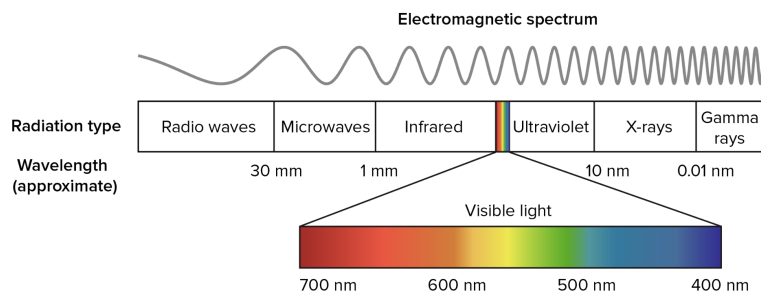
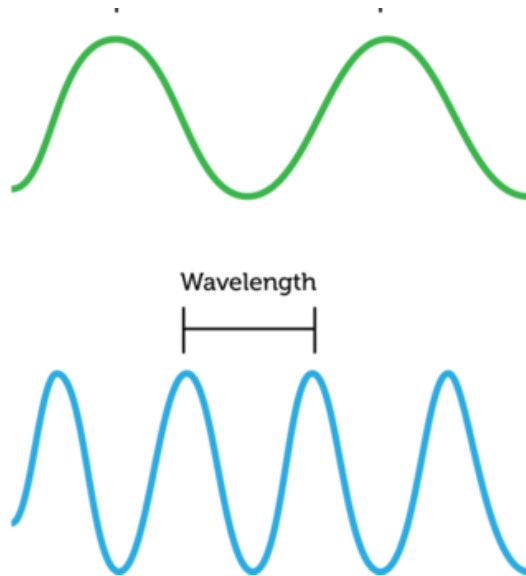


Chapter 6: Electronic Structure of Atoms

Label the following diagrams:



What is the equation for the speed of light?

Calculate the frequency given a wavelength of 640.0 nm.

What is the formula for energy?

Calculate the energy for a light that has a frequency of $4.69 \times 10^{14} \text{ s}^{-1}$.

Calculate the energy of yellow light that has a wavelength of 589nm.

What is the emission spectrum?

What are the three rules for assigning electron configuration?

Identify what groups are in each orbital?

s:

d:

p:

f:

What is the electron configuration for the following elements?

Na

B

Na^+

O^{2-}

Write the following elements in condensed electron configuration:

Mg

Ti

P^{3-}

Bi

What are the exceptions to the electron configuration rules?

What shape are s orbitals? What shape are p orbitals?

If $n = 1$, then l can only be _____

If $n = 3$, and $l = 2$, then m_l can be _____

What would be the quantum numbers for n , l , and m_l , and m_s if you are given chlorine?