


# A winter science discovery with Ash and Leo

## A mitten mystery!

Predict, observe and keep discovering together.



# A mitten mystery

One snowball became a puddle. Another survived inside a woolly mitten. Ash had thought the mitten would make it melt first. What had happened?



## The first snow

That morning brought the year’s first snow. Leo was home with a cold, so Ash decided to save her best friend a snowball.



## Two matching plates

Ash used two matching plates and equally sized snowballs. One stayed uncovered. The other nestled inside her mitten. She kept them away from direct sunlight.



## Two predictions

On their video call, Ash predicted that the mitten snowball would melt first. Leo guessed that the uncovered one would. They agreed to let the evidence decide.



## Make it a fair comparison

What is your prediction: the uncovered snowball or the mitten snowball? Keep the starting size and checking time the same. Change only the insulating cover.



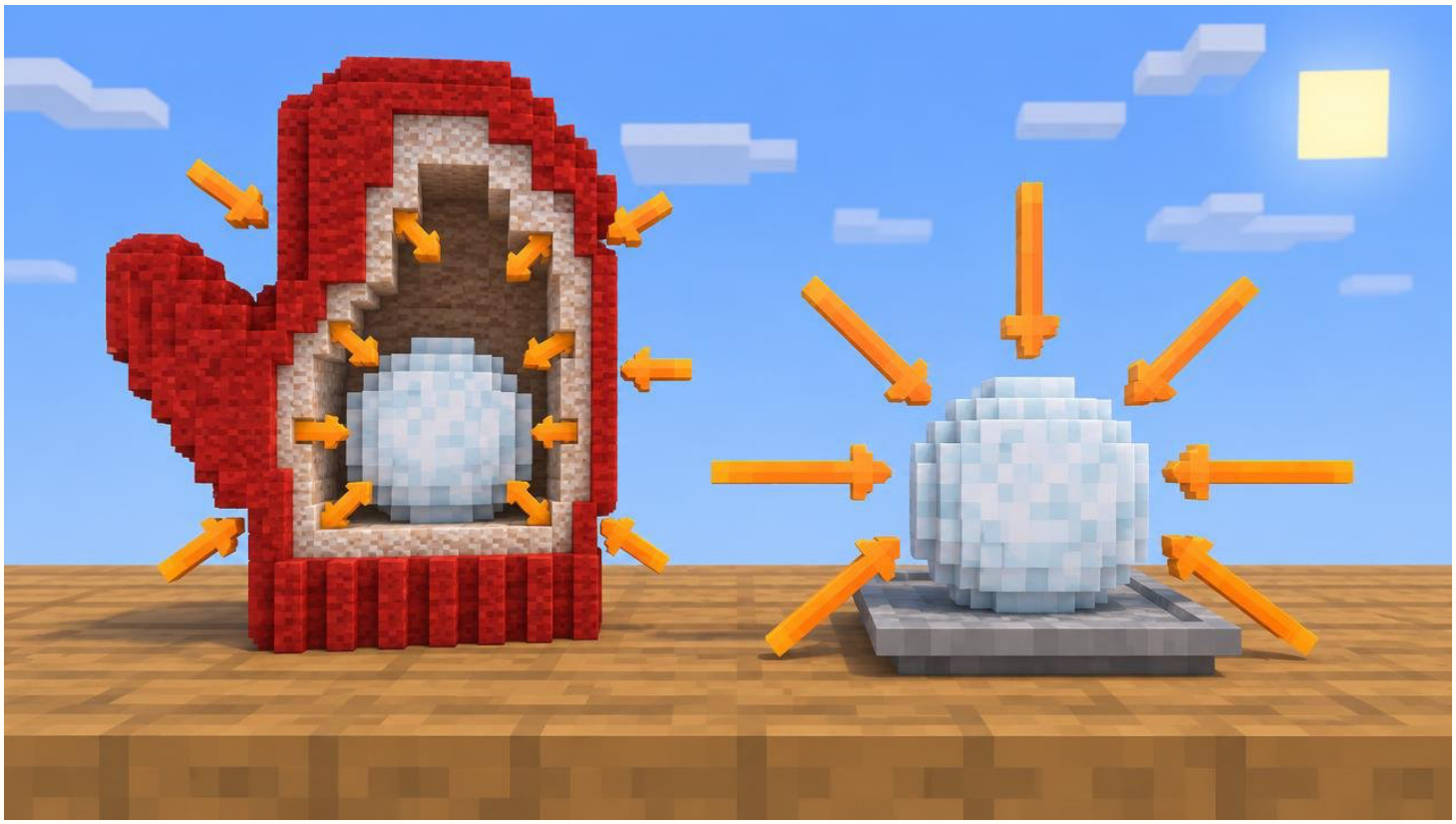
## A surprising result

By afternoon, Leo felt well enough to visit. The uncovered snowball was water, but the mitten still held a smaller snowball. Ash was surprised.



## Where does warmth come from?

The empty mitten felt cool. Ash’s hand makes heat, and wool slows that heat escaping. A mitten does not make heat of its own.



## Slowing heat transfer

With a snowball inside, insulation slows heat travelling from the warmer room towards the colder snow. Some heat still enters, but melting takes longer.



## It works both ways

Insulation works both ways. Blankets help keep our body heat in. Coolers and insulated lunch bags slow outside heat entering. None creates cold; each slows heat transfer.



## Let the evidence help

Ash admitted that her prediction had been wrong. Leo had only guessed. Their comparison supplied evidence. Changing your mind when the evidence changes is part of learning.



## A snowball worth saving

Leo gave the saved snowball a new job: a tiny snowman’s head. A small discovery had become something they could enjoy together.



## Your next investigation

With a grown-up, compare two equally sized ice cubes, one uncovered and one inside a dry insulating cover. Use matching trays, the same place and the same checking times. What do you predict? Keep discovering with Ashwika’s Story World.

# Make it your investigation

Optional, unscored: design a snowball shelter. What material might you try, and what would you keep the same to compare it fairly? Explore your idea with a grown-up.

Draw your idea here. There is no single right design.

Ask a grown-up to help you subscribe for another discovery.