Lab 12: Plant Anatomy & Transpiration

GOALS:					
You should be able to					
*	Descri	be the role of water in the surv	vival of plants and h	now wate	er is transported through them.
*		e transpiration and explain the			
*	Explain how certain conditions can affect the rate of transpiration.				
*	Identify and state the functions of major tissues in an herbaceous monocot stem, woody dicot				
	stem, and leaf cross-section.				
	Stelli, i	and rear cross section.			
I Tuonamination Functional					
	Transpiration Experiment pp. C73-C77: Follow procedure and record results in data table. Be sure to conduct both the				
					Be sure to conduct both the
	experimental control as well as your experimental variation.				
	Fill in your data on class overhead.				
	Graph your results on p. C77.				
	II. Herbaceous Monocot Stem				
	p. 109, Fig. 9.6: View slide of monocot stem and use diagram to help you identify structures.				
	Be able to label and state functions of:				
	\checkmark	epidermis	\checkmark	xylem	
	\checkmark	cortex	\checkmark	phloen	1
	\checkmark	vascular bundle	\checkmark	pith	
	View	demo of celery and carnation.	How has the colore	ed water	entered these plants?
III. W	II. Woody Dicot Stem				
	p. 110-111: Follow procedures #1-7 to view slide and identify structures.				
	View wood block, which is also a woody dicot stem.				
	On slides and wood block, be able to label and state functions of:				
	\checkmark	cork	\checkmark	annual	ring
	✓	cortex	\checkmark	xylem	•
	\checkmark	phloem	✓		ar cambium
IV. Sto	omata	r			
	p. 111: Follow procedures #1-4 to create and view your own wet mount slide.				
	Be able to identify and state the functions of:				
_	✓ West	stoma	ations of.		
	√	guard cells			
		guara cens			
V. Leaf Cross-Section					
	pp. 112 & C71-C72: View leaf cross-section slide. Use reading and diagram to help you identify				
_	the structures.				
(4) (4)					
		cuticle		v	upper/lower epidermis
	√	leaf vein		v	stoma
	√	palisade mesophyll		✓	guard cells
	✓	spongy mesophyll			