Cp (s h_2o) = 0.5 cal/g°C $H_{f(water)}$= 80 cal

Cp (l h_2o) = 1 cal/g°C

Cp (g h_2o) = 0.5 cal/g°C $H_{v(water)}$= 540 cal

Copy down and work the following problems. You may do the math for 1 gram and then multiply the answer by the total grams at the end.

1) How many calories are needed to raise the temp. of 20g of ice at -10° to the melting point?
2) How many calories are needed to raise the temperature of 5g of water at 30°C up to 100°C?
3) How many calories are needed to boil 15g of water to steam?
4) How many calories are needed to heat 50g of water from -4°C up to 104°C?
5) How many calories are released from the condensation of 100g of steam at 102°C down to water at 90°C? (think about this)
6) If the Cp of copper is 0.092 cal/g°C, how many calories are needed to raise the temp of 10g from 40° to 55°?