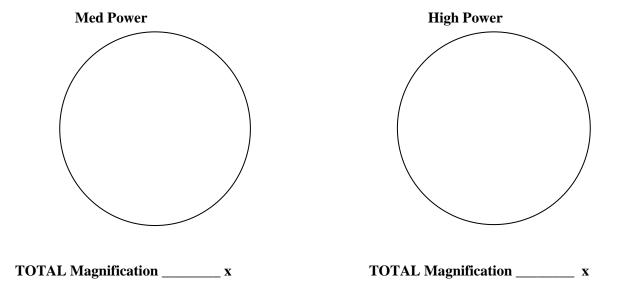
Name:		Date:	Period:	
		Photosynthesis Observatio	ons Lab	
Introduction	n:			
dioxide is ad			the process of photosynthesis. When carbon The production of this acid causes the BTB	
1. Wha	at color is the BTB solution who	en it is basic (high pH) or ne	utral?	
	What color is the BTB solution when it is acidic (low pH)?			
	Write the chemical reaction of what is occurring when carbon dioxide is added to water in the space below.			
	erline the reactants and circle the	-	•	
Part I: Obs	erving the Process of Photosy	nthesis		
bubbled into	each solution causing carbonic		and a stalk of elodea. Carbon dioxide has been n of carbonic acid has caused the solution to the other test tube was exposed to light over night	
oubbled into change color	each solution causing carbonic	a dark cabinet over night. T solutions in each test tube in	n of carbonic acid has caused the solution to the other test tube was exposed to light over night the table below.	
bubbled into change color	each solution causing carbonic r. One test tube was placed into te three <b>observations</b> about the	a dark cabinet over night. T solutions in each test tube in	n of carbonic acid has caused the solution to the other test tube was exposed to light over night	
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bubbled into change color 1. Write 2. What 2.	each solution causing carbonic r. One test tube was placed into te three observations about the  After 24 Hours in Description of the control	a dark cabinet over night. T solutions in each test tube in Dark	n of carbonic acid has caused the solution to the other test tube was exposed to light over night in the table below.  After 24 Hours in Light	
2. What tube	each solution causing carbonic r. One test tube was placed into te three observations about the After 24 Hours in East inferences can you make bases?	a dark cabinet over night. T solutions in each test tube in Dark	n of carbonic acid has caused the solution to the other test tube was exposed to light over night the table below.	
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## Part II - Observing Cytoplasmic Streaming Chloroplasts in Elodea

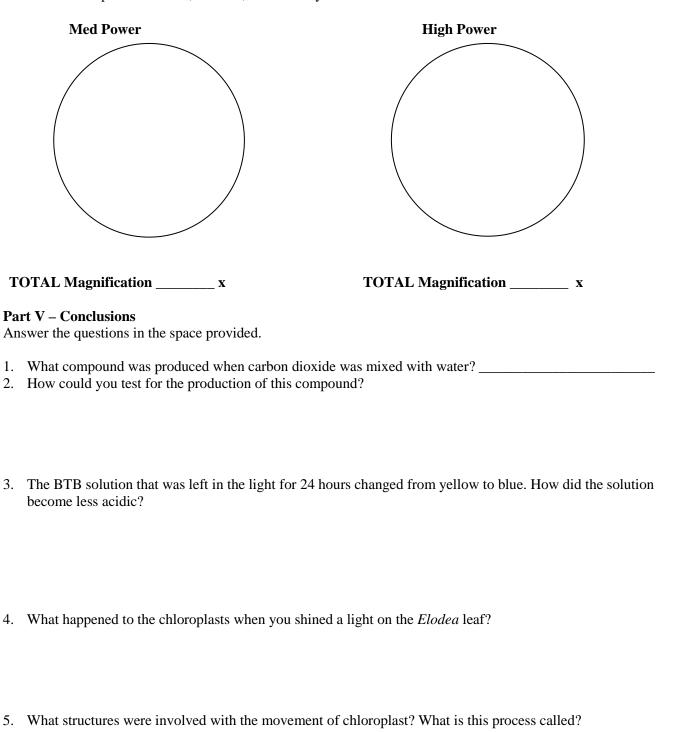
- 1. Prepare a wet mount of an Elodea leaf with tap water. To do this, place a drop of water in the center of the slide. Take one leaf of Elodea and lay it flat in the drop of water. Cover with a cover slip.
- 2. Observe the leaf at 100X and record your observations. Label the cell wall, cell membrane, chloroplasts, and any other feature you can observe.
- 3. Increase the power to 400X, observe, and record your observations.



- 4. Place your slide onto the light source on the microscope for one minute.
- 5. Observe your slide over 100x and 400x. Write your observations in the space provided below. Are the chloroplasts moving clockwise or counterclockwise?

## Part IV-Observing Stomata in Wandering Jew

- 1. Place a piece of a Wandering Jew leaf directly on a slide. Do not cover with a cover slip.
- 2. Observe the leaf at 100X and record your observations. Label the guard cells, stomata, and any other features you can observe.
- 3. Increase the power to 400X, observe, and record your observations.



6.	What cellular features could you see on the leaf of the Wandering Jew that you could not see on the leaf of the <i>Elodea</i> ?
7.	What is the purpose of stomata in plants?
8.	Under which conditions might a plant close its stomata?
9.	Under which conditions might a plant open its stomata?
10.	How might the plant control whether the stomata are open or closed? Does this require the input of ATP?