YOU'RE STRESSING ME OUT! LAB

Tensional Stress

1. Draw how you broke the soap (imagining it were a rock) and draw arrows to show what forces of tensional stress were placed on the soap.

2. In which areas did you see the soap break?

Compressional Stress

3. Draw how you broke the soap (imagining it were a rock) and draw arrows to show what forces of compressional stress were placed on the soap.

4. In which areas did you see the soap break?

Shear Stress

5. Draw how you broke the soap (imagining it were a rock) and draw arrows to show what forces of shear stress were placed on the soap.

6. In which areas did you see the soap break?

Force Analysis

7. What is your best hypothesis for why it would be harder for you to break an actual rock versus the bar of soap? Make sure your explanation includes the word “force.”

Weathering

8. Hold the sharp edge of a piece of soap under running water. Over time, what do you notice happening to the edge of the soap? What does that say about the weathering that occurs to rocks?

Source

Regents of the University of Colorado. (2006). Soapy stress activity. TeachEngineering.
https://www.teachengineering.org/activities/view/cub_rock_lesson01_activity1