LIGHT WORKSHEET, WAVELENGTH, FREQUENCY AND ENERGY

Name		Date	Period	
Useful Info	rmation You May Need:			
Red	700 ~ 650 nm	1	. Which has the greater λ blue or indigo light?	(blue)
Orange	649 - 580 nm			
Yellow	579 – 575 nm	a		
Green	574 490 nm	2	2. Which has the greater $ m v$ red or yellow light? ((yellow
Blue	489 – 455 nm			
Indigo	454 - 425 nm		3. Which has the greater energy, a photon of ye	ellow
Violet	424 – 400 nm		light or a photon of green light? (green)	
	s			
	4. Which has the frequency of 6.0 X 1 vary inversely)	onger wavelength, lig 0 ¹⁴ Hz? (6.0 X 10 ¹⁴ H	tht with a frequency of 7.32 X 10 ¹⁴ Hz or light wilz; it has lower frequency; wavelength and freq	ith a uency
	5. Which has high	er energy, λ of 674 nr	m or k of 480 nm? (480 nm)	
	6. Which has a higher frequency, orange light or indigo light? (indigo)			
			of 725 nm and another red light has a frequence er energy per photon? (4.28 X 10 ¹⁴ /sec; it is sho	
	8. Find the color o	of light whose frequence	cy is 5.21 X 10 ¹⁴ cycles/sec. (yellow)	
	9. What is the fred	quency of light if its wa	avelength is 5.4 X 10 ⁻⁵ см? (5.6 X 10 ¹⁴ Hz)	
	Th	e Electromagneti	c Spectrum	
	je, s	A. A. B. B. Ballon B. B.		

Microwaves Infrared Visible Ultraviolet X rays Gamma Radio and rays light light light television Sterilizers Medicine Medicine Heat lamps Cooking Radar Black lights Industry Research Radio Cell phones TV remote controls TV Research Nuclear energy Wireless networking High energy Low energy High frequency Low frequency Short wavelength Long wavelength