

Rubric for APES FRQ*Atmospheric and Ocean Currents*

This is the rubric for table _____

Item	Pts Earned
a. Saltier, cold water at the poles is more dense, causing it to sink down deep in the ocean. This moves water away from the poles to less saltier, less dense warm water near the equator. (1 pt)	
a. If glaciers melt, the salt water in the ocean will become less salty, which would slow or stop thermohaline circulation. (1 pt)	
b. As warm Atlantic Ocean water circulates from the equator north towards western Europe, it brings vast amounts of heat energy and warmer temperatures. (1 pt)	
b. As a result, the shutdown of thermohaline circulation would likely make western Europe colder. (1 pt)	
c. Warm, moist air rises at the equator due to the unequal heating of the Earth. This creates a low pressure region. The air cools in the upper atmosphere, which causes it to become more dense, and the air sinks. This dry sinking air rushes back down to Earth, causing a high pressure region. The air from the high pressure region rushes back to the low pressure region, and the cycle continues. (1 pt)	
c. The weather patterns found at the equator are rainy. The weather patterns at 30° north and south latitude are dry. (1 pt)	
d. If Hadley cells expanded beyond 30° latitude, ecosystems north or south of 30° latitude would likely become more dry and arid. (1 pt)	
TOTAL (out of 7)	

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[illegible][illegible]

