



SCIENCE INVESTIGATION · PROPERTIES AND CHANGES OF MATERIALS

Which material keeps a drink warm longest?

England national curriculum · Year 5 · working scientifically

Our question

Which material keeps a drink warm for the longest time?

My prediction — what do you think will happen, and why?

What we will **CHANGE**

the material wrapped around the cup

— and nothing else. That is what makes it a fair test.

What we will **MEASURE**

the temperature of the water (°C), every 5 minutes

What we will **KEEP THE SAME**

- the amount of water
- the starting temperature
- the size of the cup
- the room the cups sit in

Equipment

- | | |
|--|--|
| ☐ 4 identical cups | ☐ thermometer |
| ☐ timer | ☐ jug of warm water |
| ☐ wool, foil, paper and bubble wrap | |

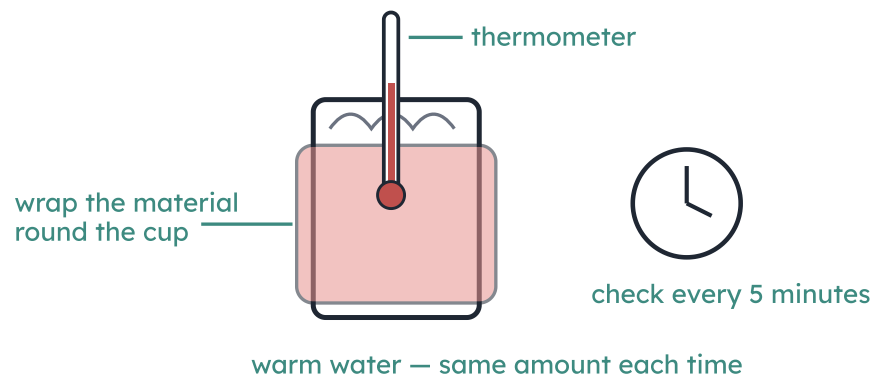
Running it: undefined

Keep it safe: undefined



STEP 2 · DO IT AND RECORD

Our results



Time (minutes)	Wool (°C)	Foil (°C)	Paper (°C)	Bubble wrap (°C)
0				
5				
10				
15				
20				
25				

Units live in the headings, so the boxes only need numbers. If a result looks odd, try that one again — scientists call it a repeat reading.



STEP 3 · DRAW THE PICTURE OF YOUR RESULTS

Line graph of our results

A line graph suits results that change smoothly over time. Number the temperature axis in equal steps, plot a small cross for each reading, then join the crosses.

Temperature (°C) — what we measured



Time (minutes) — what we changed

What does your chart show? Say it in one sentence.



STEP 4 · WHAT DID WE FIND OUT?

Our conclusion

I found out that...

I think this happened because...

My results show...

How did it go?

What went well...

What I would change next time...

A new question I could investigate...
