

Thursday 25<sup>th</sup> February

Science - Investigating thermal insulators

**Household items to support learning:**

- Two ice cubes of the same size.
- A piece of flexible material such as bubble wrap or a cleaning cloth.
- Scissors and a ruler.

Warm-up

Imagine that you have just made a snowman. How could you stop it from melting?

Look at the cartoon below.

Which child do you agree with?



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We are going to investigate how quickly an ice cube melts with or without a 'jacket' on.

- It is hard to investigate a snowman without any snow!
- Instead, you can use an ice cube and bubble wrap as a model snowman and jacket.

*Ask an adult to work with you.*

**You will need:**

- Two ice cubes of the same size.
- A piece of bubble wrap (or cloth).
- Scissors, a ruler and a clock.



1. Take the two ice cubes out of the freezer. **Measure and record their lengths in mm.**



2. Cut a 15-20 cm square piece of bubble wrap or cloth.

3. Wrap one ice cube in the bubble wrap or cloth. Leave the second ice cube uncovered.



4. Put the ice cubes **in the same place for 20 minutes.**

5. Unwrap the 'jacket'. **Measure the length of both ice cubes.** Wrap up again and leave for another 20 minutes.

6. **Repeat the measurement after 40 and 60 minutes.**

Record your results in the following table -

Time in minutes	Length of ice cube in mm	
	without a jacket	with a jacket
0 (start)		
20		
40		
60		

Discuss with your grown-up -

Which ice-melted the quickest?

What do you think the reasoning is for this?