

## **CHOCOLATE LAVA**

### **Pillow lavas shapes and structures**

Activity by Eric Muller - Exploratorium Teacher Institute 1996

#### **Introduction:**

By pouring "Magic Shell" chocolate (chocolate that hardens when poured on ice cream) into a glass of cold water, create pillow shaped structures that resemble lavas on the sea-floor.

#### **Materials:**

Clear glass of very cold water (Ice-water with ice removed)

Clear empty glass

Chocolate Hard-shell ice cream topping (Smucker's Magic Shell or Hershey's Ice Cream topping)

#### **To do and notice:**

Pour some chocolate topping into an empty glass. Notice how it flows to the bottom of the cup.

Next, pour some chocolate topping into a glass of cold water. Notice the difference in how the sauce flows in this colder liquid.

#### **What's going on:**

When the chocolate topping enters the empty cup, it sinks to the bottom where it forms a pool of brown sauce.

When the chocolate topping enters the cold water, it hardens immediately because the water's temperature is below the chocolate's freezing point. The chocolate forms into tubes and drop shaped pellets.

This edible experiment makes a great analogy to pillow lavas. Formations similar to these bizarre looking chocolate pillows are found throughout the world on the ocean floor. These structures are created when hot flowing molten lava comes in contact with cold sea water.

Pillow Lavas on the ocean bottom.

