4.4.2 – Video Analysis - Build a Mountain and Break it Down

**STEP 1:** Videos to watch:

1st) Pangaea Forming (1 min) <https://drive.google.com/a/charleston.k12.sc.us/file/d/0Bywi6UcC3fa8cEQ3bG9nN2NjSlE/view?usp=sharing>

2nd) How Mountains form (3 min) <https://drive.google.com/a/charleston.k12.sc.us/file/d/0Bywi6UcC3fa8aWxmYzd2WFJtaVE/view?usp=sharing>

**Questions:**

1. Draw, and label, the initial setup of the sand model at 1:36 seconds in the video.
2. What color sand is the ocean basin?
3. What happens to the sand as the two continental plates converge?
4. Around 2:35, what does the green sand represent at this point?

**STEP 2:** Videos to watch:

 3rd) Mountain Weathering <https://drive.google.com/a/charleston.k12.sc.us/file/d/0Bywi6UcC3fa8QVNMMGZYb3RrSTQ/view?usp=sharing>

1. At 0:24 seconds, draw a picture of this mountain (from the side) in your lab journal that is half the width of your page (# 10 will be drawn to the right of this on the other half). Label this picture your “BEFORE WEATHERING AND EROSION” picture.
2. What type of plate boundary interaction (and what kinds of plates) would cause a mountain like this to form?
3. Being that this was a “mountain building event”, what type of rocks would likely be found within this mountain range?
4. Why?
5. Specifically, what type of rocks are we going to find closer to the center of the mountain, and what type of rocks are we going to find closer to the edges? Why?
6. When the video tells you to, hit “PAUSE”. From the same side, draw a picture of this mountain in your lab journal. Label this picture your “AFTER WEATHERING AND EROSION” picture.
7. What does the spray bottle represent?
8. The Blue Ridge Mountains formed 220 mya. The simulation you performed today showed the Appalachian Mountains weathering and eroding. If the video used 44 sprays total, how many years did each individual spray represent in the total lifespan of these 220 million year old mountains?
9. They reformed the mountain and planted some “trees.” Did the “trees” help speed up or slow down and prevent weathering and erosion?
10. How can you tell?
11. So how are weathering, erosion, and deposition responsible for taking the once great Blue Ridge Mountains (25,000 ft tall) and shrinking them down to the current ~6,000 ft tall?
12. Where do you think all of that rock that used to be the other 19,000 ft of Blue Ridge Mountains went?
13. Once this mountain has been weathered, what type of rock is likely to form next with that “old small mountain pieces”?