# Investigation

# Thermal conductivity

fair test ☐ comparative test ☐

I want to find which material will be best to use for a sleeve to keep drinks warm.

**Question:** Which material will keep a hot drink warm for the longest time?

**Prediction:**

I think the _____ will keep the drink warmest because _____

_____

_____



**Independent variable**
This is what we change.



**Dependent variable**
This is what we measure.



**Control variables**
This is what we keep the same.

**Method:**

1. Create a 'sleeve' and wrap each cup in a different material.
2. Pour the same amount of hot water into each cup.
3. Measure and record the starting temperature.
4. Leave the cups in the same place for the same amount of time.
5. Measure the temperature again at 5, 10 and 15 minutes.
6. Compare the results to see which material kept the drink warm for the longest time.

**Results:**

| Material | temperature | | | | |
|---|---|---|---|---|---|
| | starting temperature | 5 minutes | 10 minutes | 15 minutes | drop in temperature |
| | | | | | |
| | | | | | |
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| | | | | | |
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**Conclusion:**

The _____ was the best thermal insulator because _____