



Floating on salt water

Background knowledge

Mixing substances together can cause their properties to change. Adding salt to water makes the water salty. Salt water boils at a higher temperature than fresh water and freezes at a lower temperature. *Buoyancy* is the upward pushing force of a fluid. Objects float more easily in salt water than in fresh water, because salt water is more buoyant. This is also why it is easier to swim in salt water than in fresh water.

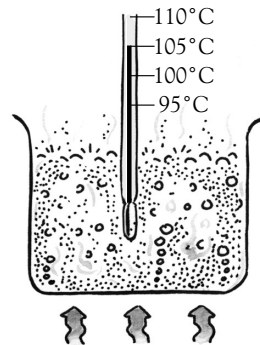
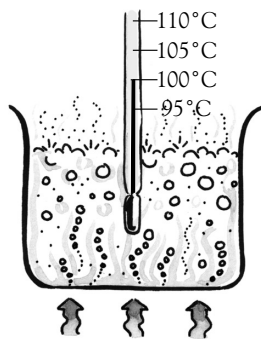
Science activity

Look at the pairs of pictures. Which picture in each pair shows sea water and which shows fresh water?



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If you added sand to water, would it boil at a higher temperature? Explain.

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Science investigation

Obtain a small toy boat. Design and conduct an experiment to see the effect of different concentrations of salt on the buoyancy of the boat.



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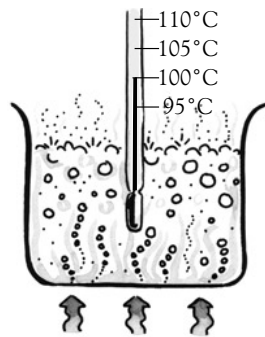
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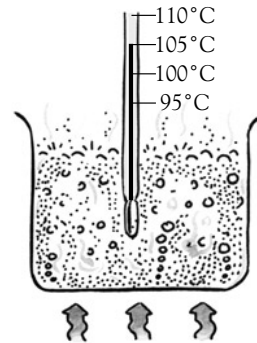
..... fresh water



..... sea water



..... fresh water



..... sea water

If you added sand to water, would it boil at a higher temperature? Explain.

No, because sand will not dissolve in water.

Science investigation

Prepare salt solutions with different concentrations, then place the boat in each solution to see how high it floats. The more salt added to the water, the greater its buoyancy (density). As the water's density increases, its buoyant force increases.