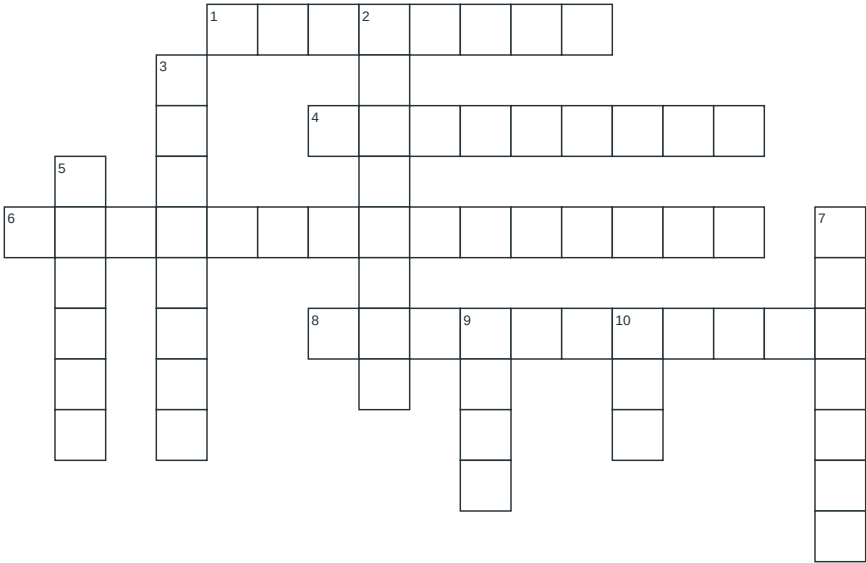


Forces and Newton's Laws Crossword

Easy | 10 clues | Student Worksheet

Name: _____ Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.



ACROSS

- 1. The vector sum of all forces acting on an object
- 4. Orientation of motion, needed to describe a velocity vector.
- 6. Equal and opposite interaction forces acting on different objects
- 8. Force that is a surface's push perpendicular to that surface

DOWN

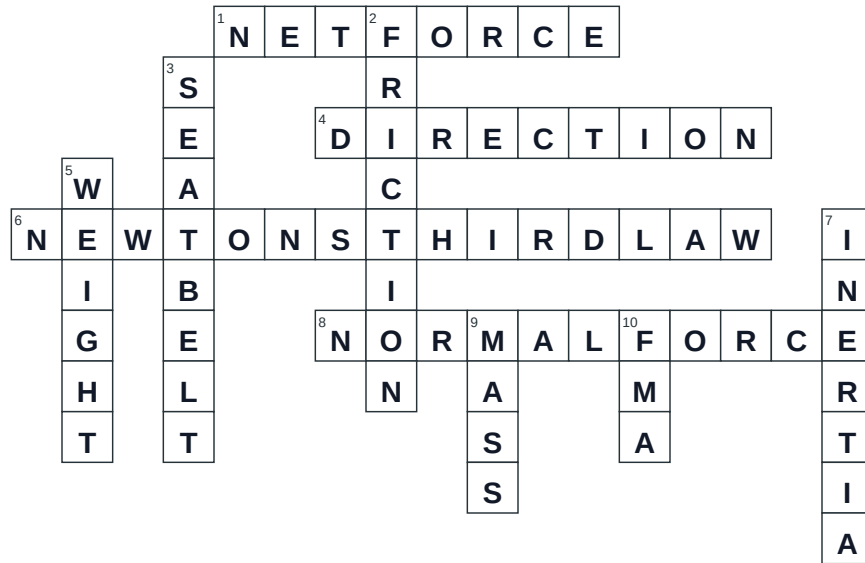
- 2. Opposes the relative sliding of contacting surfaces
- 3. Exerts a force that changes the passenger's motion
- 5. The gravitational force acting on an object
- 7. Resistance to changes in motion
- 9. Measure of the amount of matter in an object
- 10. Relationship that expresses Newton's second law for constant mass

