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Lab 2 Report

1.

Water Cooling - Temperature vs. Time
A 1000 kΩ thermistor was used to monitor the voltage change with boiled water and the added 20mL ice water.
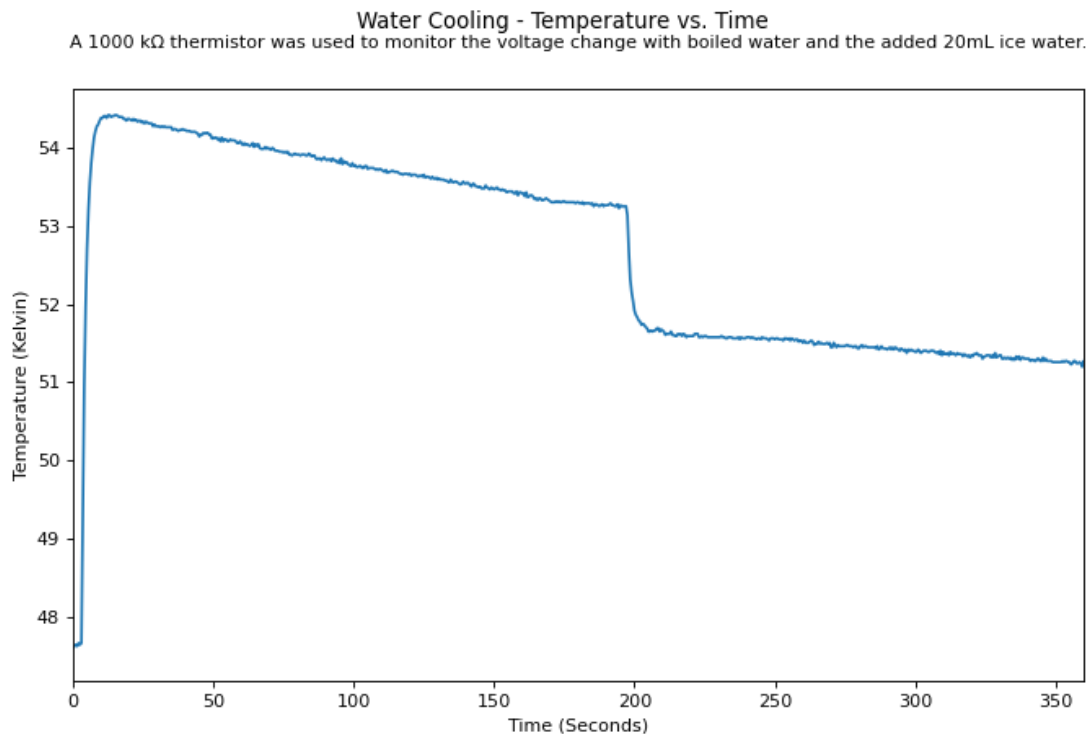
2. The graph above showed a downward trend looking throughout the experiment. Beginning the experiment, we observe a stark increase in the first seconds, making ΔT(1) a high positive value following a slight decrease over time, making it a low negative value. In contrast, a sharp drop in temperature with 20mL ice water creating ΔT(2), a relatively high negative value followed by a stable and slow decrease making it a smaller negative value.

3. Please see below
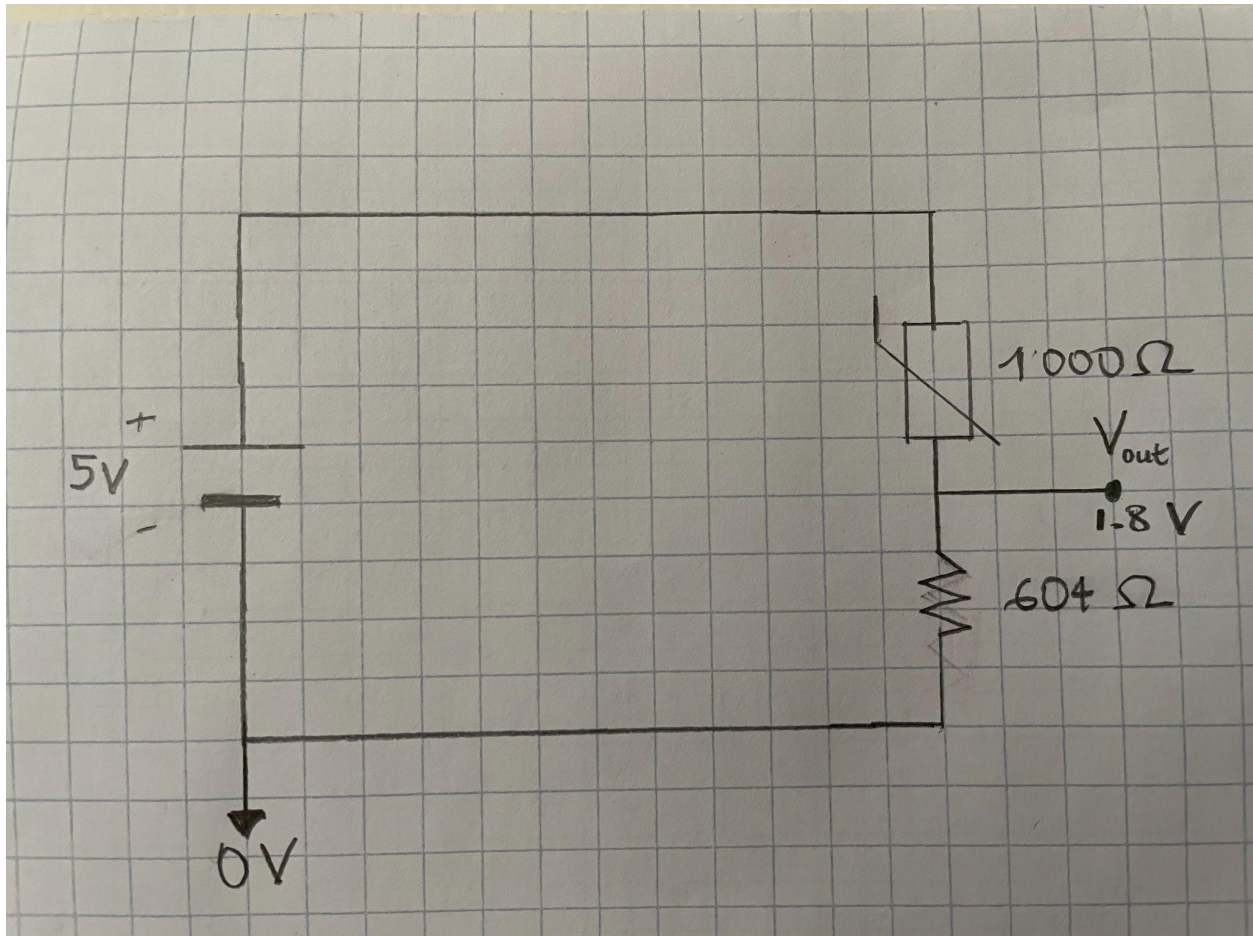
4. Please see the code as an additional attachment.

Conceptual focus:

- In our experiment, we used a 604 ohms resistor since it had better responsiveness for the voltage reading on the O-scope
- The resistor's choice would affect the sensitivity of our sensor in terms of reading out the temperature. After testing 200, 300, and 500 ohms options, we opted for the 604 ohms resistor after heating the thermistor by squeezing it.