

The Endless Voyage, episode 12: "Deep Connections"

1. What things do ocean currents move?
2. What two factors influence currents?
3. The driving mechanisms of currents are pressure difference created by differences in _____ and _____
4. What happens to cold, salty water?
5. How long does it take for water to complete a circulation circuit?
6. What two locations are the primary areas of water sinking from the surface to the sea floor?
7. How does the sea water get so cold and salty?
8. Thermohaline circulation is also called _____
9. What controls the pattern of thermohaline circulation?
10. How will the thermohaline circulation change, for perhaps a hundred years, if there is enough warming to melt sea ice and increase arctic precipitation?
11. Ocean water that has distinct characteristics of temperature and salinity is called a _____
12. These retain their temperature and salinity characteristics for about how long?
13. What is the most important factor these move?
14. List several 'tracers' of water masses:
15. The ratio of oxygen-16 to oxygen-18 in shells records _____
16. Why is it important to understand the carbon cycle and where it goes?
17. Describe the components of the 'global oceanic observing system'.
18. What could such a system show us?
19. The 'free-fall profilers' measure _____
20. How much turbulence is present on the abyssal plains?
21. How does this compare to turbulence at the oceanic ridges?
22. The understanding and prediction of oceanic circulation can lead to