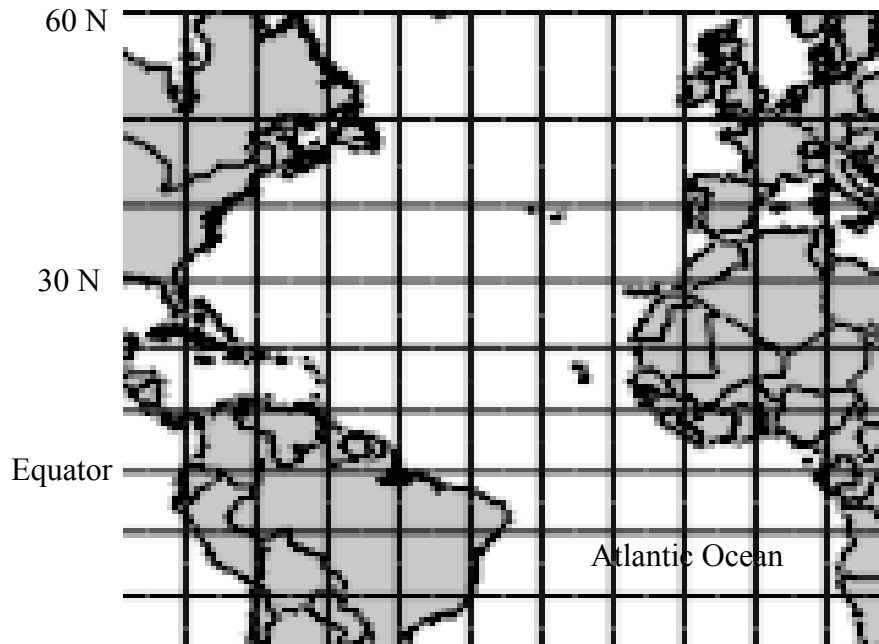


Name:  
ID #:

Section:

### AOS 1 Homework # 2



- 1) Above is a map of the Atlantic Ocean between 30 S and 60 N. Roughly indicate with the letter “H” where the North Atlantic subtropical high is centered.
- 2) Using arrows, draw the horizontal atmospheric circulation associated with this high pressure on the map above.
- 3) What vertical motion is associated with this subtropical high in the atmosphere?  
\_\_\_\_\_ (rising or sinking)
- 4) As a result of this vertical motion, is the air relatively dry or moist?
- 5) As we discussed in class, winds drag on the top layer of the ocean. The motion of the top layer of water then exerts a drag on the layers of water below. The speed of the water \_\_\_\_\_ (increases or decreases) with depth and turns to the \_\_\_\_\_ of motion in the Northern Hemisphere.
- 6) As a result of the above process, a net transport of water occurs \_\_\_\_ degrees to the \_\_\_\_\_ of the wind in the Northern Hemisphere. This is known as \_\_\_\_\_. Using arrows, draw the **NET** horizontal movement of seawater associated with the winds of the subtropical high drawn in question 2.
- 7) Does this net movement of water form a mound or a depression under the subtropical high?  
\_\_\_\_\_ What type of circulation does the perturbation in water level induce in the Northern Hemisphere? \_\_\_\_\_ (clockwise or counterclockwise)
- 8) What is the vertical motion in the ocean underneath the subtropical high?  
\_\_\_\_\_ (upwelling or downwelling)
- 9) As a result of this vertical circulation, is this a region of the ocean rich or poor in nutrients important for marine life? \_\_\_\_\_