

Period: _____

Use the questions and links below to learn/remember information about light and the electromagnetic spectrum. This info is important for understanding how the internal structure of the atom was discovered and is measured, and will be needed throughout the unit!

1. Use this [NASA website](#) to write down the following definitions:

a. What is an electromagnetic wave?

b. What is the electromagnetic spectrum?

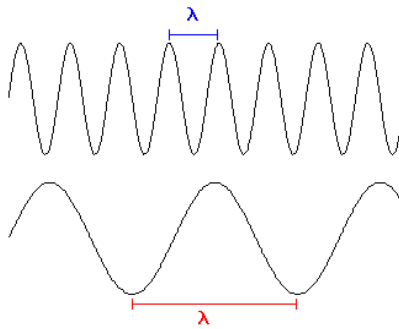
c. What is radiation?

c. What is wavelength?

d. What is frequency?

2. Use this [NASA website](#) to look up definitions of the following types of the electromagnetic radiation.
- visiblelight
 - microwaves
 - gamma-rays
 - infrared
 - ultravioletlight
 - X-rays
 - radiowaves

Use the visual below and [this link](#) to answer question 4-6.



- Which wave has a greater wavelength?
 - Which Wave has a greater frequency?
 - Which Wave has more energy?
7. Electromagnetic radiation can be arranged in order of increasing wavelength on something know as the electromagnetic spectrum. Use this image of the [EM spectrum](#) to answer the questions below:
- What type of EM radiation has the longest wavelength? What type has the shortest?
 - What type of EM radiation has the most energy? Which has the least?

- c. According to the EM spectrum, what happens to frequency as wavelength gets longer?
 - d. According to the EM spectrum, what happens to energy as wavelength gets longer?
 - e. What kind of electromagnetic radiation could be used to "see" molecules? A cold virus? Explain your reasoning.
 - f. We can only see visible light. How much of the EM spectrum can we see with our eyes?
8. Here is another image of the [EM spectrum](#) that has more information on visible light. Use it to answer the following questions:
- a. What color of light has the longest wavelength?
 - b. What color of light has the shortest?
 - c. What color of light has the highest energy?
 - d. What color of light has the least amount of energy?
 - e. What property of EM radiation determines color?