Transpiration Lab Basic Procedure and Data Set-Up

In this lab, we’ll be investigating the rate of transpiration in plants under different environmental conditions. Each group will set up a control plant and a plant that they place in the condition of their choosing. To prepare your plants for the lab:

1. Select your plants and remove any blooms present. Any blooms or leaves that fall off during the week should be placed back in the center of the plant so as not to affect the mass.
2. Carefully wrap the root ball of each plant in a plastic bag and tie the bag snugly around the stems with the yarn.
3. Record the masses of each plant and choose 1 plant to be your control.
4. Sit your control plant in the control area of the classroom.
5. Decide on which variable you’d like to investigate and propose how you’d test that variable (environmental condition).
6. Get approval on your test before proceeding.
7. Set up your variable test.
8. Each day this week, you’ll mass your plants to determine the amount of transpiration occurring.

General Data set-up: Masses recorded in grams

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type of Set-up | Monday (initial) | Tuesday | Wednesday | Thursday | Friday |
| Control |  | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |
| Group variable: |  | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |
| Class Variable 1: |  | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % Change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |
| Class Variable 2: |  | Mass:  Change in mass:  Cume % | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |
| Class Variable 3: |  | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |
| Class Variable 4: |  | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: | Mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume Change in mass:  \_\_\_\_\_\_\_\_\_\_\_\_\_  Cume % change in mass: |