

● Radiation from Space

Decide if each statement is true or false. If false, change the italicized word or words to make the statement correct and write your answer in the blank at the left. If the statement is correct, write true in the blank.

- _____ 1. Unlike mechanical waves, electromagnetic waves can travel through *matter*.
- _____ 2. *Radiation* is energy that's transmitted from one place to another by electromagnetic waves.
- _____ 3. A *refracting* telescope uses mirrors to focus light from the object being viewed.
- _____ 4. In a vacuum, the *speed of light* equals 300 000 km/s.
- _____ 5. Unlike visible light, radio waves *can't pass* freely through Earth's atmosphere.
- _____ 6. Today, *optical telescopes* the size of three football fields are being used.
- _____ 7. The *Hubble Space Telescope* is an example of an optical telescope.
- _____ 8. Sound waves are examples of *mechanical* waves.
- _____ 9. Radio telescopes are used to study *visible light* waves.
- _____ 10. Types of electromagnetic waves differ in their *speeds*.
- _____ 11. Most optical telescopes used by professional astronomers are in *observatories*.
- _____ 12. For us to hear astronauts' voices from space, the sound waves must be converted into *gamma rays* and then converted back to sound waves.
- _____ 13. Different types of magnetic waves travel at *different* speeds.
- _____ 14. Earth's *atmosphere* absorbs and distorts some of the energy we receive from space objects.
- _____ 15. The arrangement of the types of radiant energy according to their wavelengths is called the *electromagnetic spectrum*.
- _____ 16. Both reflecting and refracting telescopes are *optical* telescopes.
- _____ 17. *Magnetic* waves travel at the speed of light.