

AS 90943

Student 5

**Question: How does clothing worn in cold weather retain body heat?**

Fleece like merino and other fibres keep us warm because they are insulators. We lose heat from our bodies by three ways convection, conduction and radiation. Fleeces like merino or wool stop us losing heat. This keeps us alive.

Wool stops conduction because it can't conduct. So merino stops heat loss because it stops conduction so we don't need to worry about conduction.

These people can still get cold because they can lose some heat through convection. Convection is where heat is lost because hot air moves away from the hot body. This means you then get cold. Merino has pockets to stop this heat loss. The air can't move so you keep warm. (1) Good outdoor clothes like a swandri have pockets of air to keep us warm. (2)

Humans don't lose heat through radiation.