's get started:

- Grab** a pencil and the student activity guide (or a piece of paper)
- Go outside** and **find one rock** near your home that you think is interesting.
- Take a moment to **observe your rock using you senses** (please **do not** taste the rock).



How does your
rock feel?

How does it
look?

What does your
rock smell like?

Do you think your rock
has always looked this way?
Why, or why not?

Steps to Journaling:

Our goal is to take all the observations you just made about your rock, and put it on paper! We are not trying to make pretty pictures, we are trying to learn about the rock by making detailed observations.

Directions:

Step 1: Draw the outline of your rock. (Tip: If your rock is small enough, you can set it on your paper and trace it).

Step 2: Add detail to your picture. Does your rock have cracks, holes, different colors, or other special markings that make it unique? If so, add these to your drawing.

Step 3: Add labels with words and numbers, to give even more information about your rock. You can write just one word or full sentences.

Labels you can include:

- color, shape
- size (a ruler is located on the side of your worksheet)
- texture (what it feels like), weight (is it heavy or light)
- write down any questions you may have about your rock



Other ways to add information to your nature journal:

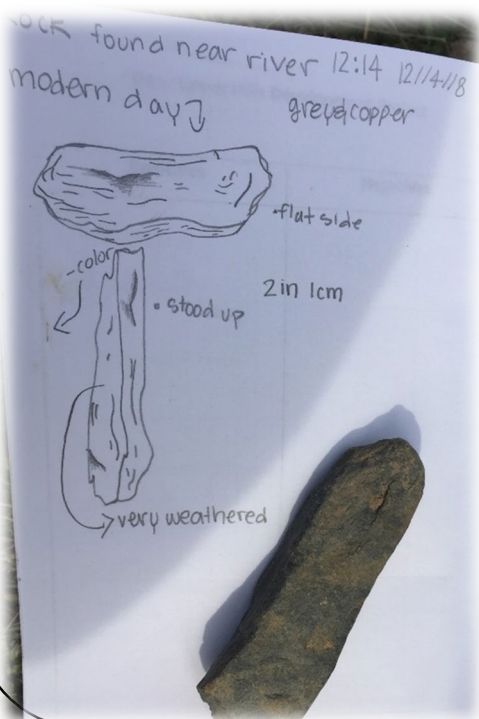
This student included two drawings. **This nature journal shows how the front, sides, or back of a rock may look different.**

Do the sides of your rock look different? Try **drawing another side of the rock.**

This student has drawn an area that shows what the rock looks like even closer. It's like you're **zooming in** with a magnifying glass.

Can you create a "zoom in" drawing next to your rock that shows what it looks like up close?

Step 4: Check your drawing. Did you include drawings, words, and numbers? If not, **add more details**, and make sure you have included all three.



What happened to this rock?

Did you know rocks change over time? They go through a process called **weathering**.

Weathering is the breaking down of rocks and minerals.

Your rock may have evidence to show how it has broken down over time. Here are some ways rocks can look and feel when weathered by nature:



water

Rocks weathered by water can be:
-round
-smooth



wind

Rocks weathered by wind can be:
- tall and wavy
- look like a sculpture
-irregular



vegetation

Rocks weathered by vegetation (plants) can:
-have plants or roots growing in or near the rock



Freeze-thaw

Rocks weathered by freeze- thaw (ice) can:
- have large cracks or splits

- 1.) What type of **weathering** has changed your rock over time? _____
- 2.) What **evidence** did you find from your rock that points to this type of weathering? _____

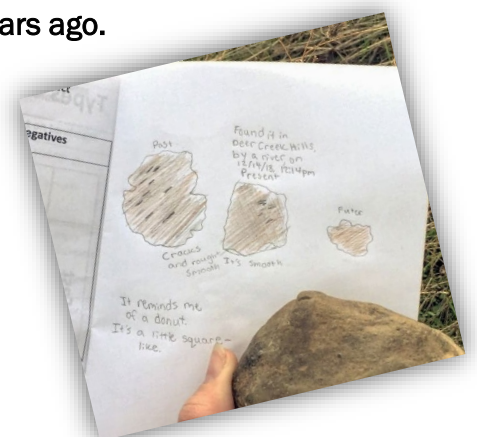
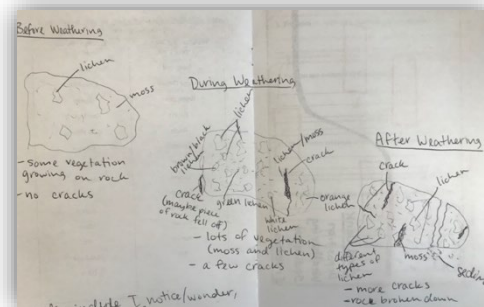
Challenge Activity: Rock Timeline

Can you imagine what your rock looked like before it was weathered? Draw what your rock may have looked like thousands of years ago.

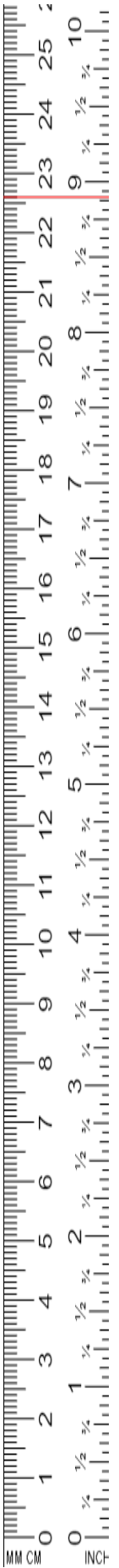
What about in the future? If your rock continues to be weathered, how might it change?

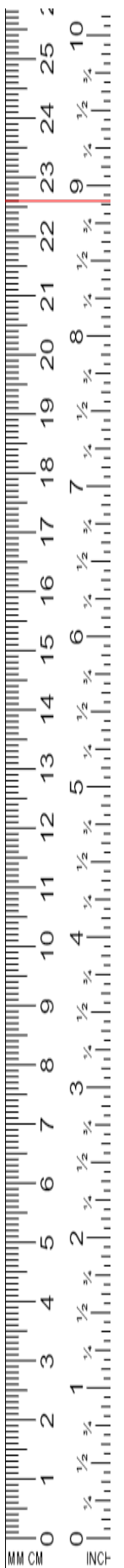
Draw what your rock may look like in the distant future.

Use pictures and words to explain your predictions.



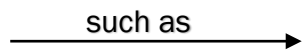
Draw your rock





Be sure to add:

- ✓ A detailed **drawing** of your rock
- ✓ **Labels** that can include words or numbers
- ✓ Different ways you **show** what you are observing



- color**
- shape**
- texture**
- size**

What happened to your rock?

Did you know rocks change over time? They go through a process called **weathering**.

Weathering is the breaking down of rocks and minerals. Different forces of nature gradually wear away tiny bits of rock. It is a very slow process that happens over thousands or even millions of years.

Your rock may have evidence to show how it has broken down over time. Here are **some ways** rocks can look when weathered by nature:



water

Rocks weathered by water can be:
-round
-smooth



wind

Rocks weathered by wind can be:
- tall and wavy
- look like a sculpture
-irregular



vegetation

Rocks weathered by vegetation (plants) can:
-have plants or roots growing in or near the rock



Freeze-thaw

Rocks weathered by freeze- thaw (ice) can:
- have large cracks or splits

1.) What type of **weathering** do you think is changing your rock over time?

2.) When you look at your rock, what **evidence** do you see that supports your idea?
