

Heat Transfer Questions

- Why does a tile floor feel cold when an adjacent wood or carpeted floor does not?
- Why is it difficult to walk on a sunny beach but you can stand on a towel that has been in the same sun?
- Why do you feel colder in a wind?
- How do thermopane windows work?
- On a very cold day, why is a wrench likely to stick to your skin?
- How does a thermos bottle work?
- Can you explain how a wood stove works?
- What is the best color to paint your car for "lasting" beauty?
- Why is snow white? Is this a good thing?
- Why is it possible to hold a lighted match, even when it is burned to within a few millimeters of your fingertips?
- Why can you feel comfortable at 50 °F in air and die within minutes if you jump into 50 °F water?
- Why can you get a more severe burn from steam at 100 °C than from water at 100 °C?

- The pioneers found that a large tub of water placed in a storage cellar would prevent their food from freezing on really cold nights. Why?
- If water is a poor conductor of heat, why can it be heated quickly when placed over a flame?
- Why can you place a thin sheet of aluminum foil in a hot oven and remove it with your fingers without getting burned?
- Aluminum foil used for cooking has a shiny side and a matte finish side. How would you wrap a potato to be baked most efficiently?
- Why do you feel cold at night if $T=50^{\circ}\text{F}$, but warmer on a sunny day if $T=50^{\circ}\text{F}$?

