**Lab - Microclimate Temperature Activity**

Question: How does temperature change at different elevations?

Hypothesis:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Question: How does temperature change on different surfaces?

Hypothesis:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Materials:**

* meter stick
* 3 thermometers
* tape
* timers
* pencil
* paper

**Procedure:**

1. Tape a thermometer to the meter stick at 0cm, 50cm, and at 100cm.

2. You will be going outside to a grass field, a parking lot, a rocky area and a concrete sidewalk.

3. At each location hold the meter stick with the thermometers perpendicular to the ground for 1 minute to allow the thermometers to stabilize. Then take a reading and record the temperature in the Data Table.

4 After the temperature at all locations has been taken return to the room and remove the thermometers from the meter stick. Place all material on the lab table.

**Results:** Record temperatures in the table below

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Location |  |  |
|  |  | Grass | Parking lot | Sidewalk | Rocks |
|  | 0cm |  |  |  |  |
| Height | 50cm |  |  |  |  |
|  | 100cm |  |  |  |  |

**Conclusion:**

1. Graph the results putting all surfaces in one graph. Use a different color for each surface.



**Elevation (cm)**

**Temperature (°C or °F)**

1. On which surface and at which height was it the hottest? The coolest?
2. On which surface was there the largest change?
3. Based on your graph how does elevation affect the temperature? Does the surface make a difference?