

Lab 9: Transpiration Lab

Please do the following for the plant lab:

- chart and graph the averages of the 4 different conditions we placed upon our leaves
 - Control, Rain Forest, Cloud Forest, Desert
 - make sure to use the appropriate graph type
 - (hint) you are plotting data over time....the slope of which is the rate...!
 - write a brief explanation of the data presented by your graph
 - include all setup groups
 - make sure to fully explain any trends and be sure to tell **why** the trend is occurring.
 - make sure you are showing water loss in ml/m²
 - (hint) what ever grid you used to measure the surface area will need to be converted to m²

- Answer all questions in the lab manual

- find a picture of the underside of a leaf
 - label the picture making sure to show the guard cells and the stomata

- label and diagram the cross section of the plant stem
 - label the following: phloem, xylem, sclerenchyma, pith, epidermis, cortex, vascular bundle

- compare and contrast the following:
 - C3 plant, C4 plant, CAM plant

- the following is your raw data....use the chart on the next page once you've calculated the milliliters of water lost per square meter (ml/m²)

Set Up	Time (minutes)			
	0	10	20	30
Control	0.12	0.14	0.16	0.18
Control	0.00	0.08	0.15	0.15
Rain Forest	0.51	0.41	0.36	0.30
Rain Forest	Clogged Tube			
Cloud Forest	0.07	0.10	0.10	0.11
Cloud Forest	0.44	0.55	0.55	0.53
Desert	0.32	0.34	0.35	0.36
Desert	0.49	0.50	0.52	0.54

Table 1: Cumulative water loss (ml/m²) due to transpiration with respect to different simulated conditions: Control (ambient), Rain Forest, Cloud Forest, and Desert environments

Set Up	Time (minutes)			
	0	10	20	30
Control				
Control				
Rain Forest				
Rain Forest				
Cloud Forest				
Cloud Forest				
Desert				
Desert				