Waves: Day 6 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Core: \_\_\_\_\_\_\_ Date: \_\_\_Tuesday, March 28th

Learning Check!

1. What type of wave are EM waves?

A) Longitudinal B) Transverse C) Mechanical

2. These EM waves have the longest wavelength:

A) Radio B) X-rays C) Visible Light

3. This wave is used to transmit signals to and from your cell phone:

A) Radio B) Visible Light C) Microwaves

VOCABULARY:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the distance between crests of a transverse wave or compressions of a longitudinal wave.

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ These are emitted from the sun and are dangerous to humans because of their high energy.

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Anything with a temperature above absolute value will emit these waves.

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The only part of the EM spectrum humans can actually see.

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ What we refer to all of the EM waves as when they are in order of wavelength and energy.

Spectrum \* Infra-red \* Ultra Violet (UV) \* Visible Light \* Wavelength

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| * Infra-Red:   + Anything with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ above absolute zero will emit Infra-Red waves.   + Certain censors can detect \_\_\_\_\_\_\_\_\_\_\_\_\_ emitted by the body.   + They can be used by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to see suspects at night or by the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ to locate people in smoke-filled buildings.   + Infra-red light is often used for \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ communications.   + Uses [list at least 2]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Visible Light:   + This relatively narrow band of the spectrum is the only part humans can \_\_\_\_\_\_\_\_\_\_\_\_\_\_.   + Different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ correspond to different colors. If all of the wavelengths of visible light are being emitted, we see the combination as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light. | * Visible Light (continued):   + When the temperature of an object gets above 500 degrees C, it starts to emit in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as well as the infra-red and we see it glowing \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_.   + Uses [list at least 2]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Ultra Violet:   + At this end of the spectrum the waves become extremely \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to living organisms. The waves have enough \_\_\_\_\_\_\_\_\_\_\_ to ionize the atoms, disrupt the DNA which can lead to cancer.   + The \_\_\_\_\_\_\_\_\_\_ and other white hot objects emit some UV light as well as visible light. Fortunately the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ protects us from most of it but what little gets to the ground is enough to give us a sub-burn.   + Uses: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |