

1. The \_\_\_\_\_ of a sound describes its loudness at a particular distance.
2. The pitch of a sound is most closely related to \_\_\_\_\_ of vibrations.
3. The unique sound quality of a clarinet or a violin is caused by the relative intensity of different \_\_\_\_\_ in each note.
4. Resonance refers to an effect in which the vibration of one object causes another object to vibrate at \_\_\_\_\_ natural frequencies.
5. When a sound wave strikes your eardrum, it causes forced vibrations that are transferred to the hammer, anvil, and \_\_\_\_\_.
6. The structure within the cochlea containing hair cells that vibrate at different natural frequencies is the \_\_\_\_\_ membrane.
7. A \_\_\_\_\_ system measures distance by determining the time it takes for sound waves to bounce off a surface.
8. An ultrasound system can produce images of body structures because sound waves travel at different speeds through materials of different \_\_\_\_\_.
9. Which property of lights is not explained by the wave model of light?
10. The particle model of light explains how light can travel through empty \_\_\_\_\_ without a medium.
11. The amount of energy in a photon of light is proportional to the \_\_\_\_\_ of the corresponding light wave.
12. The rate at which light energy flows through a given area of space is referred to as its \_\_\_\_\_.
13. Which type of electromagnetic waves has slightly longer wavelengths longer than red light?
14. Which type of waves has wavelengths longer than microwaves?
15. Which type of electromagnetic waves has the highest frequency?

16. Which type of electromagnetic radiation is used to kill cancer cells?
17. Short-range radar works by sending a signal out from a control tower that is \_\_\_\_\_ off a plane back to the control tower.
18. What happens when light rays reflect off a rough surface?
19. The law of reflection states that when light rays reflect off a surface the angle of incidence is \_\_\_\_\_.
20. An image that results from light rays that only appear to be at certain location is called \_\_\_\_\_.
21. A tree looks green because it \_\_\_\_\_ green light and \_\_\_\_\_ other colors.
22. You look at a red tulip, with green leaves, under green light what do you see?
23. The color that an object appears to be depends on the \_\_\_\_\_ of light that the object reflects.
24. When light moves from a material in which its speed is higher to a material in which its speed is lower, it is bent \_\_\_\_\_ the normal.
25. A virtual image caused by reflection of light in the atmosphere is called a \_\_\_\_\_.
26. Light that enters one end of a fiber optic cable reaches the other end by means of \_\_\_\_\_.
27. Diverging lens bend light \_\_\_\_\_ and can only create a \_\_\_\_\_ image.
28. Which structure within the eye is responsible for the largest percentage of refraction of light?
29. The effect in which white light separates into different colors is called \_\_\_\_\_.
30. White light breaks up into different colors when it passes through a prism because of differences in \_\_\_\_\_.