



## Answers to Focus Questions

1. Perspiration cools you on a warm day because the perspiration on your skin evaporates. The evaporation process is endothermic. The energy to change the state of the perspiration comes from your body, which causes your skin to feel cool.
2. Your hand would feel cooler if you dipped it into methyl alcohol and removed it to the air. At the same temperature, the vapor pressure of methyl alcohol is higher than the vapor pressure of water. Thus more molecules of methyl alcohol would leave the surface of your skin, each requiring energy to change state, thereby making your skin feel cool.
3. Evaporation occurs at temperatures below the boiling point. The phase change occurs at the surface of the liquid. At the boiling point the vapor pressure of the liquid is equal to the atmospheric pressure, so the change of state can take place anywhere within the liquid. Boiling is a much faster process than evaporation for this reason.