Formative Assessment #1

**Concept(s) Addressed**
Movement at plate boundaries produces different types of faults: normal, reverse/thrust, and strike-slip. Exposed rock layers indicate the type of fault. California has a strike-slip fault where constant movement occurs over millions of years (San Andreas) on the transform boundary between the Pacific and North American Plate.

**Time**
30 minutes

**Materials**
Individual
Prompt

**Advance Preparation**
1. Duplicate prompt for each student.

**Procedure:**
1. Tell students they will have an opportunity to share what they understand about using models to explain different types of faults.
2. Distribute the prompt to each student and ask him/her to do his/her best work.
**Formative Assessment #1**

*Directions:* Use your notes to label each diagram with the type of stress indicated and the type of fault.

---

**Rock Stress**

Before stress

A

Stress

Fault is

B

Stress

Fault is

C

Stress

Fault is

---

*Directions:* Use the terms in the word bank and the diagram below to answer the following questions. Be sure to use complete sentences.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>tension</td>
<td>normal fault</td>
</tr>
<tr>
<td>reverse/thrust fault</td>
<td>compression</td>
</tr>
<tr>
<td>strike-slip fault</td>
<td>model</td>
</tr>
<tr>
<td>plate boundaries</td>
<td>shearing</td>
</tr>
</tbody>
</table>

1. Explain the movement of a normal fault. Use your notes and class activities as evidence to support your explanation.

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6.B Formative Assessment #1 Earthquakes and Volcanoes

*SCIENCE MATTERS*
Justified Multiple Choice

**Directions:** Please circle the best answer and explain why it is the best answer using science terms.

2. San Andres fault
   a. takes energy out of rock.
   b. adds energy to the rock.
   c. changes the rock’s volume.
   d. makes the rock harder.

“Science reason”: ________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

3. Which type of stress force produces reverse faults?
   a. shearing
   b. tension
   c. compression
   d. deformation

“Science reason”: ________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Directions: Use your notes to label each diagram with the type of stress indicated and the type of fault.

Directions: Use the terms in the word bank and the diagram below to answer the following questions. Be sure to use complete sentences.

<table>
<thead>
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<th>reverse/thrust fault</th>
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</tbody>
</table>

Explain the movement of a normal fault. Use your notes and class activities as evidence to support your explanation.
Normal fault is caused by tension at the plate boundary causing rocks to crack. One rock layer moves down away from the other.

**Justified Multiple Choice**

*Directions:* Please circle the best answer and explain why it is the best answer using science terms.

2. San Andres fault
   e. takes energy out of rock.
   f. adds energy to the rock.
   g. changes the rock’s volume.
   h. makes the rock harder.

“Science reason”: _____ Tectonic pressure is putting energy into the rock until it moves at the plate boundary.

3. Which type of stress force produces reverse faults?
   e. shearing
   f. tension
   g. compression
   h. deformation

“Science reason”: _____ Compression of the rocks causes one rock layer to move up as it is being pushed by the other rock layer.