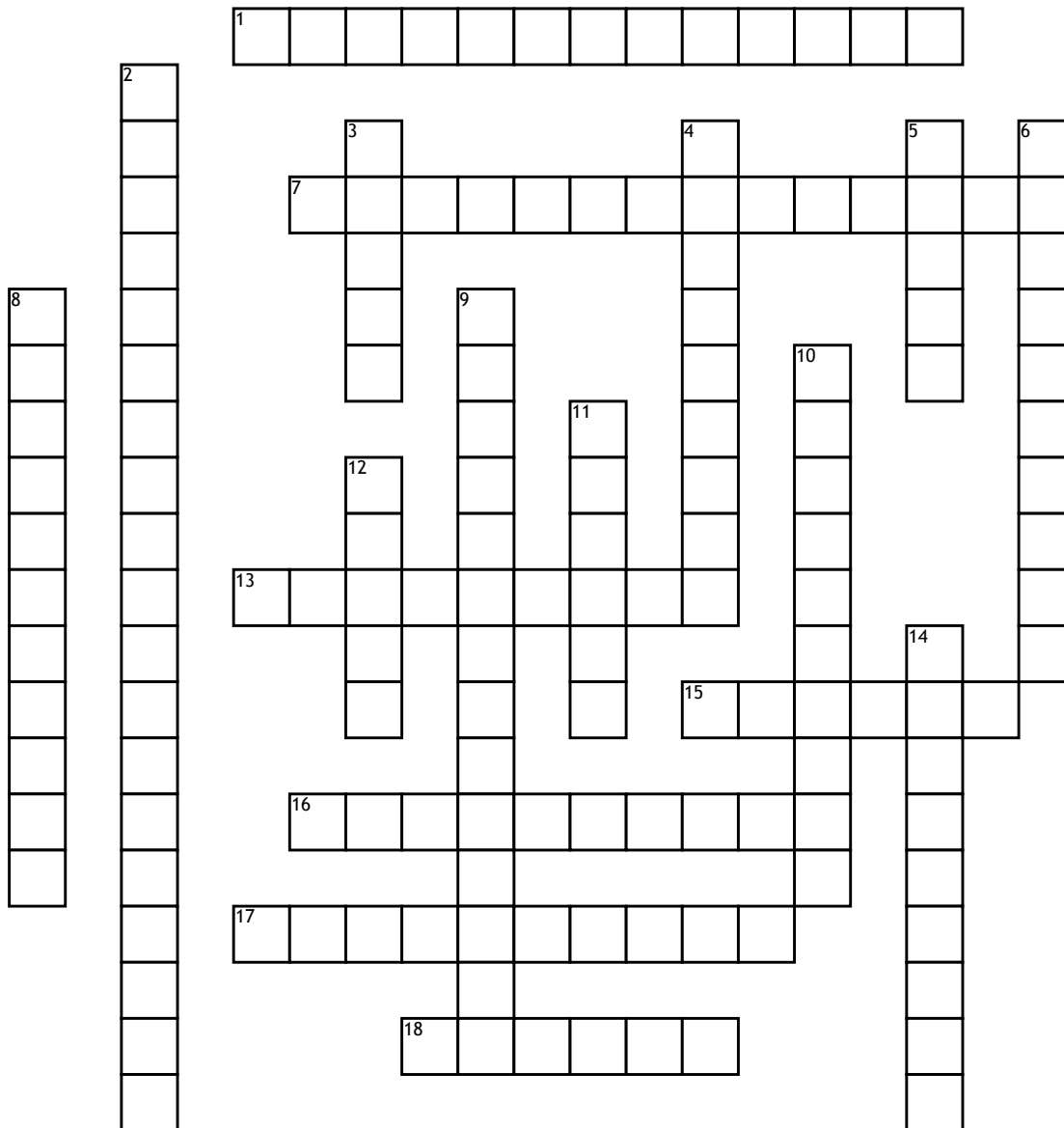


# Sound Waves



## Across

1. An increase (or decrease) in the frequency of sound, light, or other waves as the source and observer move toward (or away from) each other
7. A wave vibrating at right angles to the direction of its propagation
13. The quality of being intense
15. A particle representing a quantum of light or other electromagnetic radiation
16. The throwing back by a body or surface of light, heat, or sound without absorbing it
17. Sound waves with frequencies below the lower limit of human audibility
18. The time needed for one complete cycle of vibration to pass a given point

## Down

2. waves of the electromagnetic field, propagating (radiating) through space carrying electromagnetic radiant energy
3. A comb or tuft of feathers, fur, or skin on the head of a bird or other animal
4. The rate at which something occurs or is repeated over a particular period of time or in a given sample
5. A system for detecting the presence, direction, distance, and speed of aircraft, ships, and other objects
6. Change in direction of propagation of any wave as a result of its traveling at different speeds at different points along the wave front

8. The process by which a beam of light or other system of waves is spread out as a result of passing through a narrow aperture or across an edge
9. A wave that is an oscillation of matter, and therefore transfers energy through a medium.
10. Sound or other vibrations having an ultrasonic frequency
11. The materials or empty space through which signals, waves or forces pass
12. The quality of a sound governed by the rate of vibrations producing it
14. A wave of compression and rarefaction