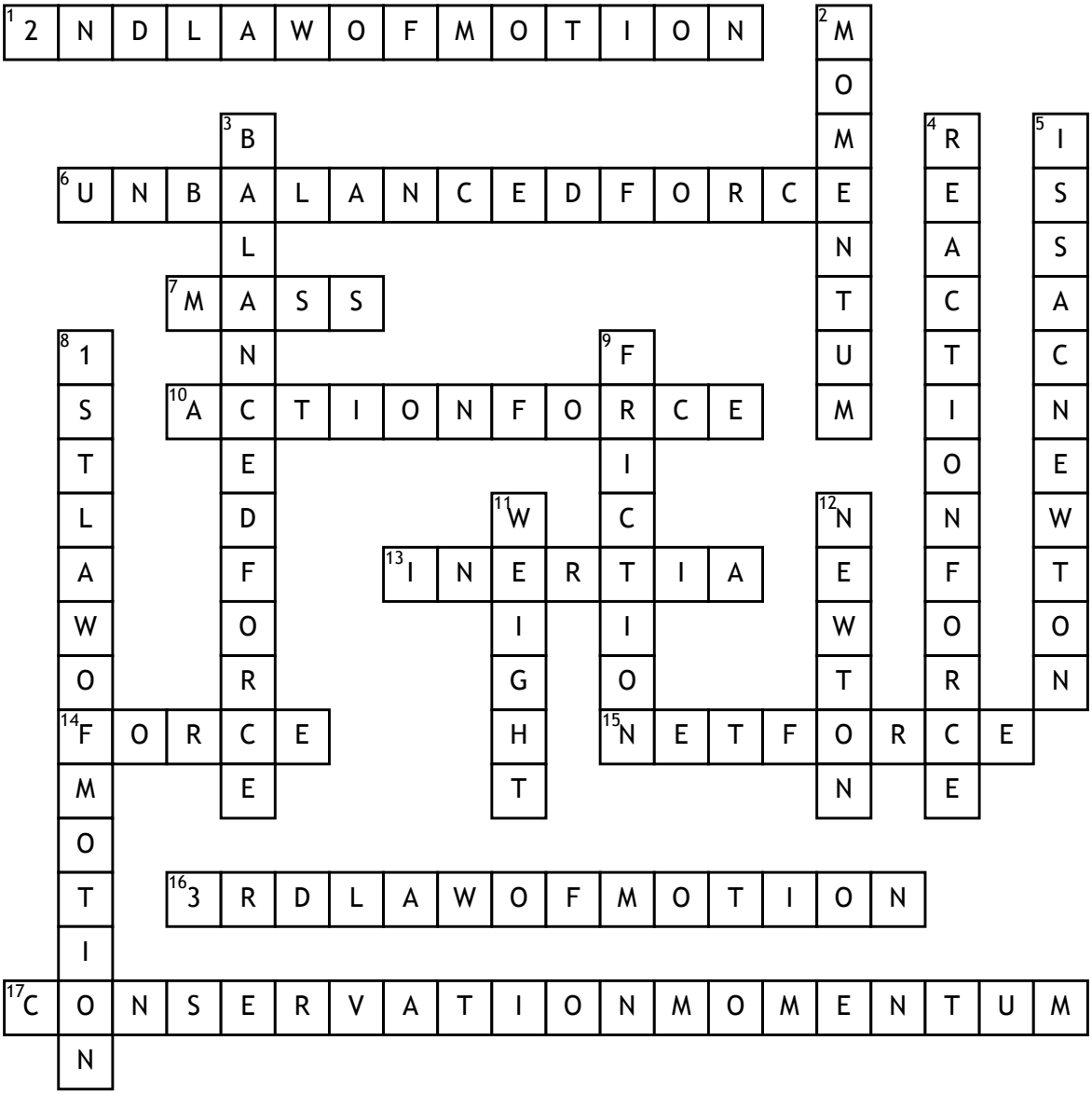
Name: _____ Date: _____

Physics Unit 2: Forces and Laws of Motion



Across

1. 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.

6. when all the horizontal and vertical forces do not balance out so that a net force does exist

7. quantity of matter in a body regardless of its volume or of any forces acting on it

10. Action force is force acting in one direction.

13. 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.

14. a push or pull resulting from one object's interaction with another object

15. the sum of all the forces acting on an object in a free-body diagram

16. For every action, there is an equal and opposite reaction. The statement means that in every interaction, there is a pair of forces cacting on the two interacting objects. The size of the forces on the first object equals the size of the force on the second object.

17. the momentum of a system is constant if there are no external forces acting on the system. It is embodied in Newton's first law (the law of inertia).

Down

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

3. when all the horizontal and vertical forces balance out so that the net force = 0

4. force acting in the opposite direction.

5. an English physicist and mathematician who is widely recognised as one of the most influential scientists of all time and a key figure in the scientific revolution

8. 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.

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

11. is the force of gravity on the object and may be defined as the mass times the acceleration of gravity, w = mg

12. force needed to accelerate one kilogram of mass at the rate of one metre per second squared in direction of the applied force