After about 5 minutes, check to see if all of the ice has melted. When all of the ice melts, record the final temperature of the water to two decimal places.

7. Clean up! Complete calculations and conclusion.
8. For your percent error, compare your experimental value to the heat of fusion of water. See Table B (334J/g).
9. If there is time, complete the experiment again, as Trial 2. Your teacher will advise.

Data Table 1:Needs Title title of lab

QUANTITY	TRIAL 1	TRIAL 2 (if time permits)
a. Mass of calorimeter (g)	10.06	
b. Mass of calorimeter + ice (g)	39.32	
c. Mass of ice (g)	b-a 29.26	
d. Mass of hot water	100.0 mL=100.0 g	100.0 mL=100.0 g
e. Initial temperature of hot water *(teacher will tell you)*	T1 Hot water 49°C	
f. Final temperature of water	T2 for both 20°C	
g. Ice temperature	Assume 0.00°C	Assume 0.00°C

CALCULATIONS:

1. Determine the Heat of fusion of ice using the following equation:

Heat gained ice = Heat lost water

$$m_{ice}C\Delta T + m_{ice}H_{fusion} = -(m_{Hot\ water}C\Delta T)$$

$$(29.26)(4.18)(29) + (29.26)(Hf) = -(100)(4.18)(29)$$

$$3546.8972 + (29.26)(Hf) = -12,122$$

$$-3546.8972 \quad\quad -3546.8972$$

$$\frac{(29.26)(Hf)}{29.26} = \frac{8575.1028}{29.26}$$

$$Hf = 293.0657$$