# Specific Heat Worksheet

**$q = (mass)(C_{sp})(\Delta T)$**

Units for specific heat = $\frac{J}{g \cdot °C}$

1. What is the specific heat of a substance that absorbs $2.5 \times 10^3$ joules of heat when a sample of $1.0 \times 10^4$ g of the substance increases in temperature from 10.0°C to 70.0°C?

2. How many grams of water would require $2.20 \times 10^4$ joules of heat to raise its temperature from 34.0°C to 100.0°C? The specific heat of water is 4.18 J/g·°C

3. If 200. grams of water is to be heated from 24.0°C to 100.0°C to make a cup of tea, how much heat must

[redacted]

data, what is the specific heat of lead?

7. The specific heat of wood is 2.03 J/g·°C. How much heat is needed to convert 550 g of wood at -15.0°C to 10.0°C?

8. What is the total amount of heat needed to change 2.25 kg of silver at 0.0°C to 200.0°C? The specific heat of silver is 0.129 J/g·°C