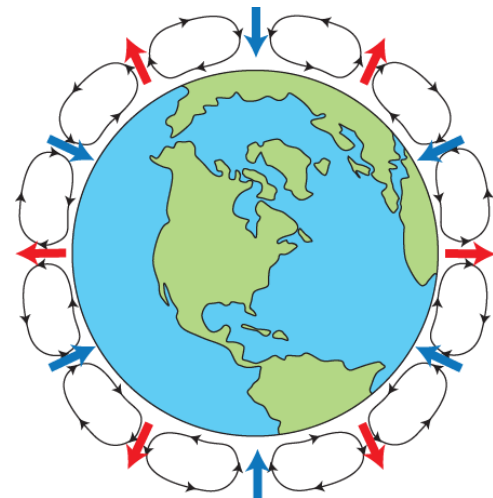




Convection Currents

Activity

Convection is a process of thermal energy transfer in fluids, like air and water. When thermal energy is added to a fluid, the matter in the fluid gains kinetic energy and spreads out. As the matter spreads the fluid becomes less dense (same amount of mass but larger volume). Less dense fluids rise above fluids with greater density causing movement within the liquid or gas, called a current.



Procedure

Deep Ocean Currents

1. Look at the Ocean Surface Currents Map.
2. Follow the flow of the cold water indicated in blue and the warm water indicated by red.
3. Write an explanation in your lab journal of where and why the cold-water current becomes a warm-water current.
4. Write an explanation in your lab journal of where and why the warm-water current becomes a cold-water current.

Surface Currents

5. Look at the Ocean Surface Currents Map.
6. Follow the flow of the cold water indicated in blue and the warm water indicated by red.
7. Write a statement in your lab journal to compare the flow pattern of the deep-ocean and surface currents.
8. On the Teacher Printout: Ocean Surface Currents Diagram, use red and blue colored pencils to indicate possible convection currents.
9. Trim the diagram page and glue it in your lab journal.