

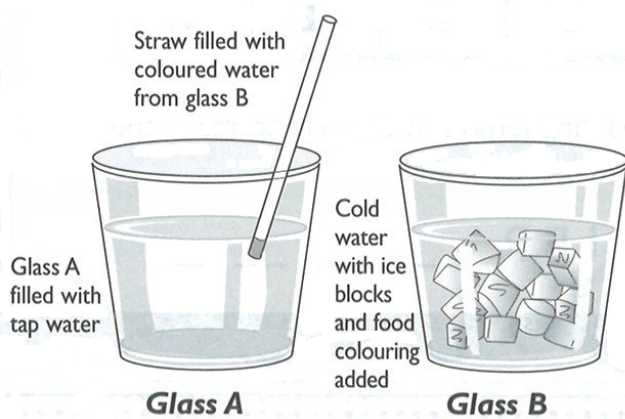


Great Barrier Reef: Ocean Currents

Cold currents, rich in nutrients, move along the ocean floor from Antarctica to the tropics, bringing food for the abundant wildlife in the tropical reef waters. These simple activities highlight how these currents work.

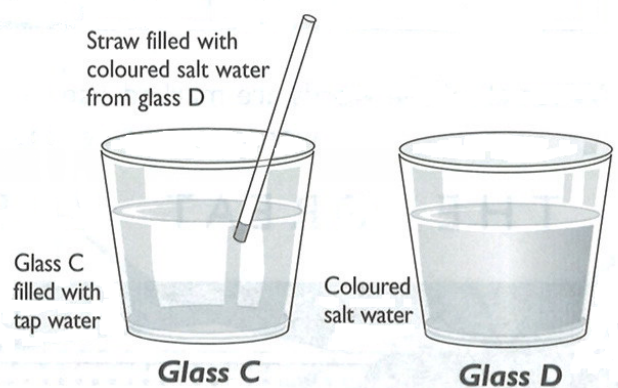
Cold Water

1. Half fill a glass with room-temperature water from the tap (Glass A).
2. Partly fill a second glass with cold water from the fridge. Add some ice cubes to keep it cold and a few droplets of food colouring to allow it to be identified (Glass B).
3. Suck up some of the coloured cold water into a straw, place a finger over the end to keep it there and place the tip of the straw in the warmer water.
4. Remove your finger a little, allowing the cold, coloured water to run slowly into the warmer water and watch what happens.
5. Repeat, placing the straw at different depths in the warm water to see if there is a different result.



Salty Water

1. Partly fill two glasses with warm tap water.
2. Dissolve as much salt as possible in one glass and add a few drops of food colouring, to allow it to be identified (Glass D).
3. Now use the straw to add the salty water to the ordinary water (Glass C) in the same way as for the cold-water experiment and observe.



Extension

Measure the temperature of the cold water before adding it to the warm water. Time how long it takes to reach the bottom of the glass. Then time how long slightly warmer water takes to sink. Graph the results, with temperature on the y-axis and time on the x-axis and discuss the implications in relation to global warming.