

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## G2-3 Weathering Field Guide w/ Graphic Organizer & Rubric

### Rules:

1. You must stay within sight of the field at all times.
2. You must stay within sight of an adult at all times.
3. Stay out of the woods.
4. Leave nothing but footprints. Do not move rocks or any other items around or manipulate anything.
5. Bring with you the following items:
  - a. A device w/ a camera
  - b. A pen or pencil
  - c. This instruction packet
6. Keep your eyes open. If you rush, you will not find anything!! I expect quality.
7. You will need 4 different, specific types of weathering (*Types of Change*).

### Directions:

As you walk, you need to take pictures that show change has happened or is happening to the surface of the Earth. You will be looking for examples of weathering or erosion. For each picture you take, you need to document the following information:

1. *Physical or Chemical Weathering* – Remember mechanical is the same as physical weathering.
  2. *Type of Change*: The specific type of change your example illustrates (i.e. ice wedging, oxidation, root pry, acid in living things, water erosion, etc.)
  3. *Location Description*: A description of the location
  4. *Weathering Description*: A description of why you took the picture and what you think happened
- You will be using this to create a Field Guide in **Book Creator**.
  - Must have a cover page with:
    - Picture
    - Title
    - Name
    - Class
    - Date
  - You will **email** your Field Guide as a pdf to your teacher from Book Creator, with the email subject: “**Field Guide by: \_\_\_\_\_(your full name)\_\_\_\_\_**”

### Example:

#### Site 1



1. **Physical or Chemical Change:** Physical Weathering

2. **Specific Type of Change:** Ice Wedging

3. **Location Description:** This picture was taken about 3 meters off the trail on the path to Orris Falls. As you are heading to the falls you need to look to the left near a big pine tree.

4. **Weathering Description:** We took these pictures because it shows how ice split apart this rock. We think that pieces of ice, over many years, split this rock open as it expanded. Every winter, the rock split more and eventually it became two separate rocks.

**Weathering Examples:**

**Chemical Weathering:** a rock being changed into 1 or more new compounds  
 Oxidation- turns the rock into a rusty color  
 Acid Rain- Acid in the rain breaks down the rock  
 Biological Activity – acids from plants weather rocks  
 Dissolution- when the rock dissolves in a solvent  
 Carbonic Acid- deterioration of rock causing it to change color or texture  
 Spheroidal Weathering- water breaks down minerals into a spherical shape.

**Mechanical Weathering:** the breaking down of a rock, the rock's mineral composition does not change.  
 Unloading and Exfoliation- rock breaks off in sheets of layer  
 Abrasion- the wearing down of rock particles by friction due to water, wind or ice.  
 Frost Wedging- The process of water freezing and expanding in the cracks of rocks, making the cracks larger  
 Biological Activity-activities by organisms like animals, plants and humans that cause weathering. (ie burrowing)

**Instructions for turning in your Field Guide from Book Creator:**

1. Export as PDF
2. Single Pages
3. Share as an email
4. Send to your teacher:

*Ms. McNary* → [christinemcnary@walthampublicschools.org](mailto:christinemcnary@walthampublicschools.org)  
*Ms. Gately* → [bethanygately@walthampublicschools.org](mailto:bethanygately@walthampublicschools.org)

**Grading Rubric:**

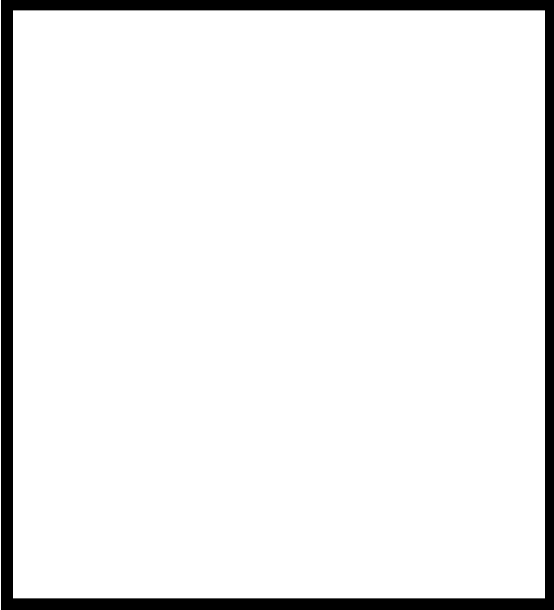
Category:	Pts Possible:	Pts Received:
1. All rules and directions were followed? All group members came to the field with a camera device, a writing utensil and the project packet?	5	
2. Cover page with name, class and the date? Emailed to your teacher w/ correct subject?	5	
3. <b>Site 1:</b> Phy/Chem, Specific Change, Location Description, and Weathering Description	6	
4. <b>Site 2:</b> Phy/Chem, Specific Change, Location Description, and Weathering Description	6	
5. <b>Site 3:</b> Phy/Chem, Specific Change, Location Description, and Weathering Description	6	
6. <b>Site 4:</b> Phy/Chem, Specific Change, Location Description, and Weathering Description	6	
7. Information is Legible with Proper Spelling and Grammar, and Well-Formatted?	6	
8. Neat and colorful? Artistic and creative?	10	
<b>Total:</b>	<b>50</b>	

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Field Guide Graphic Organizer**

(This is just used to help you plan. You do not have to turn this in.)

