

Virtual LAB - Chapter 26.1 Name _____

Electromagnetic Waves

What is the electromagnetic spectrum?

Question 1: As you move from left to right on the electromagnetic spectrum, What happens to frequency? What happens to wavelength?

Question 2: Arrange the following types of electromagnetic waves in order by wavelength, from longest to shortest:

Gamma rays

Visible light

Infrared radiation

Ultraviolet radiation

Microwaves

Radio waves

X rays

Question 3: What kinds of electromagnetic waves have the lowest frequencies? What kinds have the highest frequencies?

Question 4: Which type of electromagnetic waves has more energy, an ultraviolet wave or an infrared wave? How can you tell this by looking at the electromagnetic spectrum?

Question 5: In terms of wavelength and frequency, What is the difference between a radio wave and an X ray?

Question 6: Based on your results, which type of electromagnetic wave do you think is more dangerous, a low-frequency wave or a high-frequency wave? Why?

What is the electromagnetic spectrum?

Frequency (hertz)	Wavelength (meters)	Type of Wave
1×10^7	30	
5×10^9	6×10^{-2}	
7×10^{13}	4.3×10^{-6}	
5×10^{14}	6×10^{-7}	
6×10^{15}	5×10^{-8}	
3×10^{18}	1×10^{-10}	
4×10^{19}	7.5×10^{-12}	