Topic #1: Basic Ocean Facts

Name the four major divisions of the world ocean:

What is the source of the ocean’s salts?

Topic #2: Surface currents

What is the driving force behind surface currents? ________________

What other two factors influence surface currents? ________________ and _______________

In what general direction do surface currents flow in the northern hemisphere? ________________

In what general direction do surface currents flow in the southern hemisphere? ________________

Topic #3: Thermohaline Circulation

What property of water is the driving force behind thermohaline circulation?

Deep currents are generally (colder / warmer) than surface currents.

Does freezing increase or decrease density?

Does evaporation increase or decrease density?
The figures below show a surface current entering a region of the ocean with a different salinity. Which figure shows what would most likely happen when the waters meet?

![Diagram A](image1)

In the figures below, white circles represent salt atoms. Which figure is most like ocean water that has been changed by freezing or evaporation?

![Diagram B](image2)

The Amazon River flows into the Atlantic Ocean in eastern Brazil. Which figure below would most closely represent the salinity of the Atlantic Ocean just east of the mouth of the river?

![Diagram C](image3)
Topic #4: Currents and climate

Answer the questions below using complete sentences (TTQA!).

Use the figure above to explain why Great Britain (A) has milder winters than Nova Scotia (B).

Do you think the Equatorial Countercurrent helps cool the desert regions of east Africa (C) or does it make the area hotter? Explain your answer using evidence from the map.

Anchovies do best in cold water, but Mahi do best in warm water. Which would you most likely catch off the west coast of Chile (D)? Explain your answer using evidence from the map.