**Site 1**



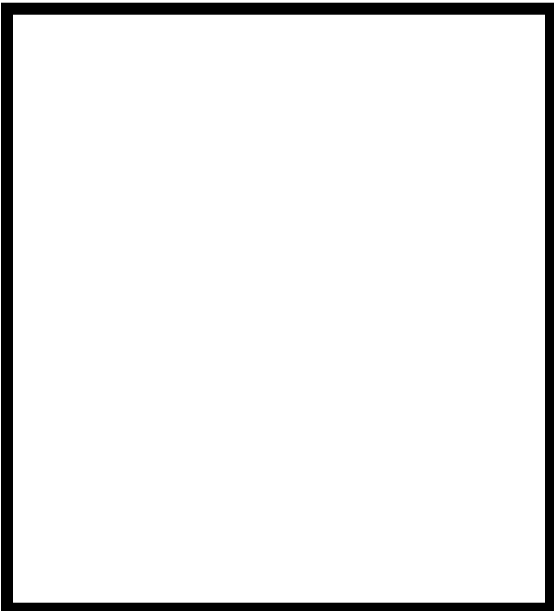
1. Physical or Chemical Change: \_\_\_\_\_

2. Specific Type of Change: \_\_\_\_\_

3. Location Description:

4. Weathering Description:

**Site 2**



1. Physical or Chemical Change: \_\_\_\_\_

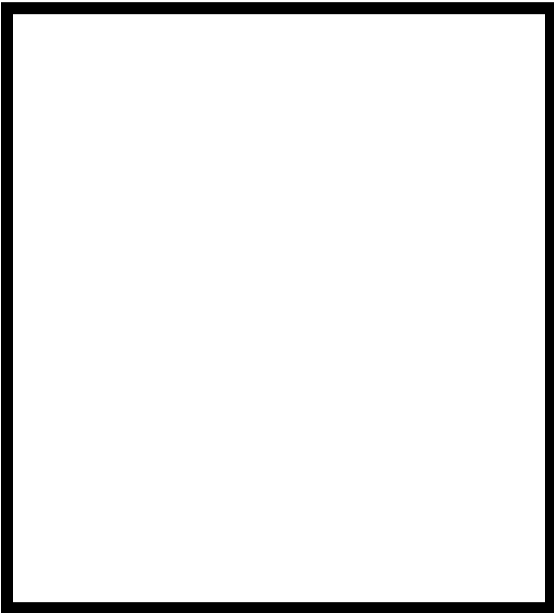
2. Specific Type of Change: \_\_\_\_\_

3. Location Description:

4. Weathering Description:

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

### Site 3



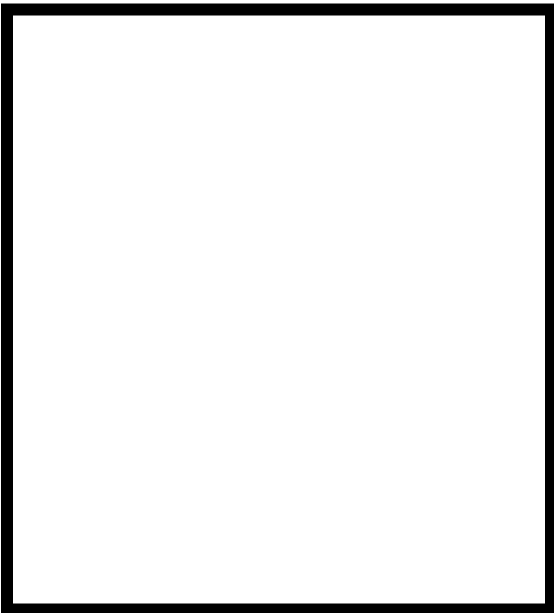
1. Physical or Chemical Change: \_\_\_\_\_

2. Specific Type of Change: \_\_\_\_\_

3. Location Description:

4. Weathering Description:

### Site 4



1. Physical or Chemical Change: \_\_\_\_\_

2. Specific Type of Change: \_\_\_\_\_

3. Location Description:

4. Weathering Description: