Student Sheet 7.1b-Storms Review

The red indicates where you should look to find the information. If, after reading and looking in your notes you are still struggling, stop in and see your teacher for help.

Answer these questions to study for Part A:

1. What is a vortex, and what causes it to form?
   Page 18 in your textbook- "What is a Vortex?"

2. How does air above a heated surface move?
   Read about convection in "Why does the Wind Blow?" on pages 59-62.
   Look over your class notes from labs 4 and 5 (convection tubes).

3. How does air above a cold surface move?
   Read about convection in "Why does the Wind Blow?" on pages 59-62.
   Look over your class notes from labs 4 and 5 (convection tubes).

4. What happens when hot air meets cold air?
   Read pg.63 "Weather Fronts".

5. How do hurricanes form?
   Read about hurricanes and the water cycle on pg.72 "Hurricane Formation and the Water Cycle"

To study for Part B, answer these questions:

1. How are hurricanes and tornadoes alike? How are they different?
   Look at handout 2.1 "Thunderstorms, Tornados, and Hurricanes". You completed table 1: comparing tornados and hurricanes.

2. What role does the sun play in the weather on the earth?
   Look at your answers for lesson 7- getting started, review convection and differential heating of the earth's surfaces.

3. What is a convection current?
   Reflection for lesson 7 and the reading on page 84 "Ocean Currents".

4. Think about the investigation in Lesson 3 when you heated soil and water. Then answer the following questions:
   A. How did you set up your investigation to make it a fair test?
   Review the set up for lesson 3- remember to keep PHEOC in mind.

   B. Which heated faster: soil or water?
   Look at the graph you made using the data you collected on pg.42 of your packet
   Review the worksheet on pg.43

C. Which held its heat longer: soil or water?
Look at the graph you made using the data you collected on pg.42 of your packet
Review the worksheet on pg.43

5. Look at your graph from Lesson 3.

A. What does the soil curve look like? Why?
Look at the graph you made using the data you collected on pg.42 of your packet
Review the worksheet on pg.43

B. What does the water curve look like? Why?
Look at the graph you made using the data you collected on pg.42 of your packet
Review the worksheet on pg.43

C. What was the temperature of your soil after 5 minutes of heating?
Look at the graph you made using the data you collected on pg.42 of your packet
Review the worksheet on pg.43

6. Study the illustration of Tornado Alley on page 65. Answer the following:

A. What states make up Tornado Alley?
Reread pg.65 "Trouble in Tornado Alley"

B. What causes tornadoes to form in Tornado Alley?
Reread pg.65 "Trouble in Tornado Alley"

7. Take another look at the illustration of a sea breeze and a land breeze on page 59. What is a sea breeze, and when does it form?
Reread "Why does the Wind Blow?" on page 59.

8. Look at the illustration of the water cycle on page 72. Describe the water cycle and how clouds form.
Reread page 72 "Hurricane Formation and the Water Cycle" and look at the reflection questions in your notebook for the cloud demonstration (lesson 6).

9. Look at the weather maps on page 70.

A. Where is the pressure high? What is the weather like there?
Look at lesson 6 reflection questions (especially 6.3, reading weather maps).

B. Where is the pressure low? What is the weather like there?
Look at lesson 6 reflection questions (especially 6.3, reading weather maps).

C. Find a front. Where is it? What is the weather like there?
Look at lesson 6 reflection questions (especially 6.3, reading weather maps).
Also, read pg.63 "Weather Fronts".

D. In what direction is the weather moving across the United States? How can this help meteorologists?
Look at lesson 6 reflection questions (especially 6.3, reading weather maps).

10. Think about the investigation in Lesson 7 in which you modeled ocean currents.
    A. How do some deep ocean currents form?
    Reread "Ocean Currents" on page 84. Look at lesson 7 reflection questions.

    B. How do winds affect ocean water?
    Read "How Trade Winds Cause Upwelling" on page 87. Look at lesson 7 reflection questions.

    C. How do ocean currents affect air temperatures around the world?
    Read "Surface Currents" on page 89 and "El Nino Stirs up the World's Weather" on pages 92-95.