Name: _____ Period: _____ Date: _____

Coriolis Effect Worksheet

Directions: Use your class notes and outside sources to help you answer the following questions.

1. What causes the Coriolis Effect to occur?

2. Even though it takes any location on earth 24 hours to complete one rotation, not all locations move around at the same speed. Which latitude on earth travels at the fastest speed? EXPLAIN WHY

3. When a free-moving object moves from the North Pole (90°) towards the equator (0°), it curves from its intended path since:

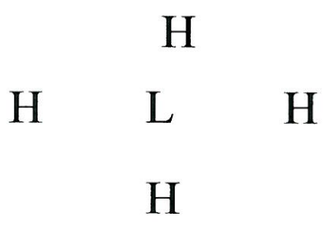
4. In the Northern Hemisphere, free-moving objects traveling over large distances are deflected to the _____ of their intended path of motion.

5. In the Southern Hemisphere, free-moving objects traveling over large distances are deflected to the _____ of their intended path of motion.

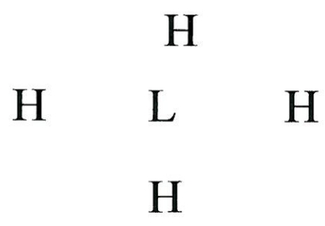
6. If a missile is launched from the North Pole, toward an object on the equator, should it be aimed to the left, to the right, or directly at its target? EXPLAIN YOUR ANSWER.

7. If a missile is launched from the equator toward an object in the Northern Hemisphere, should it be aimed to the left, to the right, or directly at its target? EXPLAIN YOUR ANSWER.

8. DRAW arrows indicating how the wind will move in both the northern and southern hemisphere. (REMEMBER: -how does air move & how does Coriolis act)



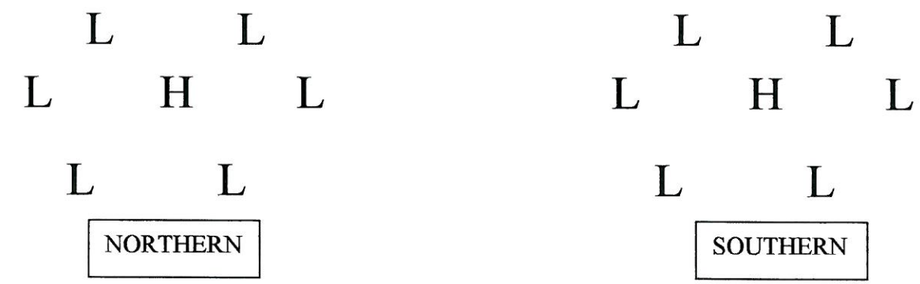
NORTHERN



SOUTHERN

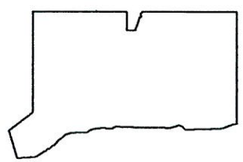
9. DRAW arrows indicating how the wind will move in both the Northern and Southern Hemisphere. (REMEMBER: -how does air move & how does Coriolis act)

A



10. We in Connecticut know that a Nor'easter can bring a whole lot of snow and winds out of the Northeast. Given what you know about circulation of air, where does the low pressure center need to be positioned (A or B) in order for Connecticut to have one of these storms. Draw how the air will circulate on the map below.

A



B

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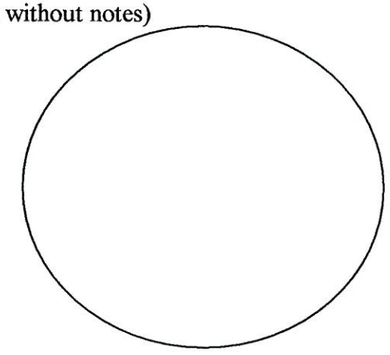
11. Draw the global wind patterns and label a) zones of H and L pressure b) wind directions c) names of the winds. (See if you can do it without notes)



12. A flight from Hartford, CT to Seattle, WA takes about 6 hours. The return trip takes about 5 hours. The reason for this is related to the concepts you are learning about. Why does this happen?