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Gr. / 6

Subject/ Science

Worksheet#1

Unit:3, Lesson:1
The Electromagnetic Spectrum
Textbook Pgs. (82 - 93)

Lesson Vocabulary

Radiation:

the transfer of energy as EM waves

Electromagnetic spectrum:

The full range of frequencies or wavelengths of electromagnetic radiation

Ultraviolet:

electromagnetic wave frequencies immediately above the visible range

Infrared:

electromagnetic wave frequencies immediately outside the red end of the visible spectrum.

Q1. Choose the correct answer.

1. What is the highest-frequency part of EM spectrum?
a. Radio waves b. Gamma rays c. Visible light
2. What is the lowest frequency part of EM spectrum?
a. Radio waves b. Gamma rays c. Visible light
3. What is the narrowest part of EM spectrum?
a. Radio waves b. Gamma rays c. Visible light
4. Which kind of EM spectrum is the most dangerous wave to humans?
a. Gamma rays b. Visible light c. Ultraviolet light
5. The table below lists electromagnetic waves.

Low frequency  High frequency	A	B	C	D
	Radio waves	Gamma rays	Laser light	Visible light
	Microwaves	x-rays	Visible light	x-rays
	Infrared waves	Ultraviolet light	Ultraviolet light	Ultraviolet light
	Visible light	Visible light	x-rays	Radio waves
	Ultraviolet light	Infrared light	Gamma rays	Microwaves

Which column correctly lists waves from lowest to highest frequencies?

- a. column A
- b. column B
- c. column C
- d. column D

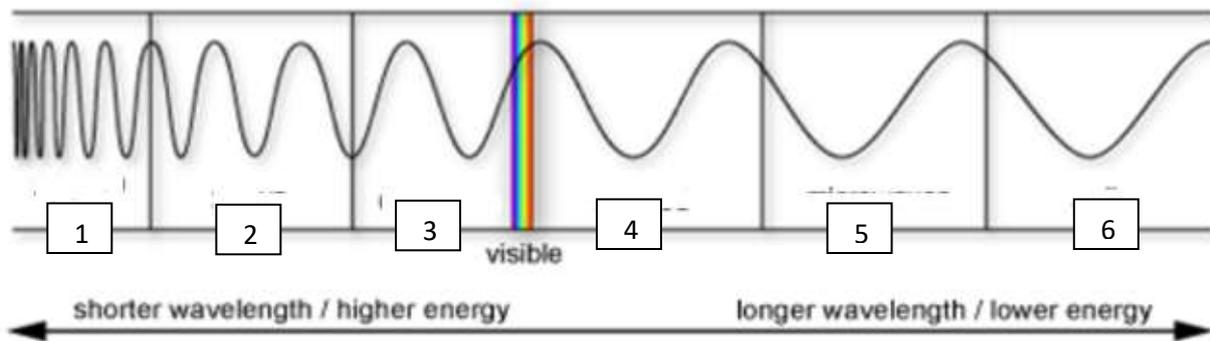
Q2. Complete the following questions.

- 1- The color of the longest visible wavelength isand the color of the shortest visible wavelength is.....
- 2- The energy of electromagnetic wave is proportional to its
- 3- can pass through most living tissue, but are absorbed by bone.
- 4- is the transfer of energy as EM waves.
- 5- All of the frequencies or wavelengths of electromagnetic radiation is called the
- 6- are used to broadcast signals for radios, televisions, and alarm systems.
- 7- EM waves travel to both electric and magnetic field.
- 8- Two parts of the spectrum are close to the visible light are and
- 9-..... can be used to treat illnesses and in making medical image.
- 10-,, and are the primary colors.

Q3. Put (true) or (false).

- 1- Microwaves are a form of visible light. ()
- 2- All electromagnetic waves can travel through empty space. ()
- 3- All electromagnetic waves have the same frequencies. ()
- 4- Radio waves are electromagnetic waves. ()

Q4. Use the graph to answer the following questions.



a. How would you classify an EM waves with a frequency?

.....
.....

b. Write the parts of the electromagnetic spectrum in order from the highest to the lowest energy.

- | | |
|-----------------|-----------------|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

Q5. Explain

1- We should wear UV-Blocking sunglasses.

.....
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2- Radio waves are safer than x-rays.

.....
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3- Is radiation from the sun always harmful?

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