Forces and Newton's Laws Crossword

Easy | 10 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

1. Net Force
4. Direction
6. Newton's Third Law
8. Normal Force

DOWN

2. Friction
3. Seat Belt
5. Weight
7. Inertia
9. Mass
10. $F = ma$

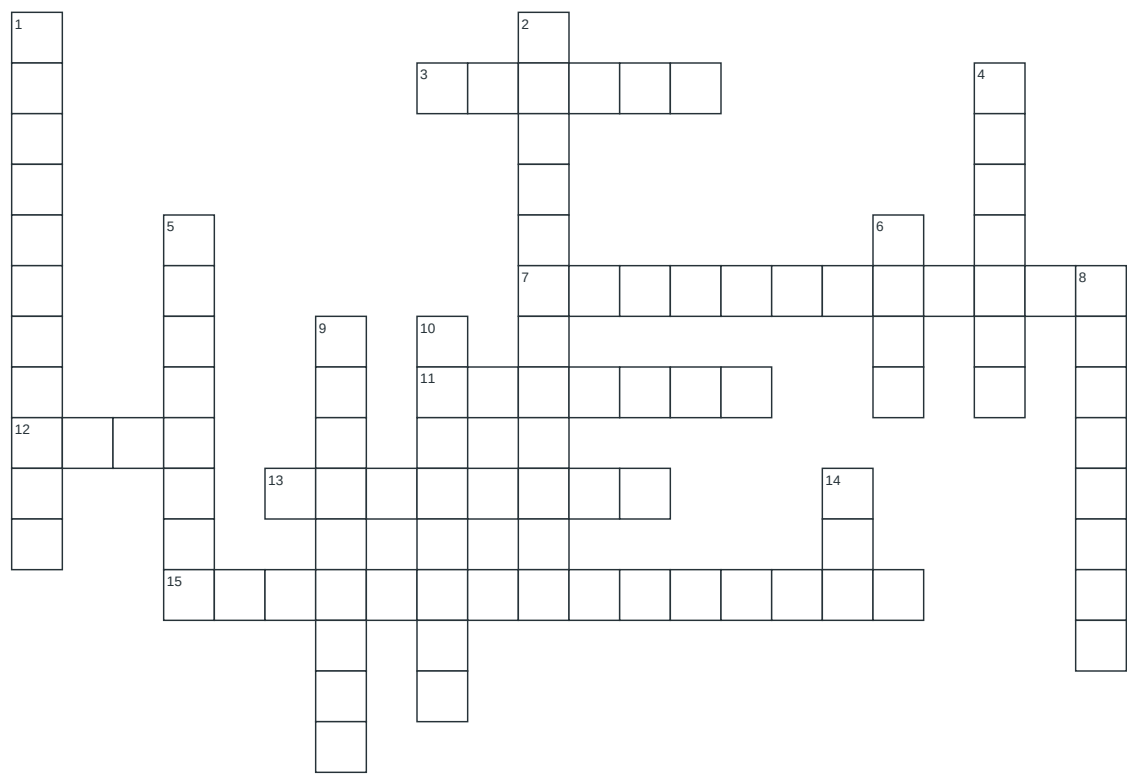
Forces and Newton's Laws Crossword

Medium | 15 clues | Student Worksheet

Name: _____

Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.



ACROSS

- 3. The gravitational force acting on an object
- 7. Change in velocity per unit time.
- 11. Resistance to changes in motion
- 12. State in which position does not change relative to a chosen reference point.
- 13. Exerts a force that changes the passenger's motion
- 15. Equal and opposite interaction forces acting on different objects

DOWN

- 1. Force that is a surface's push perpendicular to that surface

DOWN (continued)

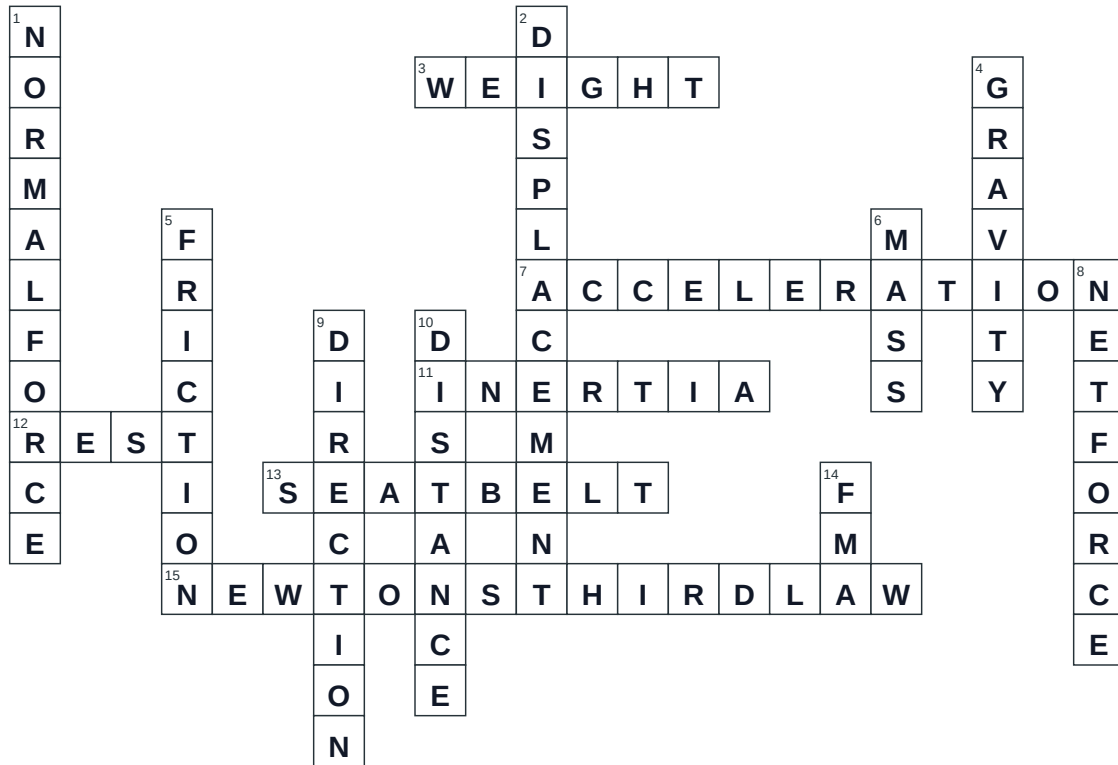
- 2. The directed change from initial to final position
- 4. In the ideal near-Earth projectile model, which force acts after launch when air resistance is neglected
- 5. Opposes the relative sliding of contacting surfaces
- 6. Measure of the amount of matter in an object
- 8. The vector sum of all forces acting on an object
- 9. Orientation of motion, needed to describe a velocity vector.
- 10. The total length of a traveled path
- 14. Relationship that expresses Newton's second law for constant mass

