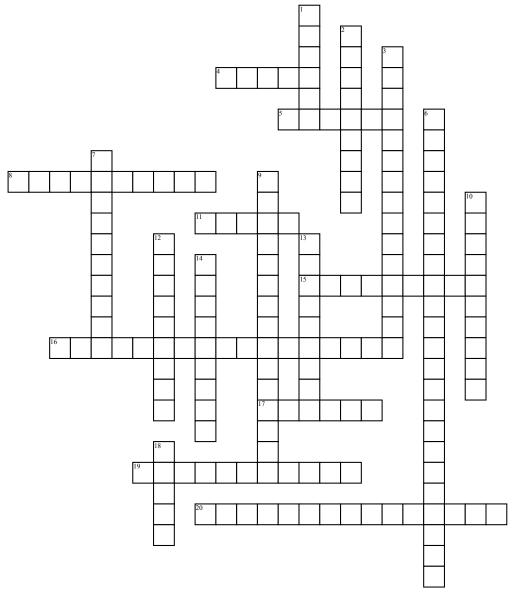
## waves



## Across

- **4.** reach the top of something such as a hill or wave.
- 5. a channel used to convey a liquid.
- **8.** the throwing back by a body or surface of light, heat, or sound without absorbing it.
- 11. a long body of water curling into an arched form and breaking on the shore.
- **15.** penetrating electromagnetic radiation of a kind arising from the radioactive decay of atomic nuclei.
- **16.** a wave vibrating in the direction of propagation.
- **17.** the strength and vitality required for sustained physical or mental activity.
- 19. 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, typically accompanied by interference between the wave forms produced.

**20.** the interaction between surface gravity waves and a mean flow.

## **Down**

- 1. physical substance in general, as distinct from mind and spirit that which occupies space and possesses rest mass, especially as distinct from energy.
- 2. the rate at which something occurs or is repeated over a particular period of time or in a given sample.
- **3.** a wave that is an oscillation of matter, and therefore transfers energy through a medium.
- **6.** the range of wavelengths or frequencies over which electromagnetic radiation extends.
- 7. the fact or phenomenon of light, radio waves, being deflected in passing obliquely through the interface between one medium and another or through a medium of varying density.

- 9. one of the waves that are propagated by simultaneous periodic variations of electric and magnetic field intensity and that include radio waves, infrared, visible light, ultraviolet, X-rays, and gamma rays.
- **10.** a wave vibrating at right angles to the direction of its propagation.
- 12. the maximum extent of a vibration or oscillation, measured from the position of equilibrium.
- 13. a type of electromagnetic wave visible as well as those that are invisible to the human eve.
- **14.** a wave of compression and rarefaction, by which sound is propagated in an elastic medium such as air.
- **18.** the quality of a sound governed by the rate of vibrations producing it; the degree of highness or lowness of a tone.