Hurricanes

A hurricane is located in the Gulf of Mexico just off the coast of western Florida. The exact location is identified on the map with the hurricane weather symbol. The date is September 1 and the time is 6:00 p.m. Information about the hurricane speed and direction of movement is provided. The hurricane has a diameter of approximately 150 miles. Suppose that you live in Cape Hatteras, North Carolina along the coast (marked with a dot).

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1. Identify the location of the eye of the hurricane at 12-hour intervals by placing the weather symbol for hurricanes at the appropriate places on the map. (Mark locations for September 2 6AM & 6PM, September 3 6AM & 6PM

2. Sketch a circle marking the "edges" of the hurricane (diameter = 150 miles) at each location.

3. Draw four arrows around each hurricane symbol to indicate the direction of air flow around the hurricane.

4. At what date and time will the hurricane make landfall?

5. Shade in the region that will experience the highest storm surge as the hurricane makes landfall.

6. Place a small "x" in the region that will experience the highest storm surge as the hurricane moves out over the Atlantic Ocean.

7. What direction will the surface winds be at your house on September 2 at 6:00 p.m.?

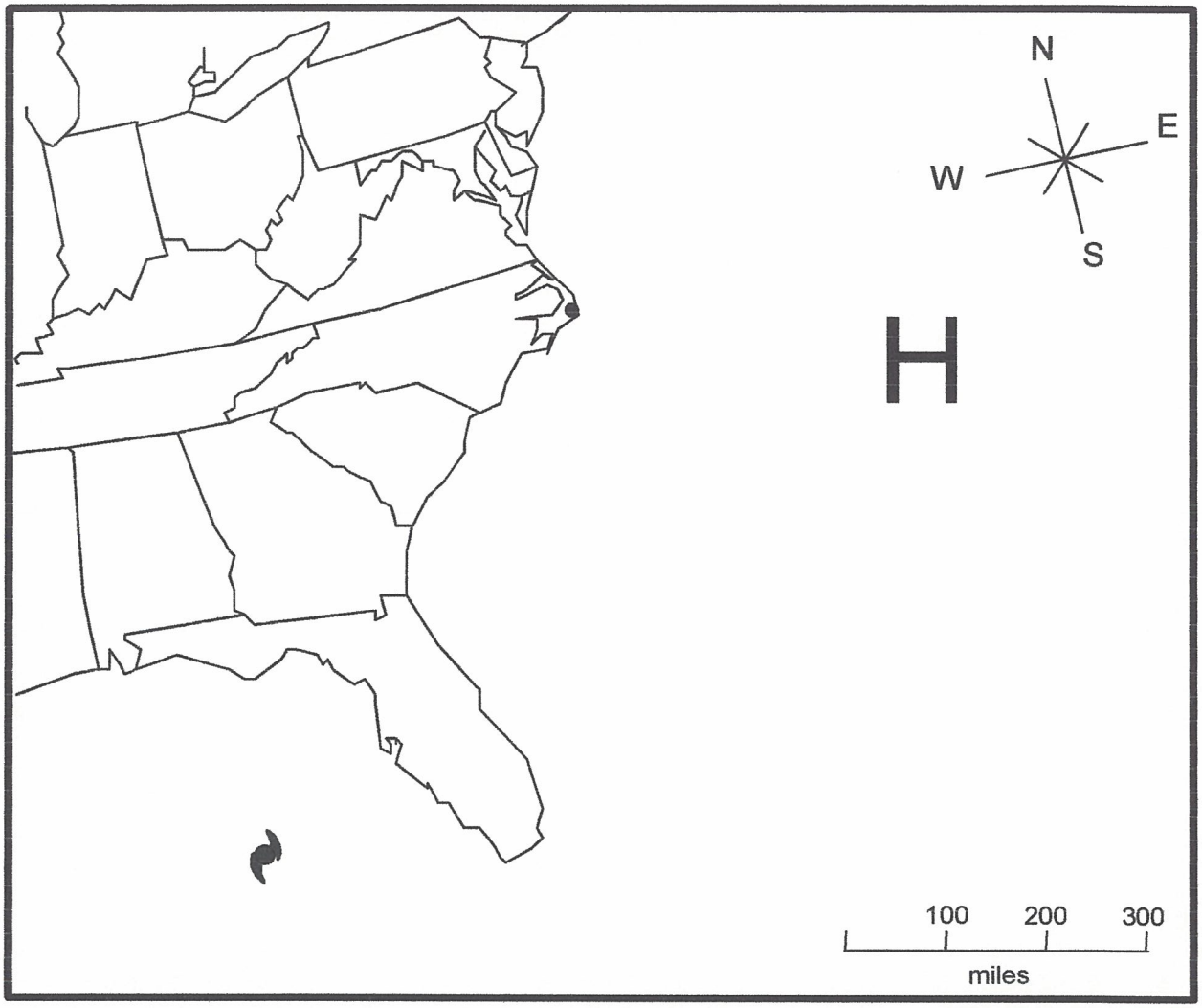
8. When the hurricane passes due east of you, the strongest winds would most likely be blowing from which direction?

9. When the hurricane passes to the east of you, where (in relation to the hurricane) will the weakest winds occur?

10. Determine the category of the hurricane according to the Saffir-Simpson scale based on the information provided. Fill the in category ranking in the table provided.

11. Does the strength of the storm change during its path up along the coast? If so, why?

12. Can you provide a reason for why the hurricane's direction changed after the first 24 hours?



	Rotational speed	Forward speed	Direction of movement	Saffir-Simpson scale rating
Sept. 1 6:00 p.m.	105 mph	25 mph	NE	
Sept. 2 6:00 a.m.	125 mph	30 mph	NE	
Sept. 2 6:00 p.m.	105 mph	15 mph	N	
Sept. 3 6:00 a.m.	80 mph	12 mph	E	