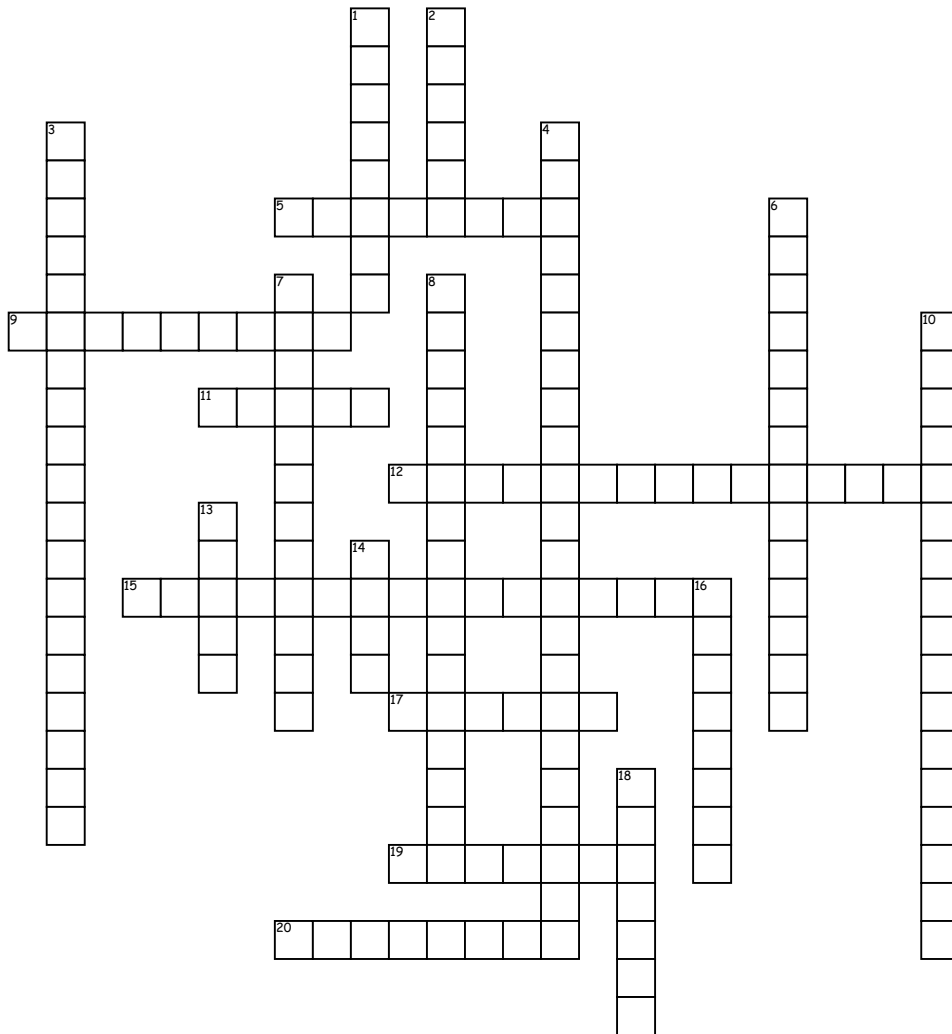


crossword puzzle



Across

- 5. The force that two surfaces exert on each other when they rub against each other is called ____.
- 9. A ____ causes a change in the object's motion.
- 11. The ____ of an object is the distance the object travels per unit of time.
- 12. ____ occurs when two solid surfaces slide over each other.
- 15. Newton's ____ states that an object at rest will remain at rest unless acted upon by a nonzero net force. An object moving at a constant velocity will continue moving at a constant velocity unless acted upon by a nonzero net force.

- 17. ____ is mathematically described in terms of displacement, distance, velocity, acceleration, speed, and time.
- 19. Resistance to change in motion is called ____.
- 20. ____ is a characteristic of a moving object that is related to the velocity of the object.

Down

- 1. ____ is defined as the vector measurement of the rate and direction of motion.
- 2. ____ is a measure of the force of gravity on an object.
- 3. ____ of action and reaction forces are all around you.
- 4. The law of ____ states that, in the absence of outside forces like friction, the total momentum of objects that interact does not change.

- 6. An object is in motion if it changes position relative to a ____.
- 7. Acceleration Scientists define ____ as the rate at which velocity changes.
- 8. Newton's ____ states that if one object exerts a force on another object, then the second object exerts a force of equal strength in the opposite direction on the first object.
- 10. Newton's ____ states that an object's acceleration depends on its mass and the net force acting on it.
- 13. A ____ is a push or pull.
- 14. ____ is a measure of the amount of matter in an object.
- 16. The combination of all the forces on an object is called the ____.
- 18. ____ is a force that pulls objects toward each other.

Word Bank

- | | | | |
|---------------------|--------------------------|----------------------|--------------|
| inertia | Mass | Motion | velocity |
| first law of motion | Force | second law of motion | acceleration |
| friction | third law of motion | speed | Momentum |
| Reference point | Action reaction pairs | Sliding friction | Net force |
| Gravity | conservation of momentum | 0 net force | Weight |