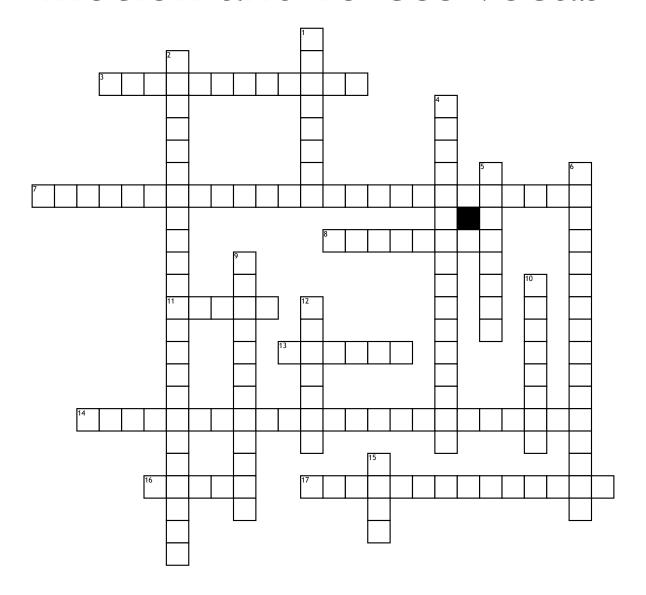
## motion and forces vocab



## <u>Across</u>

- **3.** The rate at which velocity changes over time; an object accelerates if it's speed, direction, or both change
- 7. 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.
- 8. overall force acting on an object11. the rate at which someone or something is able to move or operate.
- **13.** 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.
- 14. For every action, there is an equal and opposite reaction. The statement means that in every interaction, there is a pair of forces acting on the two interacting objects. The size of the forces on the first object equals the size of the force on the second object.
- **16.** strength or power exerted upon an object; physical coercion; violence
- **17.** two forces acting in opposite directions on an object, and equal in size **Down**
- 1. the resistance that one surface or object encounters when moving over another.
- **2.** 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.

- **4.** 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.
- **5.** the quantity of motion of a moving body, measured as a product of its mass and velocity.
- **6.** forces that cause a change in the motion of an object
- **9.** the total distance traveled divided by the total time elapsed.
- **10.** the speed of something in a given direction.
- 12. 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.
- **15.** a measure of the amount of matter in an object