

# HEAT VS. TEMPERATURE NOTES

EN <sup>2</sup> mass

Heat: measures the total amount of KE in a sample (depends on temp)

- Units of Heat: Joules =  $kg \cdot m^2/s^2$  OR Calories by using a Calorimeter

Temperature: measures the average KE in a sample

- Units of Temperature:  $F^\circ$ ,  $^\circ C$ ,  $K$  = Kelvin using thermometer

Temp. ~~Conversations~~  
Conversions

$$^\circ C = K - 273$$

$$K = ^\circ C + 273$$

Which has more heat, a tea cup filled with boiling water or an iceberg? Why

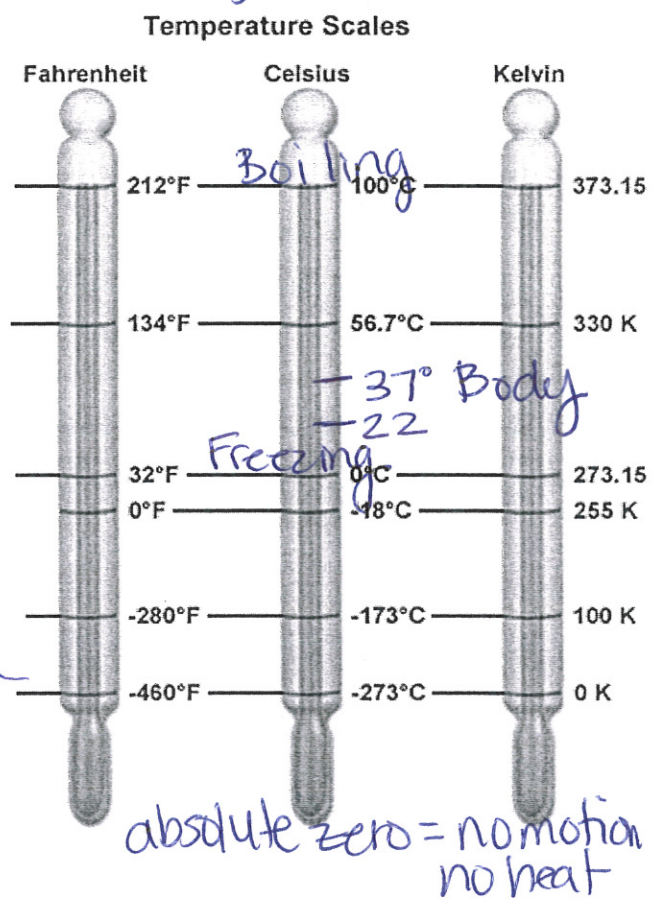
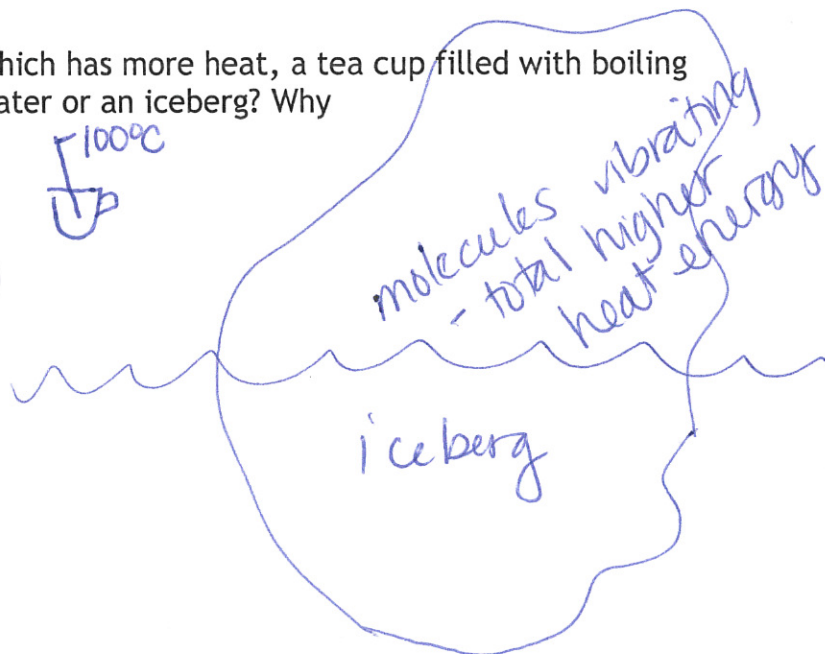
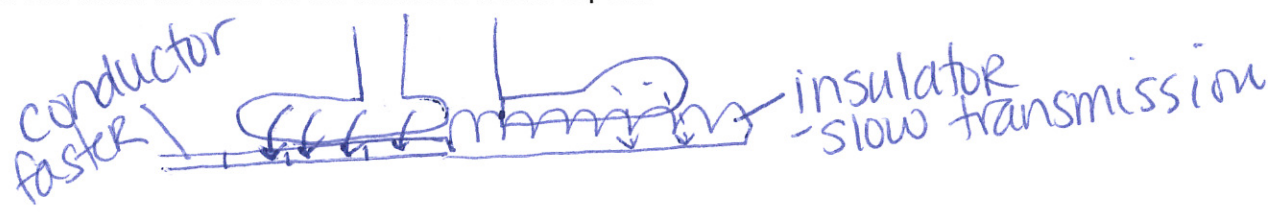


Image from [www.magnet.fsu.edu](http://www.magnet.fsu.edu)

When step out of the shower and put your left foot on the tile floor and the right foot on the fluffy bath mat, the one on the tile feels cold while the other on the mat feels warm. Explain:



What is meant by a heat gradient?

How does heat flow?