

# Does the Material of a Cup Affect how Quickly the Water Rises or Drops in Temperature?

## Aim

To find out whether the material of a plastic, glass or ceramic cup affects how quickly the temperature of water drops or rises.

## Hypothesis

We believe that the water in the plastic cup will rise and drop the quickest as we believe that the plastic will let in more of the temperature.

## Equipment

- \*Plastic cup
- \* Glass cup
- \* Ceramic cup
- \*3 Thermometers
- \* Recording sheet
- \* Kettle
- \*Fridge
- \* Water

## Method

1. Place a jug of water in the fridge for 2 hours.
2. After the water has been in the fridge for 2 hours boil a kettle of water.
3. Place 2 ceramic cups, 2 plastic cups and 2 glass cups on a bench.
4. Fill 1 of each of the cups with cold water and do the same with the hot water.
5. Put a thermometer in each cup with cold water. Start the timer immediately.
6. Record the temperature of each cup every 30 seconds.
7. Repeat steps 6 for half an hour.
8. Do the same with the boiling water.
9. Compare results to see which cup changes in temperature the most.

## Conclusion

Our hypothesis was incorrect as the water in the glass cup dropped and rose the quickest. We think that the water in the glass cup dropped and rose the quickest in temperature because it is transparent and transparent objects usually let in a greater amount of temperature.



Total Temperature Risen or Fallen in 20 Minutes

