FLINN SCIENTIFIC

Name_____

Stomata and Transpiration Rates Worksheet

Part I.

Drawing of an Individual Stoma

Microscope Field	Number of Observed Stomata
1	
2	
3	

Average number of stomata per field _____

Questions for Part I.

1. In your own words, describe the function of stomata.

2. What are the advantages for a plant that has a large number of stomata? What are the disadvantages?

3. What is the advantage of closed stomata to a plant when water is in short supply? What are the disadvantages?

Part II.

Plant #	Predictions for each plant test tube setup
1	
2	
3	
4	

Plant #	Initial water volume in test tube (mL)	Final water volume in test tube (mL)	Water Loss (mL)
1			
2			
3			
4			

Questions for Part II.

1. Define transpiration. Briefly describe three factors that influence transpiration.

2. Compare the amount of water loss in the test tubes for plants 1–4 and explain the differences among the results depending on the plant treatment.

3. What do you predict would happen to the water volume in each plant test tube setup if this activity was carried out for a longer period of time? Which plants would likely survive?