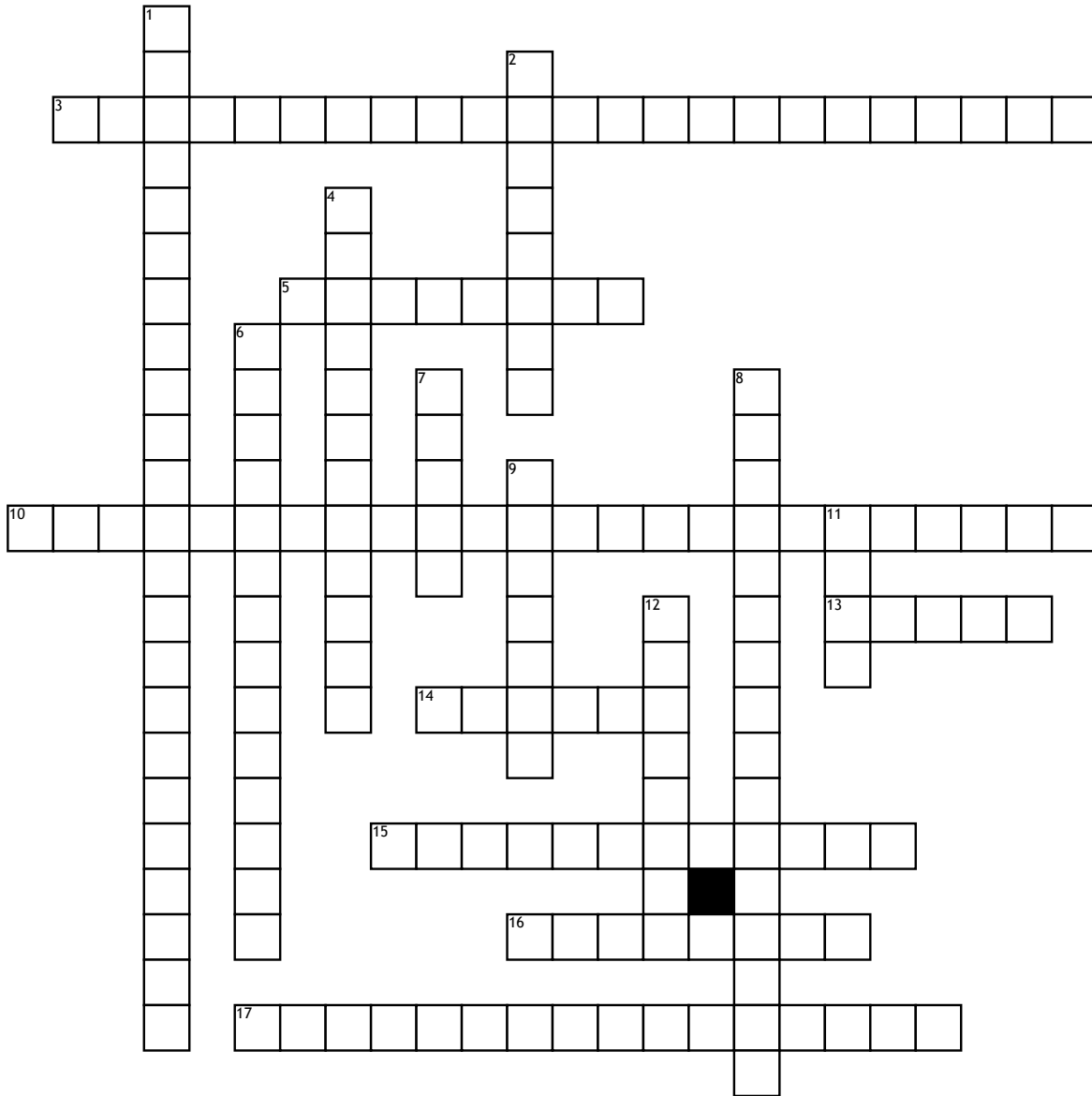


# Motion and Forces Vocabulary



## Across

**3.** For every action, there is an equal and opposite reaction.

**5.** the speed of something in a given direction.

**10.** The acceleration of an object as produced by a net force is directly proportional to the magnitude of the net force, in the same direction as the net force, and inversely proportional to the mass of the object.

**13.** the rate at which someone or something is able to move or operate.

**14.** a body's relative mass or the quantity of matter contained by it, giving rise to a downward force; the heaviness of a person or thing.

**15.** a vehicle's capacity to gain speed within a short time.

**16.** the quantity of motion of a moving body, measured as a product of its mass and velocity.

**17.** forces that are unbalanced.

## Down

**1.** An object at rest stays at rest and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force.

**2.** the resistance that one surface or object encounters when moving over another.

**4.** the distance traveled divided by the time elapsed.

**6.** two forces acting in opposite directions on an object, and equal in size.

**7.** strength or energy as an attribute of physical action or movement.

**8.** states that a particle attracts every other particle in the universe using a force that is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.

**9.** a property of matter by which it continues in its existing state of rest or uniform motion in a straight line, unless that state is changed by an external force.

**11.** a measure of the amount of matter in an object.

**12.** net force is the overall force acting on an object.