Teacher Sheet 1

LAB ACTIVITY:
WHAT'S BEHIND SEA LEVEL RISE?

OBJECTIVES: Students will:

- Describe the change in water level when the water is exposed to heat.
- Predict the impact of rising sea level on coastal areas.
- Explain the role of global warming on sea level rise.

MATERIALS:

- Conical flask
- Two-hole cork for flask
- Thin, glass tube
- Long thermometer
- Portable, clamp-on reflector lamp
- 150 Watt floodlight
- Food coloring
- Water
- Markers

PROCEDURE:

1. Completely fill the flask with very cold water (to improve visibility add food coloring.
2. Place the thermometer and glass tube into the cork as shown in the picture at Sample Setup.

    - Place the cork (with tube and thermometer) into the mouth of the flask. The water should rise a short way up the glass tube.

Teacher Sheet 2

Sample setup:

3. Have a student report the temperature of the water and mark the water level in the glass tube with marker or piece of tape.

4. Ask students to predict what will happen to the water level when exposed to heat. Form a hypothesis or multiple hypotheses.

5. The flask should be placed under the lamp. (Lamp should be aimed towards the water, not the neck or top of flask.)

6. The lamp should then be turned on the lamp and within 5-10 minutes the water level in the glass tube should rise.

7. Record the initial temperature in the table below at time "0"
    - Record the temperature and water level at one minute intervals on a table they have created.

8. When students have finished recording the data on their table they should graph their results with time on the horizontal axis, and temperature and water level on separate vertical axes.
    - Use different colors for each line.

9. When students have completed their graph they should answer the questions in the **ANALYSIS AND CONCLUSIONS** section.