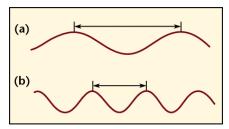
Name	e:	Section:		
Elect	romagn	netic Spectrum & Light - Webquest		
Elect	romagn	netic Spectrum (http://imagine.gsfc.nasa.gov/docs/science/know_l1/emspectrum.ht	<u>tml</u> )	
Click	on the	link above and answer the following questions:		
1.	What	is the electromagnetic spectrum?		
2.	What	is radiation?		
3.	mouse	e at the website ( <a href="http://imagine.gsfc.nasa.gov/docs/dictionary.html">http://imagine.gsfc.nasa.gov/docs/dictionary.html</a> ), roll the e over each of the following words and write what comes up it ox to describe each.	n	
	a.	visible light		
	b.	microwaves		
	c.	gamma-rays		
	d.	infrared		
	e.	ultraviolet light		
	f.	<u>X-rays</u>		
	g.	<u>radio waves</u>		

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.lbl.gov/MicroWorlds/ALSTool/EMSpec/EMSpec2.html)

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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)

idviour o	T LIGITI (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 incident equaling an angle of reflection.
C.	Explain the difference in how light will act on a smooth versus rough surface.
Ь	Define refraction.
u.	befine refraction.
e.	Using proper terms, explain what is happening to the spoon in
	the cup as well as the water in the pot.
f.	Click the page forward to see the different lenses as well as how the eye perceives images. Explain the difference between

concave and convex lenses. Draw a picture of each and how the

light hits it.