Wanna bet you can't boil water in boiling water?

THE SETUP

There's an old saying that a watched pot never boils. That's because it seems to take forever to come to a boil when you're in a hurry. But in this trick it would take forever. The water truly never boils.

Have an adult present before you do this trick, since you will be using the stove. Put some water into a small jar.

Find a way to suspend the jar in a pot of water so that it doesn't touch the sides or the bottom. If you use a two-handled pot, hang the jar from a wire that is fastened to the handles. Heat the pot on the stove. The water in the pot will soon come to a boil, but the water in the jar never will.

INSIDER INFORMATION

This may come as a bit of a surprise. After all, the water in the jar is the same as the water in the pot. To make water boil and turn into steam requires an input of heat energy. The heat energy of the stove makes the temperature of the water in the pot rise until it reaches 100°C (212°F). At that point, the stove's heat changes the water into steam the water boils. The conversion of water to steam keeps the temperature from rising above 100 degrees. The water in the jar, however, is kept separated from the source heat, the stove. So it never gets enough heat to boil.

A double boiler works on this principle. It is used to cook foods that should not boil, like chocolate pudding.