

TRANSPIRATION
PRE-LAB

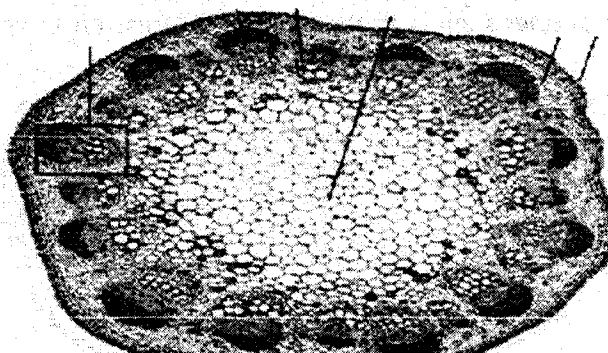
Name: _____

Date: _____

Total Points: 35

Due Date: _____

1. What is a 'potometer?' (1 point)
2. Diagram and label a potometer (4 points)
3. Why and how will you measure the area of the leaves used? (2 points)
4. Which conditions will transpiration occur quicker than the control and why? (2 points)
5. What is a microtome and how do you set one up? (2 points)
6. How will you differentiate between the different plant tissues? (4 points)
7. For the diagram below, label the major plant tissues. Is the sample from a monocot or dicot? (5 points)



8. With the data below, construct a graph and calculate the rates of transpiration for each condition. (3 points for each line (12 points) and 4 points for the rates of transpiration.)

Condition	0 min	3 min	6 min	9 min	12 min	15 min	18 min	21 min	24 min	27 min	30 min
Wind	0	3.70	7.77	9.87	12.34	14.19	16.29	17.90	19.87	21.60	23.45
Room	0	0.67	1.34	1.94	2.61	3.13	3.63	4.33	4.78	5.30	5.75
Heat	0	2.15	4.27	5.89	8.15	9.41	10.96	11.53	12.74	13.90	16.42
Humid	0	1.59	1.70	1.85	1.97	2.21	2.46	2.70	2.83	3.13	3.39

Measurements are in ml.

Time is measured in minutes (min)

Leaf surface area has been taken into consideration with this data.

RATES OF TRANSPIRATION

Condition	Rate of Transpiration (ml/M ² /min)
Wind	
Room	
Heat	
Humid	

Calculations (if needed):