



Names: \_\_\_\_\_ Date: \_\_\_\_\_

### Module 2A: What's the Wavelength? - EM Spectrum Foldable

**Instructions:**

Refer to the "What's the Wavelength" guided instructions to complete the double-sided electromagnetic (EM) spectrum foldable. Use the "clues" on the foldable, the EM Spectrum diagram (below), and module videos to "research" in order to complete both sides of the "What's the Wavelength" foldable.

## THE ELECTROMAGNETIC SPECTRUM

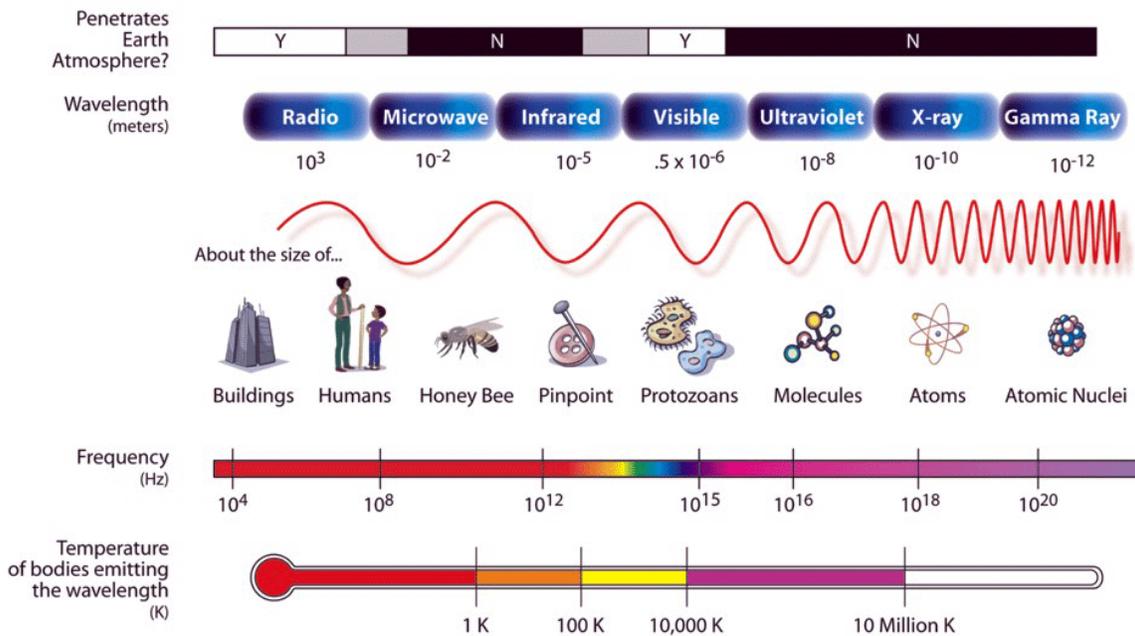


Image: NASA

*Longer Wavelength  
Lower Frequency  
Lower Energy*

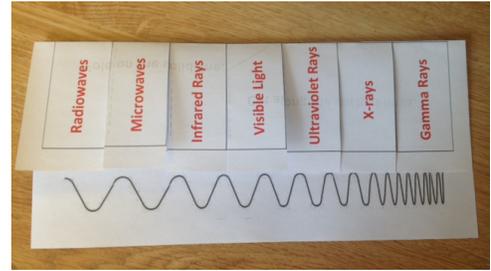
*Shorter Wavelength  
Higher Frequency  
Higher Energy*





### “What’s the Wavelength” Electromagnetic Spectrum Foldable:

After reading the “What’s the Wavelength” guided instructions, complete the following questions on the EM Spectrum foldable:



#### 1. Parts of a Wave

Sketch an EM wave. Label the crest, trough, and distance of a wavelength.

#### 2. EM Spectrum Wavelengths

On the “What’s the Wavelength” EM Spectrum foldable, label the wavelengths in the correct order on the foldable tabs that match their wavelength location along the electromagnetic spectrum.

#### 3. Size of EM Waves

Write the definition of “wavelength”.

Write a size comparison for each of the EM wavelengths.

Label the longest wavelength and the shortest wavelengths.

#### 4. Frequency

Write the definition of “frequency”.

What units measure EM wavelength frequency?

Label the shortest frequency and the highest frequency.

#### 5. EM Examples

On the “What’s the Wavelength” EM Spectrum foldable, write one example of the source or use for each of the EM wavelengths.

#### 6. Visible Light

In the “Visible Light” section of the of the EM Spectrum foldable, color the wavelengths of the rainbow (ROYGBIV). Label the following in this section, too:

What is a natural source of visible light waves?

Which visible light wave color has the longest wavelength?

Which visible light wave color has the shortest wavelength?

**Way to go, your team has explored the Electromagnetic Spectrum!**