**Constructive & Destructive Processes**

**Goal:** Describe how landforms are created through a combination of destructive and constructive processes.

We are going to be using a menu of options to learn about forces that change Earth's surface. There are six different topics that we will be examining in further detail:

1. weathering and erosion  
2. deposition  
3. faults  
4. earthquakes  
5. volcanoes  
6. mountains

**Organization of Project:**
- You must choose at least one activity from each topic area (see columns on the back for choices).
- You may not do more than two activities in any one topic area for credit.
- Ensure that your name is clearly marked on every product you submit.

**Grading Procedures:**
- You must earn a total 45 points for 100% with the potential of earning a maximum of 5 points extra credit. This will be recorded as an assessment grade.
- You may be asked to revise or add to your work if it does not and resubmit it for a final grade.
- Grading will be on-going, so turn in your work as you complete it.
- We will have check points along the way to ensure completion:
  - Minimum of one activity completed by **Tuesday, 1/27**
  - Minimum of three activities completed by **Friday, 1/30**
  - Minimum of six activities completed by **Wednesday, 2/4**
  - All work submitted by **Friday, 3/6**
# Constructive & Destructive Processes

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<td><strong>Make a Venn Diagram</strong> that compares and contrasts weathering and erosion. Ensure that the Venn Diagram is titled and that all sections within it are also titled. Include at least six items in each section.</td>
<td>Make a mobile that shows various landforms that are created by deposition. Include at least 10 pieces of related information, as well as color and pictures. Your product should be visually appealing (i.e., hangs in a balanced way, is easy to read).</td>
<td>Create a three dimensional model that shows the three different types of faults. Parts of the model are labeled. You attempt to show it to scale. It must include titles for each fault.</td>
<td>Scientists use triangulation to locate the epicenter of an earthquake. Use the following website (also can be found on the wiki) to complete the “Determining the Earthquake Epicenter” activity. You must complete 3 of the 4 earthquakes provided on the site and print your results (ask for teacher assistance if needed).</td>
<td>Chart how each of the following volcanoes forms and how each impacts Earth’s surface: (1) cinder cones, (2) composite volcanoes, (3) shield volcanoes, and (4) lava domes. Include how each kind is both constructive &amp; destructive.</td>
<td>Make a flipbook that shows how different types of mountains form: (1) folded, (2) upwarped, (3) fault-block, and (4) volcanic. Include examples of where each type is located on Earth. Make sure to explain why each style forms the way that it does.</td>
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<td><strong>Create a model</strong> (three-dimensional or virtual) that demonstrates two different agents of erosion (ex: water erosion, wind erosion, etc.) and types of weathering in a chosen location.</td>
<td>Design a demonstration that shows how deposition takes place. Record your demonstration so it can be shared with the class. The term demonstration implies that you will be showing a three-dimensional model of deposition in action.</td>
<td>Identify a location on Earth where each of the three kinds of fault lines exists. Map these places on a world map. Also, explain the evidence at each of the three locations that leads us to think that is the kind of fault line there. Share your information in an easy-to-read chart.</td>
<td>Create a brochure that explains what causes earthquakes (5 facts) and includes earthquake safety tips (5 additional facts). Your brochure should be in three-fold format (front includes title and picture).</td>
<td>Create a comic strip that shows how volcanoes are related to the Ring of Fire. Include at least five representative volcanoes found in the Ring of Fire and explain in your comic how/why these examples are typical of the Ring of Fire.</td>
<td>Research 18 interesting facts about mountains that includes the four types of mountains (see list above), at least one example each type, and ten other facts about mountains. This means you should have at least 18 total. <strong>Check these facts with your teacher</strong>. Then, design a crossword puzzle (remember, these contain clues to the words, not just the words). Provide a key as well. This could be done online if you want.</td>
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<td><strong>Create a news report</strong> that exposes a problem created by weathering or erosion in a chosen location. Be sure to include pictures or video to document the problem. Address the who, what, where, when, why and how in your report. Written documentation of your work must be submitted.</td>
<td>Research the creation and changes of the Mississippi Delta (or other delta with prior approval) over time. Using your data, make <strong>poster or powerpoint/keynote</strong> that predicts how the delta will change during the next 30 years. You should have a title and pictures/diagrams to illustrate your information. The purpose of this to show the current stage and the predicted future of the delta as time passes.</td>
<td><strong>Identify three places</strong> on Earth where faulting has caused the rock layers to re-arrange so that the youngest rock is not on top. Explain the process that caused the rock to exist the way that it does currently. <strong>Choose your method of sharing this information.</strong> Please let your teacher know of your choice before you begin.</td>
<td>You have been chosen to research earthquake proof structures. <strong>Record a presentation</strong> that outlines your recommendation. Present a plan for EITHER a building or a bridge. Cite at least two successful designs already built as well as your original idea. Include visuals to support your presentation.</td>
<td>Write a letter to your teacher ranking the most destructive volcanic eruptions. Explain how you defined destructive and why you chose to rank the ones in the order that you did. Rank the top FIVE volcanic eruptions. Your letter should be in proper letter format, either written or typed in a final draft.</td>
<td>You have made it your goal to visit the most majestic mountains in the world. Create a scrapbook that documents your journeys. Include how each mountain formed and why it was chosen. Include <strong>FIVE</strong> mountains. Your scrapbook must include a cover with a title. Each example must include a picture and a written explanation.</td>
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| Comments: | Grade: |
Weathering and Erosion
• *Earth’s Changing Surface*, Weathering - p 38 - 45, Erosion - Chapter 3, starts p 65 - various sections throughout chapter

Depositions
• *Earth’s Changing Surface*, Deposition - Chapter 3, starts p 65 - various sections throughout chapter
• Mississippi Delta Formation
  • [http://www.americaswetlandresources.com/background_facts/detailedstory/MississippiFormed.html](http://www.americaswetlandresources.com/background_facts/detailedstory/MississippiFormed.html)
  • [http://lacoast.gov/new/about/basin_data/mr/default.aspx](http://lacoast.gov/new/about/basin_data/mr/default.aspx)

Faults
• *Inside Earth*, Forces in Earth’s Crust - p 44 - 50

Earthquakes
• *Inside Earth*, p. 51 - 75 - various sections
  • Earthquake Safety and Structures, p. 68 - 73
  • Triangulation, p 56 -57

Volcanoes
• *Inside Earth*, Chapter 3, various sections throughout chapter starting on page 82
  • Ring of Fire, p 83
  • Volcano formation, p 99 - 105

Mountains
• *Inside Earth*, p 48 -49, p 100-104

General Resources for Multiple Topics