

Name _____ Per. _____ Date _____

**Chapter 8- Make Up Lab
Chromatography and Photosynthesis**

Part 1- Paper Chromatography

Using a minimum of 2 websites, research and explain what paper chromatography is and how this process works in separating the different pigments in a spinach leaf.

To earn credit for this part, you must list the website addresses of all of the websites you used to complete the above statement. Your explanation must be well written paragraphs with complete sentences. Plagiarism will result in a zero for this lab.

You must draw a picture of an actual result of a chromatography spinach lab.

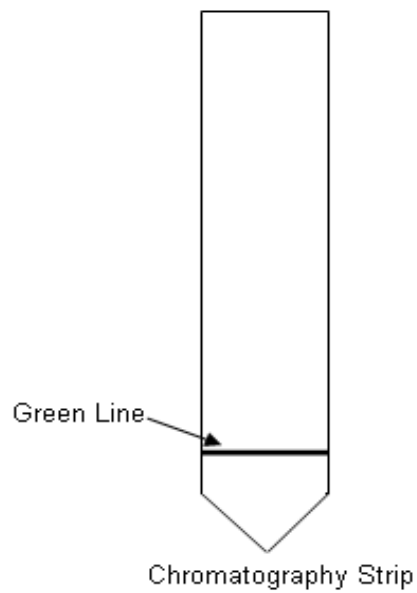
(Be sure to draw the chromatography paper and color the different bands)

Website addresses: _____

What is Paper Chromatography?

Explain how the process of paper chromatography is used to separate the different pigments in a spinach leaf.

Drawing of an actual result of Spinach Chromatography.



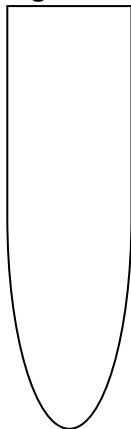
Part 2- Carbon Dioxide Absorption

Read the paragraph and answer the following questions.

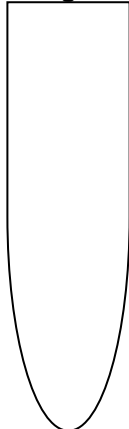
During this part of the lab, students prepared a test tube. In their test tube, students added distilled water and a dropper of bromothymol blue. The solution in the test tube was blue. Next, they covered the top of their test tube with a paper towel, placed a straw into the test tube, and gently blew into the solution. The solution in the test tube changed from blue to yellow. The students then obtained a sprig of elodea and placed it into the test tube in the yellow solution. The test tubes were then placed in a rack under a light for 48 hours. At the next class meeting, the students grabbed their test tubes and made their final observations. They observed that the solution in the test tube had changed from yellow back to blue.

Draw the solution before the students blew into the straw, after they blew into the straw and after 48 hours.

Initial Observations
(Before blowing into straw)



Initial Observations
(After blowing into straw)



Final Observations
(After 48 hours)



Questions- Answer all questions in complete sentences and, if you must, a well written paragraph.

- 1 After students blew into the straw, explain what caused the color of the solution to change from blue to yellow.

- 2 After 48 hours, explain why the color of the solution changed from yellow back to blue.

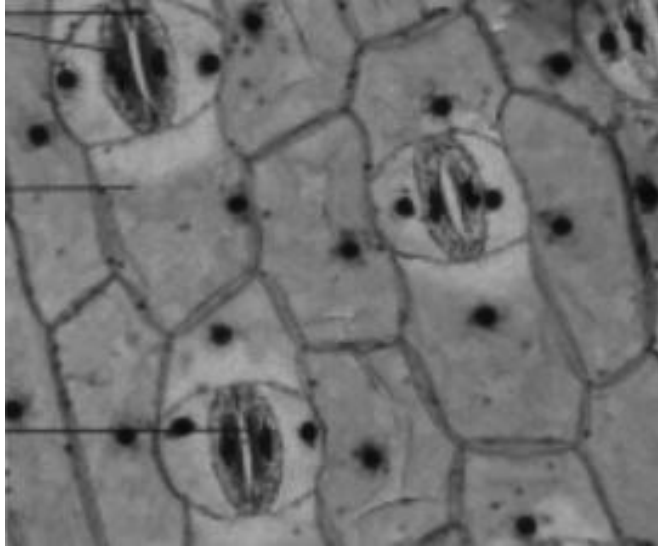
- 3 Explain why students test tubes were placed under a light for 48 hours.

Part 3- Zebrina Plant Leaf Structures.

Using the given list, label the diagram below of the structures of a Zebrina leaf.

Structures

Epidermal Cells
Guard Cells
Stomata



Questions

- 1 What is a stomata?
- 2 Explain the role of the stomata during photosynthesis.
- 3 What are guard cells?
- 4 Explain the role of guard cells during photosynthesis.