Unit 6: Thermochemistry
Specific Heat #2

1) Determine the amount of heat energy needed to raise 100.0 g of tin metal from 15.00°C to 75.00°C. The specific heat capacity for tin is 0.228 J/g°C.

2) Determine the amount of heat energy released to lower 300.0 g of zinc metal from 85.00°C to 20.00°C. The specific heat capacity for zinc is 0.093 cal/g°C.

3) The amount of heat energy needed to heat an unknown mass of copper from 20.00°C to 100.00°C is 1.560×10^6 J. Determine the mass of copper used. The specific heat capacity for copper is 0.092cal/g°C.

4) How much energy must be absorbed by 20.0 g of water to increase its temperature from 283.0°C to 303.0 °C?

5) How much energy is required to heat 120.0 g of water from 2.0 °C to 24.0 °C?

6) If 720.0 g of steam at 400.0 °C absorbs 800.0 kJ of heat energy, what will be its increase in temperature?

7) How much heat (in kJ) is given out when 85.0 g of lead cools from 200.0 °C to 10.0 °C?

8) If it takes 41.72 joules to heat a piece of gold weighing 18.69 g from 10.0 °C to 27.0 °C, what is the specific heat of the gold?

9) A certain mass of water was heated with 41,840 J, raising its temperature from 22.0 °C to 28.5 °C. Find the mass of water.