Team #3344

Activity 4.2: *Heat Transfer*

Task 1: Briefly describe heat type of heat transfer:

- **Conduction -Transfer of heat through a material or between objects in direct contact.**
- **Convection - Transfer of heat through the movement of fluid or gas particles, creating currents and circulation.**
- **Radiation -Emission and transmission of heat energy in the form of electromagnetic waves, without direct contact.**

Task 2: Set-Up the LunaSat

- ☑ ~~Plug in the LunaSat and upload the code~~
- ☑ ~~Launch the serial plotter~~
- ☑ ~~Locate the temperature sensor on the LunaSat~~

Task 3: Conduction Experiment

Task 3 in Activity 4.1 was an example of conduction. You can transfer your data over to this page if you wish.

What was the max temperature the graph shows (in Celsius)? 31.2 c

Task 4: Convection Experiment

- ☑ ~~Wave a hand or a piece of paper rapidly over the LunaSat for 15 seconds. Remain at least 1 foot away from the sensor. ***Do not hit the LunaSat.***~~

What was the max temperature the graph shows (in Celsius)? 27.6 C

What is the behavior of the graph as you start convection? How about when you stop? The temperature dropped when we started waving and raised when we stopped

Task 5: Radiation Experiment

- ☑ ~~Warm up your hands~~
- ☑ ~~Place both hands surrounding (but not touching) the LunaSat with the temperature sensor side face up~~

What was the max temperature the graph shows (in Celsius)? 28.3 C

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What is the behavior of the graph as you cover the sensor? How about when you uncover it again? The temperature raised when we covered the sensor and dropped when we stopped