

Name: _____ Section: _____

Electromagnetic Spectrum & Light - Webquest

[Electromagnetic Spectrum](http://imagine.gsfc.nasa.gov/docs/science/known1/emspectrum.html) (<http://imagine.gsfc.nasa.gov/docs/science/known1/emspectrum.html>)

Click on the link above and answer the following questions:

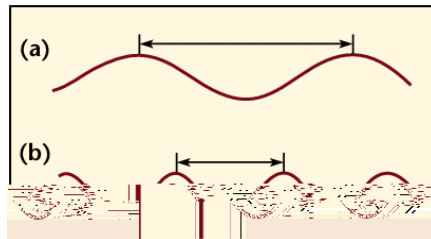
1. What is the electromagnetic spectrum?

2. What is radiation?

3. While at the website (

4. What is the order of the electromagnetic spectrum from **highest to lowest energy**?

Use the visual below to answer question 5.



(a) Longer wavelength; (b) shorter wavelength

5. Which has more energy, A or B? Explain your reasoning.
6. Define a wavelength.
7. What is a frequency of a wavelength?
8. For **visible light** (ROYGBIV), which has the shortest wavelength? Which has the longest? Place all the other colors in order based on their wavelength from shortest to longest.

[Electromagnetic Spectrum](http://www.ibl.gov/MicroWorlds/ALSTool/EMSpec/EMSpec2.html) (<http://www.ibl.gov/MicroWorlds/ALSTool/EMSpec/EMSpec2.html>)

9. Click on the link above and answer the following questions:

- a. What kind of electromagnetic radiation has the shortest wavelength? The longest?

- b. What kind of electromagnetic radiation could be used to "see" molecules? A cold virus? Explain your reasoning.

- c. Why can't you use visible light to "see" molecules?

- d. Some insects, like bees, can see light of shorter wavelengths than humans can see. What kind of radiation do you think a bee sees? Explain your reasoning.

[Behaviour of Light](http://camillasenior.homestead.com/optics3.html) (<http://camillasenior.homestead.com/optics3.html>)

10. Click on the link above and answer the following questions:

a. What is reflection?

b. Draw a picture of an angle of incidence