Candy Bar Tectonics

Part A: Getting Ready

1. Use your fingernail to make small cracks in the surface of your “Earth” or candy bar. Place on a paper towel.
   - What do we call the cracks in the Earth’s surface? __________________
   - What do we call the large pieces of Earth’s crust? ______________

2. Compare the candy bar to the Earth's structure. Label the parts of the candy bar to correspond to the layers of the Earth.

   ![Diagram of candy bar layers](image)

3. Which layer is "missing" in the candy bar? __________________________

Part B: Observing Forces

COMPRESSISON

- What do you observe as you apply this force? ____________________________
- At what type of plate boundary would this force occur? ____________________
- At what type of fault would this force occur? ____________________________

TENSION

- What do you observe as you apply this force? ____________________________
- At what type of plate boundary would this force occur? ____________________
- At what type of fault would this force occur? ____________________________

SHEARING

- What do you observe as you apply this force? ____________________________
- At what type of plate boundary would this force occur? ____________________
- At what type of fault would this force occur? ____________________________

Part C: Applications

Where else might we observe the three types of forces? Give at least three examples.
Candy Bar Tectonics

Part A: Getting Ready

1. Use your fingernail to make small cracks in the surface of your “Earth” or candy bar. Place on a paper towel.
   - What do we call the cracks in the Earth’s surface? **Faults**
   - What do we call the large pieces of Earth’s crust? **Plates**

2. Compare the candy bar to the Earth's structure. Label the parts of the candy bar to correspond to the layers of the Earth.

   ![Diagram of Earth's layers](image)

   - Core
   - Upper Mantle (Asthenosphere)
   - Lower Mantle

3. Which layer is "missing" in the candy bar? **Core**

Part B: Observing Forces

**COMPRESSION**
- What do you observe as you apply this force? **The pieces of chocolate move together with some going over the others or two pieces push upwards together (arch)**
- At what type of plate boundary would this force occur? **Convergent**
- At what type of fault would this force occur? **Reverse (& thrust)**

**TENSION**
- What do you observe as you apply this force? **The pieces of chocolate spread apart; some may "drop" into the caramel layer**
- At what type of plate boundary would this force occur? **Divergent**
- At what type of fault would this force occur? **Normal**

**SHEARING**
- What do you observe as you apply this force? **The pieces of chocolate "slide" in different directions**
- At what type of plate boundary would this force occur? **Transform (or lateral)**
- At what type of fault would this force occur? **Strike-Slip**

Part C: Applications

Where else might we observe the three types of forces? Give at least three examples.

*Answers will vary*

*Sample: Winds can cause shearing to occur on skyscrapers or the weight of the building might cause compression in the lower levels.*