

How Can Snow Keep You Warm?

The Inuit are the native people of the Northern polar region. They are familiar with cold temperatures. Traditionally, people used what was around them to make their homes. For the Inuit, that meant snow. They built small ice huts called igloos. Igloos were used mostly as temporary homes for hunting trips. They could be made quickly using the snow around them. The Inuit also had permanent wooden buildings in their villages.



Inuit hunters with sleds and reindeer



Traditional wooden Inuit building

To make an igloo, you need a certain type of snow. The snow needs to be able to hold its shape well. They would make bricks out of the snow and stack them. This would form a dome shape with a long tube for an entrance. Igloos had a hole in the dome for ventilation. This helped to keep the air moving around the space. They could also have a window.

The entrance was a long tunnel that also had a place for storage. A larger igloo would have a fire lit inside. Furs and wood helped to keep the main chamber comfortable for living and sleeping.

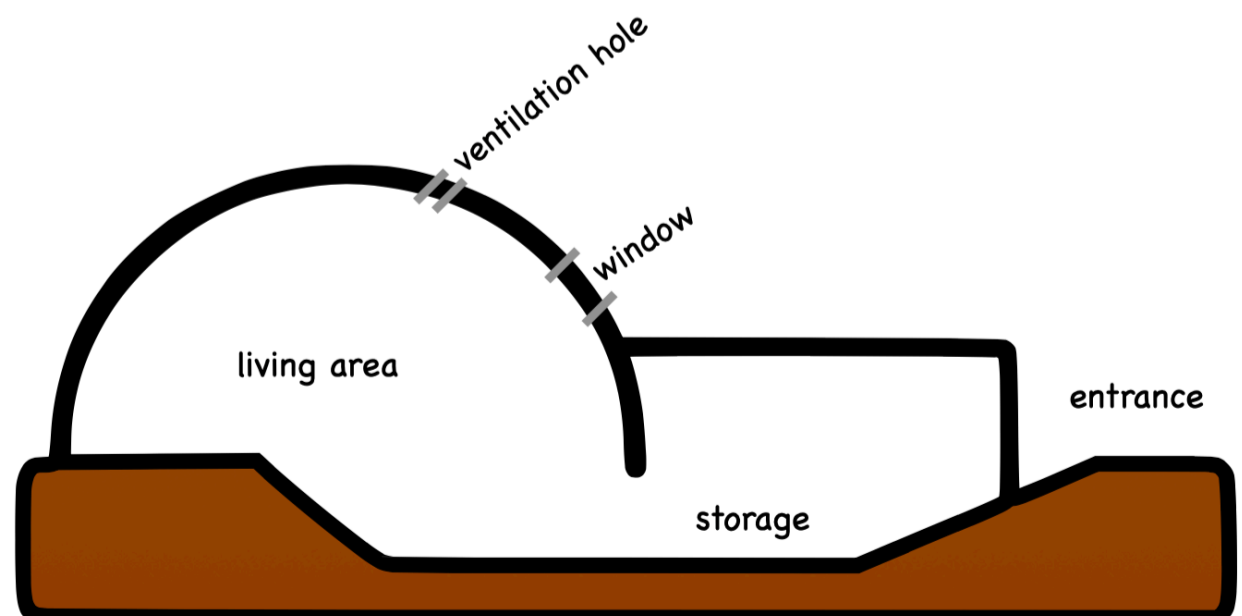
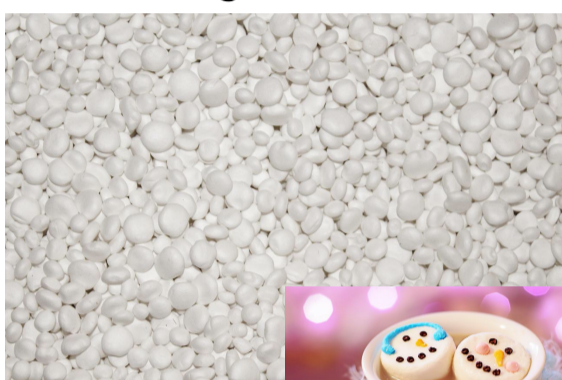


Diagram of an igloo

Igloos worked well keeping the wind out. This helped to make the temperature feel warmer. But that's not the only way they helped to keep people warm. Snow also acts as a good insulator. An insulator keeps heat from leaving it easily. It helps to keep things warmer for longer. Insulators can also keep cold things cold for longer. It does this by keeping heat from moving from one thing to another thing.



Photo of several igloos



Top: Zoomed in photo of styrofoam



Bottom: Mug of hot chocolate

Think about a good mug of hot chocolate. If you pour the hot chocolate into a styrofoam cup and put a lid on it, it will take a while to go cold. That's because styrofoam is an insulator. When you touch a styrofoam cup, you will usually not feel much heat from the hot chocolate inside. That's because the styrofoam does not let much heat go from the inside into your hand.

Not all materials do this. Some materials are called conductors. They let heat leave very easily. An example of this is metals. If you take a steel mug and pour hot chocolate inside, you will get a very different effect than from a styrofoam one. The sides of the metal mug will feel hot and can even burn your hand if the hot chocolate is too hot. The sweet treat will also not stay warm as long.



Steel mug



Photo of furs inside ice house by Filippo Cesarini

Snow acts similar to styrofoam. Even though snow is cold, it keeps the heat inside of the igloo. Snow is actually a good insulator even though snow is freezing cold itself. By blocking the cold wind from getting inside and keeping the heat from their bodies from going outside, igloos made of snow helped to keep the Inuit people warm.