



## Transferring Information Through Different Types of Waves



### Matching

Write the matching number to the types of waves with their corresponding examples.

- |                  |                                 |
|------------------|---------------------------------|
| 1. Sound waves   | _____ Cellular phone calls      |
| 2. Light waves   | _____ Earthquake waves          |
| 3. Radio waves   | _____ Fiber optic communication |
| 4. Seismic waves | _____ Listening to music        |

### Fill in the Blank

medium

electromagnetic

wind

microwaves

1. Light waves are a type of \_\_\_\_\_ wave.
2. Radio waves have longer wavelength than \_\_\_\_\_.
3. Sound waves need a \_\_\_\_\_ to travel through.
4. Ocean waves are caused by the \_\_\_\_\_.

### True or False

Circle T if the statement is true or F if the statement is false.

1. T or F     Sound waves can travel through outer space.
2. T or F     In fiber optic communication, data is encoded into light signals.
3. T or F     Microwaves are used for heating food but have no other applications.
4. T or F     Infrared waves are used in TV remote controls to transmit signals to the TV.

### Multiple Choice

Circle the correct answer.

1. Waves are disturbances that carry \_\_\_\_\_ from one place to another without transferring matter.

- a) energy
- b) sound
- c) light

2. Sound waves are \_\_\_\_\_ waves that require a medium, such as air or water, to travel through.

- a) mechanical
- b) electromagnetic
- c) radio

3. What type of waves are responsible for our ability to see?

- a) Sound waves
- b) Light waves
- c) Microwaves

4. How do sound waves transfer information? Sound waves transfer information through changes in \_\_\_\_\_.

- a) temperature
- b) air pressure
- c) color

### Short Answer

1. Provide an example of how light waves transfer information in our daily lives.

2. Explain the difference between mechanical waves and electromagnetic waves.