

Name _____

Date _____

Use with textbook pages 152-160.

The electromagnetic spectrum

Write a use for each electromagnetic radiation stated below. In the box provided, draw a picture to illustrate your example.

1. Radio waves

Use: _____

2. Microwaves

Use: _____

3. Infrared waves

Use: _____

4. Ultraviolet rays

Use: _____

5. X rays

Use: _____

6. Gamma rays

Use: _____

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True or false?

Read the statements given below. If the statement is true, write "T" on the line in front of the statement. If it is false, write "F" and rewrite the statement to make it true.

1. _____ Radiant energy spreads out from its source in all directions.

2. _____ Electromagnetic radiation includes only visible light waves.

3. _____ Microwaves are a type of infrared wave.

4. _____ X rays have more energy than gamma rays.

5. _____ Radio waves, microwaves, and ultraviolet waves all have longer wavelengths than visible light.

6. _____ Both X rays and gamma rays have higher frequencies than ultraviolet rays.

7. _____ Communicating with satellites is an application of gamma rays.

8. _____ The Sun radiates both visible energy and invisible energy.

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More than meets the eye

Vocabulary

electromagnetic radiation
electromagnetic spectrum
frequency
gamma rays
infrared waves
microwaves

radiant energy
radio waves
ultraviolet rays
visible light
wavelength
X rays

Use the terms in the vocabulary box to fill in the blanks. Use each term only once.

1. The _____ represents the different forms of electromagnetic radiation.
2. Light is classified as _____ because electrical and magnetic fields vibrate in a light wave.
3. _____ is energy that travels by radiation. An example of this is light.
4. Heat radiation, also known as _____, cannot be seen by your eyes but can be felt by your skin.
5. Microwaves are one type of _____.
6. _____ can be used to communicate with satellites.
7. Because _____ have the highest energy of all electromagnetic radiation, they are the most damaging to human tissue.
8. Compared to all other types of electromagnetic radiation, radio waves have the lowest _____.
9. An overexposure to _____ can result in sunburns and skin cancer.