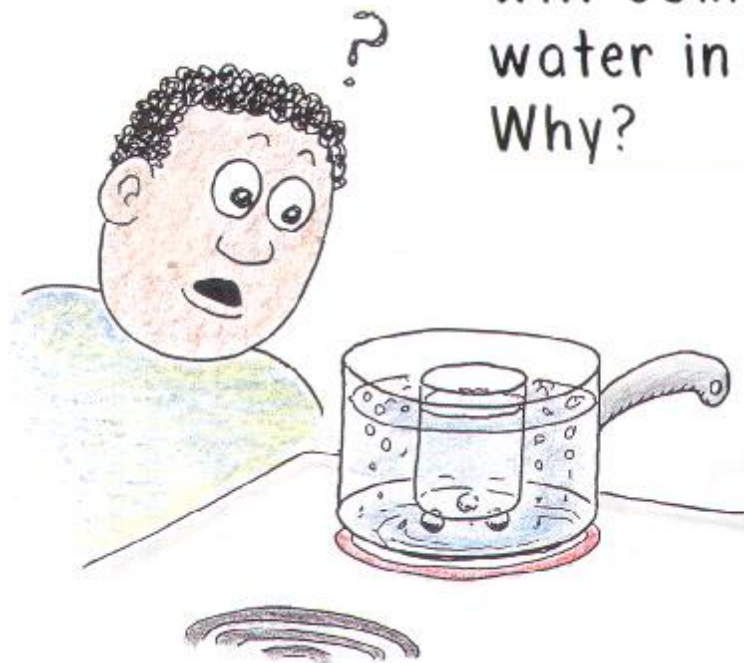


NEXT-TIME QUESTION

CONCEPTUAL Physics

Place a jar of water in a saucepan of water so the bottom of the jar is held above the bottom of the pan. Then put the pan on a hot stove and the water in the pan will come to a boil. But the water in the jar won't. Why?



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Answer:

The stove temperature is normally much higher than 100°C , which brings water in the saucepan to boiling. But when the water in the jar, insulated from the stove surface, reaches 100°C , further heat doesn't enter it because it is in thermal equilibrium with the surrounding 100°C boiling water. Without further heat input, it remains at 100°C without boiling.

This is the principle of the "double boiler," common in cooking.



The hot stove makes thermal contact with the pan of water, but not the jar of water.



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