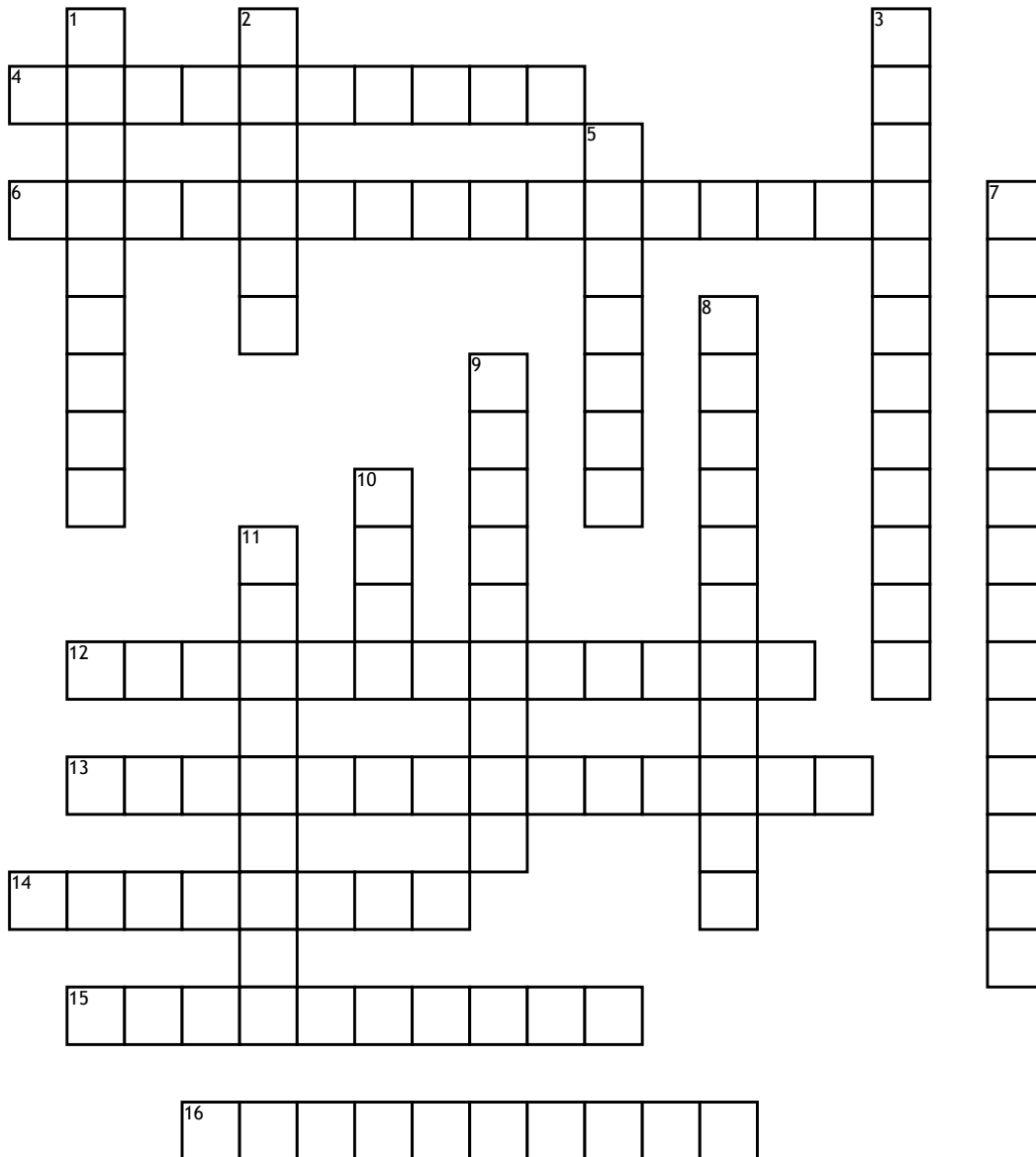


Vibration and Wave



Across

4. the return of light or sound waves from a surface
6. a wave (such as a sound wave) in which the particles of the medium vibrate in the direction of the line of advance of the wave
12. a change in the frequency with which waves (as of sound or light) from a given source reach an observer when the source and the observer are in motion with respect to each other so that the frequency increases or decreases according to the speed at which the distance is decreasing or increasing
13. a recurrent motion in which the intervals of time required to complete each cycle are equal
14. something (such as a state of affairs) that alternates between opposites

15. the distance in the line of advance of a wave from any one point to the next point of corresponding phase

16. deflection from a straight path undergone by a light ray or energy wave in passing obliquely from one medium (such as air) into another (such as glass) in which its velocity is different

Down

1. the quality or state of being resonant
2. the completion of a cycle, a series of events, or a single action
3. the act or process of interfering
5. a reduction in the amplitude of an oscillation as a result of energy being drained from the system to overcome frictional or other resistive forces.

7. a wave in which the vibrating element moves in a direction perpendicular to the direction of advance of the wave
8. a modification which light undergoes especially in passing by the edges of opaque bodies or through narrow openings and in which the rays appear to be deflected
9. the fact or condition of occurring frequently
10. to motion with the hands or with something held in them in signal or salute
11. the extent of a vibratory movement (as of a pendulum) measured from the mean position to an extreme