Pop Quiz - E.C. for Quiz 3

5 minutes

List two ways that eddies are formed in the atmosphere.

List three examples of thermal circulation in the atmosphere.

Oceanic Gyre Review

The Ekman spiral describes,

- ☐ a. ocean eddies which spin off of the Gulf Stream.
- ☒ b. the effect of wind on water in a rotating system.
- ☐ c. the effect of the pressure gradient force on water.
- ☐ d. why western boundary currents are stronger than eastern boundary currents.

Coastal upwelling occurs along,

- ☒ a. eastern boundaries of oceans.
- ☐ b. western boundaries of oceans.
- ☐ c. both eastern and western boundaries.
- ☐ d. regions with shallow coastal waters.

Ocean Conveyor Belt

The Day After Tomorrow: Scientist predicts that global warming is happening faster than expected and that this will bring on another ice age by shutting down the Thermalhaline Circulation. How could this happen? Why would this bring on an ice age?

1. Global warming would warm the North Atlantic surface waters, making them less dense, less likely to sink.

2. Global warming could also melt the Arctic Ice, freshening the North Atlantic surface waters making them less dense, less likely to sink. - Main reason.

Ice Age could potentially result because heat would no longer be transported from equator to poles via the Conveyor Belt Circulation.