

P1 - Waves Quiz

1. List the EM waves from longest to shortest wave length.
2. State one difference between UV and visible light.
3. What does redshift tell scientists about galaxies?
4. Why is the redshift not the same for all galaxies?
5. What does redshift suggest about the Universe?
6. What happens when a metal aerial absorbs radio waves?
7. Why would an X-ray telescope placed on Earth not be able to detect X-rays emitted from distance stars?
8. Give an example of IR being used for communication.
9. Give the difference between transverse and longitudinal waves.
10. Why can you hear but not see the TV in another room?
11. Why do thermal imaging cameras work better at night than during the day?
12. Give two properties of all EM waves.

13. What is the property of microwaves that allows them to be used for satellite communications?
14. An image in the mirror is virtual. Why?
15. If microwaves are absorbed by a tennis ball, what effect do the microwaves have on the ball?
16. How does red shift provide evidence for the Big Bang theory?
17. Compare a quiet and low pitch sound to a loud and high pitch sound.
18. What is cosmic background radiation?
19. How do you calculate wave speed?
20. Describe the Big Bang theory.
21. What is the Universe?
22. What is redshift?
23. Describe how the sound changes when a car drives past you.
24. Why do scientists use X-ray, gamma ray and microwave telescopes to observe the Universe?

25. How is the wavelength of CMBR likely to change over the next billion years?

26. What is the Doppler effect?

27. Give one example of microwaves being used for communications.

28. What are the dangers of IR, UV and micro wave radiation?

29. Give a use of radio waves.

30. Describe an image formed in the mirror.

31. What is refraction?

32. What are sound waves caused by?

33. How can you reduce the amount of noise transmitted through walls?
Why does the method work?

34. What is diffraction?

35. How do microwaves heat food?

36. What does the term frequency mean?

37. What do the words compression and rarefaction mean?

38. Why does the mirror get misty when you have a hot shower?
39. How does a vacuum flask keep the liquid inside hot?
40. Why do arctic foxes have small ears?
41. What is the law of reflection?
42. Why is foam a good insulator?
43. What is meant by the term U-value?
44. What is geothermal energy?
45. Why does the National Grid include step-up transformers?
46. Why are copper pipes inside a solar panel painted black?
47. Why is electricity essential for modern communication and public health?
48. What is the role of the step-down transformer?
49. What are the two main pieces of evidence for the Big Bang theory?