**Temperature Tells All Activity – Temperature vs. Time Worksheet**

Test: \_\_\_ First or \_\_\_ Second (place an “X” on which test this is for)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Time (minutes:seconds)** | **Time ID** | **Outside Temperature (°F)** | **Inside Temperature (°F)** | **Difference Between Inside and Outside Temperature (°F)** | **Change in Indoor Temperature (°F)**  **(i.e., T2-T1 )** | **Qualitative Analysis**  **(how smoky does the house look?)** |
| 0:00 | T1 |  |  |  | ---- |  |
| 0:20 | T2 |  |  |  |  |  |
| 0:40 | T3 |  |  |  |  |  |
| 1:00 | T4 |  |  |  |  |  |
| 1:20 | T5 |  |  |  |  |  |
| 1:40 | T6 |  |  |  |  |  |
| 2:00 | T7 |  |  |  |  |  |
| 2:20 | T8 |  |  |  |  |  |
| 2:40 | T9 |  |  |  |  |  |
| 3:00 | T10 |  |  |  |  |  |
| **Turn off lamp and remove incense from under the platform** | | | | | |  |
| 3:20 | T11 |  |  |  |  |  |
| 3:40 | T12 |  |  |  |  |  |
| 4:00 | T13 |  |  |  |  |  |
| 4:20 | T14 |  |  |  |  |  |
| 4:40 | T15 |  |  |  |  |  |
| 5:00 | T16 |  |  |  |  |  |
| 5:20 | T17 |  |  |  |  |  |
| 5:40 | T18 |  |  |  |  |  |
| 6:00 | T19 |  |  |  |  |  |

**Directions**

1. Graph the Inside Temperature versus time.
2. Graph the Difference in Inside and Outside Temperature versus time.
3. Graph the **change** in Inside Temperature versus time.
4. What is the **maximum** Inside Temperature? \_\_\_\_\_\_\_\_\_\_\_\_ What is the **minimum** Inside Temperature? \_\_\_\_\_\_\_\_\_\_\_\_\_ What time do each occur at? \_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the **greatest** Change in the Inside Temperature? \_\_\_\_\_\_\_\_\_\_\_ What is the **smallest** Change in Inside Temperature? Between what times do these occur? \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.
6. Find where the greatest **change** in Inside Temperature occurs on the graph you made in #1. What do you notice about the line connecting the data points? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Do the same for the smallest Change in Inside Temperature.

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1. What factors do you think affect the **rate** of Change in Inside Temperature? (materials, orientation, etc…)

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1. Compare with other groups!

**Graph #1 - Indoor Temperature vs. Time**



**Graph #2 - Difference between Indoor and Outdoor Temperature vs. Time**



**Graph #3 - Change in Indoor Temperature vs. Time**

