# Determining Temperature from an Arduino

**Reference**: [Wikipedia: Thermistor](http://en.wikipedia.org/wiki/Thermistor), [Electronics in Schools](http://www.electronicsinschools.org/page.php?m=3&ps=2&p=42)

This determination assumes that our NTC Thermistor (*R*1) is placed in series with a variable 10KΩ resistor (*VR*1). Using the concept of a voltage divider as in the graphic, let *Vs* be the reference voltage and *A*0 be the reading from Arduino’s Analog Input 0.



From the formula offered at [Wikipedia](http://en.wikipedia.org/wiki/Thermistor), we derive,



Where, from the characteristics of our NTC Thermistor at 25° C,

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See [Thermistor.xls](http://darcy.rsgc.on.ca/ACES/ICE4M/AVRTasks/Thermistors.xls) for the data and graph.