

Make-Up Quiz/DBA

Standard: SC.8.E.5.11 – Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.

Name: _____

Class: _____

Period: _____

Date: _____

Title: **Electromagnetic Spectrum**

Choose the best answer for each question

1. What kind of energy is an infrared wave?
 - A. Thermal
 - B. Visible
 - C. Sound
 - D. Light

2. What is one wavelength?
 - A. The distance from rest position to crest
 - B. The wave height from rest position to crest
 - C. The distance from crest to trough
 - D. The distance from crest to crest

3. Where on the electromagnetic spectrum is visible light found?
 - A. between infrared rays and UV rays
 - B. between x-rays and UV rays
 - C. between X-rays and gamma rays
 - D. between radio waves and microwaves

4. A wave with low frequency would have relatively _____.
 - A. high energy and a long wavelength
 - B. high energy and a short wavelength
 - C. low energy and a short wavelength
 - D. low energy and a long wavelength

5. Which of the following correctly lists electromagnetic waves in order from lowest to highest frequency?
 - A. X-rays, gamma rays, visible light, microwaves, radiation
 - B. microwaves, ultraviolet, infrared radiation, gamma rays
 - C. gamma rays, ultra violet, visible light, microwaves, radio waves
 - D. radio waves, visible light, ultraviolet, X-rays, gamma rays

6. Within the visible spectrum of light, there are many colors: red, orange, yellow, green, blue, indigo, and violet. What characteristic of each of these colors makes this spectrum of light visible to the human eye?
- A. Each color has a different speed.
 - B. Each color has a different wavelength.
 - C. Each color has a different level of intensity.
 - D. Each color has a different distance to our eyes.
7. Jessica knows that a rainbow is made up of the following colors of light: red, orange, yellow, green, blue, indigo, and violet. She has seven flashlights that each has a bulb matching a color of the rainbow, and she wants to try and make white light. Which of her seven colors would she have to mix to get white light?
- A. Just the bright colors: red, orange, and yellow
 - B. Every other color: red, yellow, blue, and violet.
 - C. All of the colors: red, orange, yellow, green, blue, indigo, and violet.
 - D. She cannot do it: Mixing the colors will make the light darker, not white.
8. Ultraviolet light comes from the Sun and can sometimes cause serious health issues such as skin cancer. Why does ultraviolet light have this effect on our bodies, but visible light does not?
- A. Ultraviolet light has more energy than visible light.
 - B. Ultraviolet light move faster than visible light.
 - C. Ultraviolet light has less energy than visible light.
 - D. Ultraviolet light is attracted to our skin.
9. One type of light that comes from the Sun is called infrared. Human eyes can't see this type of light, but specially built cameras can. Why can't human eyes detect infrared light?
- A. The energy of infrared light is too high for our eyes to detect.
 - B. The wavelength of infrared light is too long for our eyes to detect.
 - C. Infrared light is too fast for our eyes to detect.
 - D. The Sun does not give off enough infrared light for our eyes to detect.
10. Which of the following is true about the frequency and wavelength of electromagnetic waves?
- A. as frequency increases, wavelength decreases
 - B. as frequency increases, wavelength increases
 - C. frequency is constant for all wavelengths
 - D. frequency and wavelength are independent of each other