

# Calculating Specific Heat of Metals

HOT METAL  $\rightarrow$  COOLER H<sub>2</sub>O  
 Lose Heat Gain heat  
 Heat energy of metal  $\rightarrow Q_{\text{metal}}$   $=$   $Q_{\text{H}_2\text{O}}$  Heat energy of H<sub>2</sub>O  
 Calc. for each metal  $\rightarrow MC\Delta T = MC\Delta T$   
 (Zn)  $(70.7)C(100 - 22) = (104.5)(4.18)(22 - 20)$   
 $5514.6 C \overset{T_i}{\underset{T_f}{=}} 873.62 \overset{T_i}{\underset{T_f}{=}}$   
 $C = 0.1584 \text{ J/g}^\circ\text{C}$

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- Zn
- Cu
- Brass
- Al
- Pb

<http://hyperphysics.phy-astr.gsu.edu/hbase/tables/sphtt.html>

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