**Just Breathe Green Worksheet**

Time of day \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Humidity \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dew point \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Weather conditions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What do you predict that you will see accumulate on the bottle/bag? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Predict the color of water as it evaporates from the plant. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| Plant ID # \_\_\_\_\_\_\_\_Common name: *Scientific name*:  |
| **Time (minutes)** | **Weight (g)** | **Observations (What do you see?)** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Determine the amount of transpiration:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trial 1 weight |  | Trial 2 weight |  | Trial 3 weight |  |
| minus | minus | minus |
| Initial weight |  | Initial weight |  | Initial weight |  |
| equals | equals | equals |
| Trial 1 transpiration mass (g) |  | Trial 2 transpiration mass (g) |  | Trial 3 transpiration mass (g) |  |
| Trial 1transpiration rate |  | Trial 2transpiration rate |  | Trial 3transpiration rate |  |
| **Average transpiration rate (1 g=1 ml)** |  |

**Draw and describe this plant species:**

|  |
| --- |
| Plant speciesCommon name: *Scientific name*:  |
| Light requirements |  | Sketch with details: |
| Height |  |
| Soil conditions |  |
| Transpiration rate (ml/min) |  |

**Draw and describe plant species selected by two other classmates and record the transpiration rate below:**

|  |
| --- |
| Plant speciesCommon name: *Scientific name:*  |
| Light requirements |  | Sketch with details: |
| Height |  |
| Soil conditions |  |
| Transpiration rate (ml/min) |  |

|  |
| --- |
| Plant speciesCommon name: *Scientific name:*  |
| Light requirements |  | Sketch with details: |
| Height |  |
| Soil conditions |  |
| Transpiration rate (m/min) |  |

**Plant species common name:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trial 1 transpiration mass (g) |  | Trial 2 transpiration mass (g) |  | Trial 3 transpiration mass (g) |  |
| Trial 1transpiration rate  |  | Trial 2transpiration rate  |  | Trial 3transpiration rate  |  |
| **Average transpiration rate (1 g=1 ml):** |  |

**Plant species common name:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trial 1 transpiration mass (g) |  | Trial 2 transpiration mass (g) |  | Trial 3 transpiration mass (g) |  |
| Trial 1transpiration rate |  | Trial 2transpiration rate |  | Trial 3transpiration rate |  |
| **Average transpiration rate (1 g=1 ml)”** |  |

**Graphing**

**In one graph, plot the transpiration rate data as volume over time for each plant species. Use different colors
and/or line styles for each plant species and create a key. The slope of the line is the transpiration rate.**



|  |  |
| --- | --- |
| Plant Species | Color or symbol |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |

**Volume**

**Minutes**

**Analysis Questions**

**Did one plant species have a higher rate of transpiration than the other? If so, what were the physical differences in the plants? Why might this make a difference? Refer to your drawings and observations of the plants and the data you collected.**

**What was the color of the condensed water? Why?**