

Sec.: _____ Name: _____

Experiment: Part Of The Electromagnetic Spectrum (E. Science 9-22-1a)

Purpose: To Observe part of the electromagnetic spectrum.

Materials: light source triangular prism

Methods:

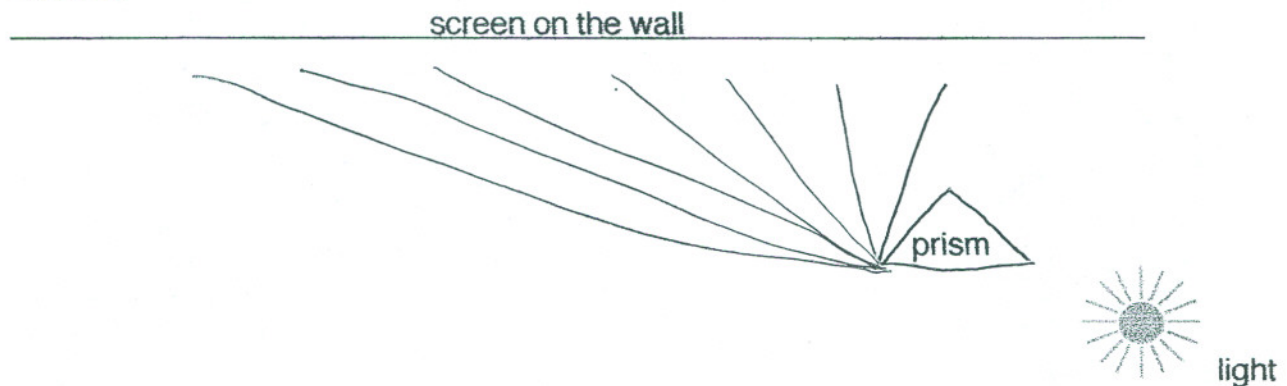
1. Place the triangular prism near a light source. Shine the light at it on at angle to observe the bending of light rays to make the "rainbow" on the screen.

2. Draw a diagram of what you observe on the screen and record the order of the colors in the visible part of the electromagnetic spectrum.

Label this portion as the visible spectrum.

3. On either side of the visible spectrum label the next two types of waves in proper order.

Results:



Conclusions:

1. List the colors of light as you see them in order from the shortest to the longest wavelength.

2. Now list all the types of waves in order from the smallest length to the largest.

3. What waves of the electromagnetic spectrum are just beyond red? (fig. 1)

4. What waves of the electromagnetic spectrum are just beyond violet?

5. Sequence these electromagnetic waves from longest (1) to shortest (6) by placing the numbers beside each wavelength.

(fig. 1). radio: _____ microwaves: _____ infrared: _____
ultraviolet: _____ x rays: _____ gamma rays: _____

<u>Location</u>	<u>Type of Material</u>	<u>Description and Sketch of Material</u>
4		

Part B: pH Determination of Rain In Our Area

<u>Sample location</u>	<u>pH level</u>
_____	_____
_____	_____
_____	_____
_____	_____

Conclusions:

1. What is the average pH of the samples obtained from this precipitation?
2. Use ^{the} figure in our notes to give the name of a solution that is nearest the average pH we obtained in this experiment.
3. What sort of materials collected on each lid containing the petroleum jelly?
4. Rank the lids in order from the most large particles to the least large particles.
5. Which of the materials, that were collected, might be a result of human activities?
6. Explain why some areas had more and larger particles in the air.

Discussion:

1. Would we label our area as receiving mild acid rain or severe acid rain?
2. Suggest a possible source of our acid rain. (Remember Prevailing Westerlies).
3. How does your body filter solid particles from the air you breathe?
4. Do any of the seeds that you might have collected suggest how some plants migrate from one area to another? Explain.
5. Do you think any of the material you collected might be harmful to humans? Explain your answer.
6. Read page 618 of the textbook. What was the name of the book Rachel Carson wrote and what was the main idea of her writings, and was the result of her writings?
 name: _____ main idea: _____
 results: _____
- 7a. Read Ex. 19:18, Ex. 20: 1 - 18. What was mount Sinai covered with?
- 7b. Why was it covered with this?
- 7c. What did God give to Moses (and us) at this time?