

Terms of Light

Light is a form of energy that originates at the sun. It is a form of energy that is visible to the human eye. Match each term in the word box to its definition.

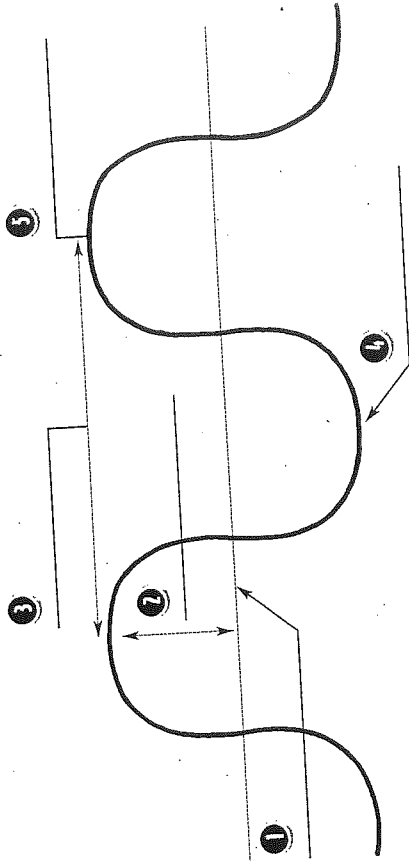
- | | | |
|------------------------|---------------|-----------|
| visible light spectrum | crest | trough |
| hertz | wave velocity | frequency |
| reflection | wavelength | prism |
| refraction | photon | light |

- 1 _____ This refers to the bending of light waves when they pass through another substance.
- 2 _____ This is the bounce of a light wave off another object.
- 3 _____ This is a particle of light.
- 4 _____ This term refers to the highest point of a wave.
- 5 _____ This is a type of electromagnetic radiation.
- 6 _____ This is the distance between corresponding points on two waves.
- 7 _____ This is a continuous band of colors arranged according to wavelength or frequency.
- 8 _____ This is the lowest point of a light wave.
- 9 _____ This is triangular-shaped glass or other transparent material that refracts white light into a spectrum of colors.
- 10 _____ This is calculated by multiplying frequency times wavelength.
- 11 _____ This is a measurement unit for frequency.
- 12 _____ This refers to the number of waves that pass a given point in one second.

Diagram of a Wave

Both light and sound travel in waves. Use the terms in the word box to label the parts of a wave.

- | | | | | |
|-----------|------------|-------|-------------|--------|
| amplitude | wavelength | crest | equilibrium | trough |
|-----------|------------|-------|-------------|--------|



Match each term in the word box above to its description.

- 6 _____ This is a measure from a point on one wave to the corresponding point on the next wave.
- 7 _____ This is the lowest point on a wave.
- 8 _____ This is the highest point on a wave.
- 9 _____ This is the distance a wave rises or falls from its equilibrium.
- 10 _____ This describes when the wave is at a rest position.

Uses of Electromagnetic Energy

Different types of electromagnetic energy have different uses and effects. Classify the phrases in the word box under each type of light wavelength.

| | | |
|--|---|---|
| <ul style="list-style-type: none"> kills organisms that spoil food shows heat loss in buildings allows us to see television signals portions of phone calls fire's heat maritime communication | <ul style="list-style-type: none"> treats some cancers shows cavities in teeth creates a tan used to cook food radar cell phone signals | <ul style="list-style-type: none"> shows breaks in bones used to kill germs creates a rainbow radio signals sun's heat causes a sunburn |
|--|---|---|

| | | |
|----------------------|----------------------|-------------------------|
| Gamma Rays | X-Rays | Ultraviolet Rays |
| Visible Light | Infrared Rays | Microwaves |
| Radio Waves | | |

Light Waves

Light is an example of radiant energy. The human eye is only able to see light of a certain wavelength. However, there are other wavelengths that are not visible to the human eye. Use the terms in the word box to label the diagram of the electromagnetic energy spectrum.

- long radio waves
- visible light
- X-rays
- infrared rays
- microwaves
- short radio waves
- ultraviolet rays
- gamma rays

