Name _____ Date _____

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

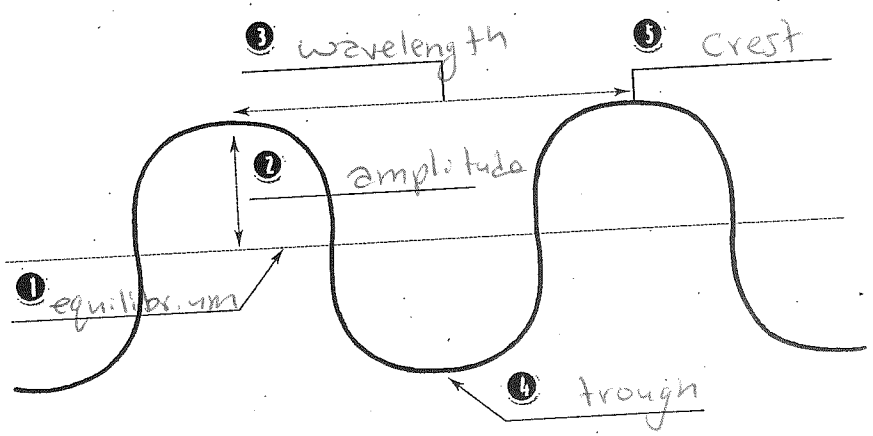
1. refraction — This refers to the bending of light waves when they pass through another substance.
2. reflection — This is the bounce of a light wave off another object.
3. photon — This is a particle of light.
4. crest — This term refers to the highest point of a wave.
5. light — This is a type of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

Name _____ Date _____

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.

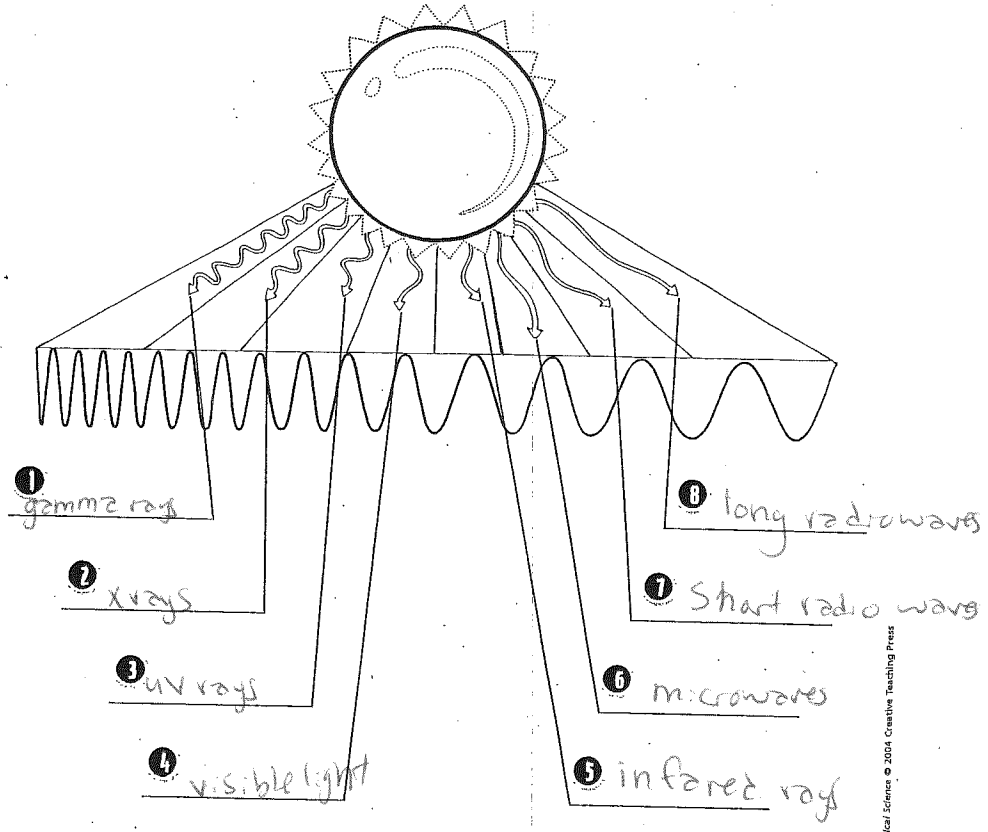
6. wavelength — This is a measure from a point on one wave to the corresponding point on the next wave.
7. trough — This is the lowest point on a wave.
8. crest — This is the highest point on a wave.
9. amplitude — This is the distance a wave rises or falls from its equilibrium.
10. equilibrium — This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

Name _____ Date _____

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



Name _____ Date _____

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.

kills organisms that spoil food	treats some cancers	shows breaks in bones
shows heat loss in buildings	shows cavities in teeth	used to kill germs
allows us to see	creates a tan	creates a rainbow
television signals	used to cook food	radio signals
portions of phone calls	radar	sun's heat
fire's heat	cell phone signals	causes a sunburn
maritime communication		

Gamma Rays kills organisms that spoil food treats some cancers	**X-Rays** shows cavities in teeth shows breaks in bone	**Ultraviolet Rays** creates a tan kills germs causes sunburn
Visible Light allows us to see creates a rainbow	**Infrared Rays** shows heat loss in buildings fire's heat Sun's heat	**Microwaves** portions of phone calls cook food radar
Radio Waves television signals radio signals	cell phone signals maritime communication	