Name:_____

Cold Calorimetry Checklist

Points Earned	Points Total	Description	Notes
	10	Introduction - 2 to 3 sentences explaining the reason of the experiment and brief background ☐ Explain what the overall objective of the experiment is ☐ what are the variable (s) that are being tested ☐ What is the null hypotheses ☐ H_0 -	
	20	☐ What is specific heat ☐ How is the formula for specific heat derived ☐ Define the following formulas including writing an written out explanation of the formula $\Delta H = m C (Tf - Ti)$ $\Delta H = 0$ so: $m_w C_w (Tf_w - Ti_w) = m_o C_o (Tf_o - Ti_o)$	
	20	☐ What is the specific heat of water ☐ What is the relationship between 1 gram of water and 1 mL of water ☐ What is the relationship between the final temperature of the water and object ☐ Why are all measurements in Celcius	
	10	☐ Why are most metal objects not pure metals	
	40	☐ Completed Data Table	
	20	☐ Calculate the specific heat capacity of unknown metal - show all work and label including all units	

	10	**Specific Heats of Common Metals (C_{sp})** | Substance	Formula	Phase	C_{sp} (J/g°C)
Aluminum	Al	solid	0.900
Copper	Cu	solid	0.385
Iron	Fe	solid	0.444
Nickel	Ni	solid	0.444
Tin	Sn	solid	0.213
Water	H_2O	liquid	4.184
Zinc	Zn	solid	0.388	 ☐ ☐ Using the chart above what do you feel the unknown metals	