**Lab #** **Energy from the Sun: Rate of Melting**

Date: Name & Partners**:**

**Purpose:** To test to see if the sun’s energy heats up and melts ice cubes at the same rate

**Hypothesis:** I predict that the ice cube will melt the fastest on the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ surface and the slowest on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ surface.

Materials:

-5 ice cubes -1 cup - 4 surfaces: wood, concrete, asphalt & grass

-lab report -stop watches -pencil

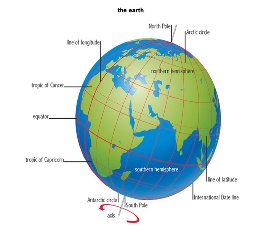
**Procedure**:

1. time how long it takes using a stop watch for an ice cube to melt at room temperature (20-23◦C).
2. Observe the properties of each surface and predict which will absorb the sun’s heat energy the most.
3. Answer communication questions to help support your hypothesis.
4. Write your predictions of what surfaces the ice cube will melt rapidly.
5. Place an ice cube on each surface: grass, wood, asphalt and concrete and time each sample using a stop watch
6. Wait and record the observations and time for each.
7. Refer back to your hypothesis, refute or confirm if it was correct and explain why.

**Communication:**

On a hot summer day, where would you prefer to sit in the afternoon: on the grass, in a sandbox, on a concrete sidewalk, on a wood deck or an asphalt basketball court? Explain your choice. Which location do you think would be the worst and why? **Draw a picture of each.**

Explain why the average temperature in a desert (near the equator) would be higher than the average temperature on a mountain in Canada?



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**Observations**:

Chart your observations on a table:

|  |  |
| --- | --- |
| **Surface** | **Rate of Melting in minutes and seconds** |
| room temperature |  |
| grass |  |
| concrete |  |
| asphalt |  |
| wood |  |

**Explain:** which surface had the most rapid rate of melting the ice cube:

wood grass asphalt concrete

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**Conclusion:**