

Spinach Chromatography Lab Notes

Name: _____

Date: _____

Period: _____ Page: _____

Key Concepts:

Light:

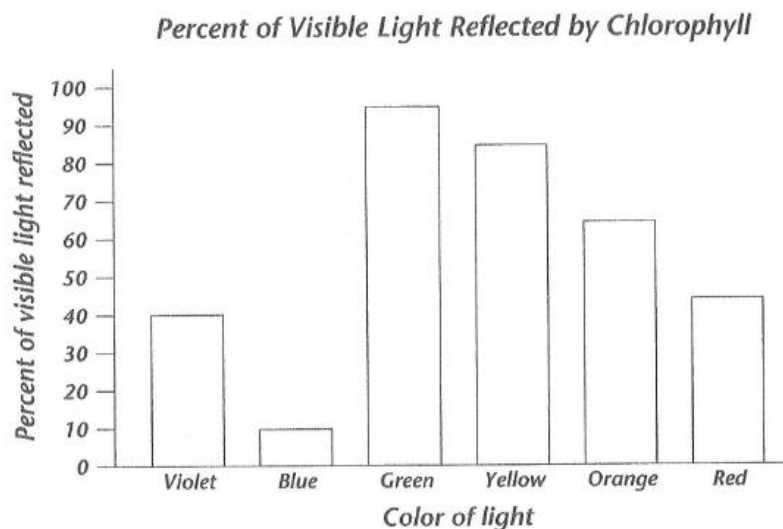
- _____ is made up of different _____, and the type of light _____ our eyes can detect is known as _____ light.
- _____ light or white light contain all the _____.
- When we look at an object, the _____ of light we see is the _____ of light _____ off the object.
- The rest of the _____ in _____ light get _____ by the object.
- For example, if I am looking at a _____ fire truck, _____ light is _____ off the fire truck and the other colors are _____ by the fire trucks.

Lights and Plants:

- _____, in organisms the produce their own food through _____, absorb _____.
- _____ are chemicals that give an object color. The _____'s color is seen by us when that specific color of light _____ off the chemical.
- In the _____, there is a pigment known as _____.
- _____ is the _____ or chemical used to _____ sunlight energy used for the process of _____.
- _____ reflects _____ light. Plants appear _____ because of the _____ light and absorbing the other colors of light.
- _____ mostly absorbs two colors of light in green plants. _____ absorbs _____ and _____ light the best out of all the colors of the rainbow.
- During the _____, chlorophyll breaks down in plants, and leaves start to turn colors. Other pigments in the plant become _____ and start _____ different colors of light commonly found on plants in the fall.

Chlorophyll and the Color of Light

A pigment is a colored chemical compound that absorbs light. You can think of a pigment as a kind of sponge that absorbs light of all colors except the ones that it transmits and reflects. The colors that you see are the colors of light that the pigment reflects. The bar graph below shows the percentages of light of different colors that are reflected by the plant pigment chlorophyll.



Directions: Answer the following questions in a complete sentence.

1. Which color of light does chlorophyll reflect the most? About what percent of light of this color does chlorophyll reflect?
2. Which color of light does chlorophyll absorb most? About what percent of light of this color does chlorophyll absorb?
3. The colors that are reflected less than 50% contribute very little to what the eyes sees. Which colors does your respond to when you look at a “green” leaf?
4. Which colors of light do you not see when you look at a “green” leaf?
5. Explain in your own words how chlorophyll makes a leaf look green.