Forces and Newton's Laws Crossword

Medium | 15 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

- 3. Weight
- 7. Acceleration
- 11. Inertia
- 12. Rest
- 13. Seat Belt
- 15. Newton's Third Law

DOWN

- 1. Normal Force

DOWN (continued)

- 2. Displacement
- 4. Gravity
- 5. Friction
- 6. Mass
- 8. Net Force
- 9. Direction
- 10. Distance
- 14. $F = ma$

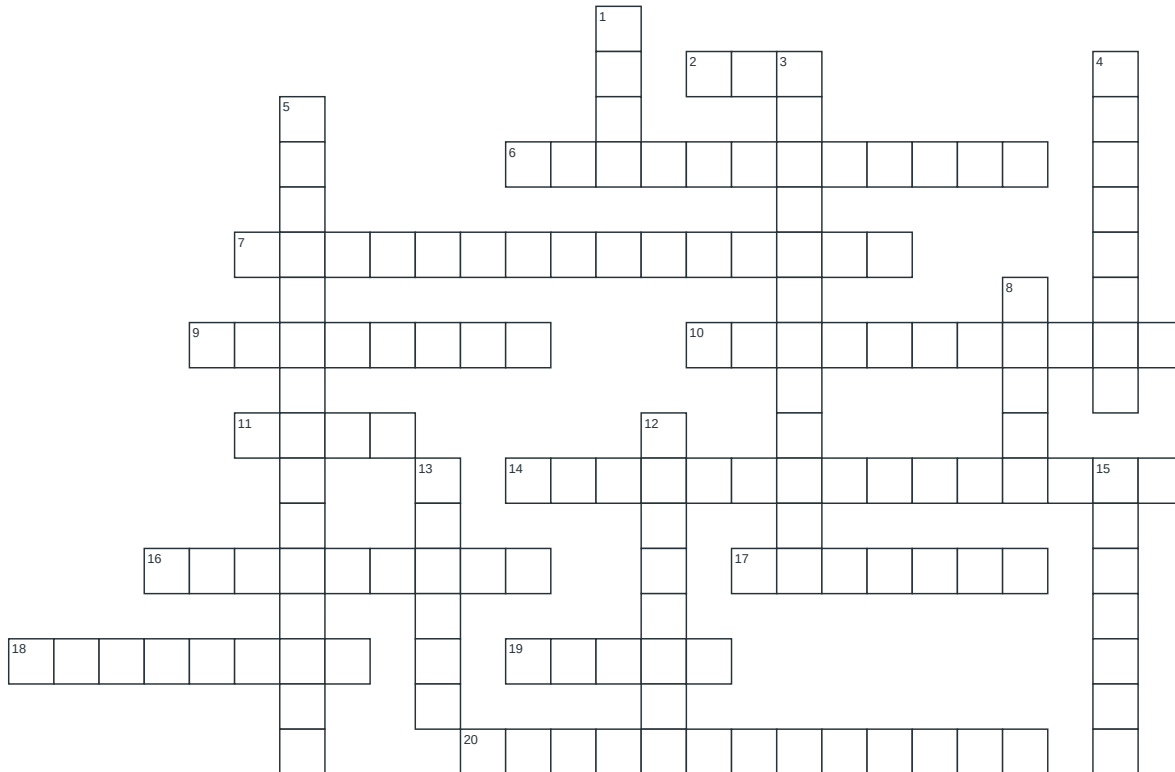
Forces and Newton's Laws Crossword

Hard | 20 clues | Student Worksheet

Name: _____

Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.

**ACROSS**

2. Relationship that expresses Newton's second law for constant mass
6. The directed change from initial to final position
7. Equal and opposite interaction forces acting on different objects
9. The total length of a traveled path
10. Force that is a surface's push perpendicular to that surface
11. State in which position does not change relative to a chosen reference point.
14. Energy associated with position in a gravitational field
16. Orientation of motion, needed to describe a velocity vector.
17. Resistance to changes in motion
18. Opposes the relative sliding of contacting surfaces

ACROSS (continued)

19. Quantity that is a scalar
20. Energy of motion; for a fixed mass it varies with the square of speed.

DOWN

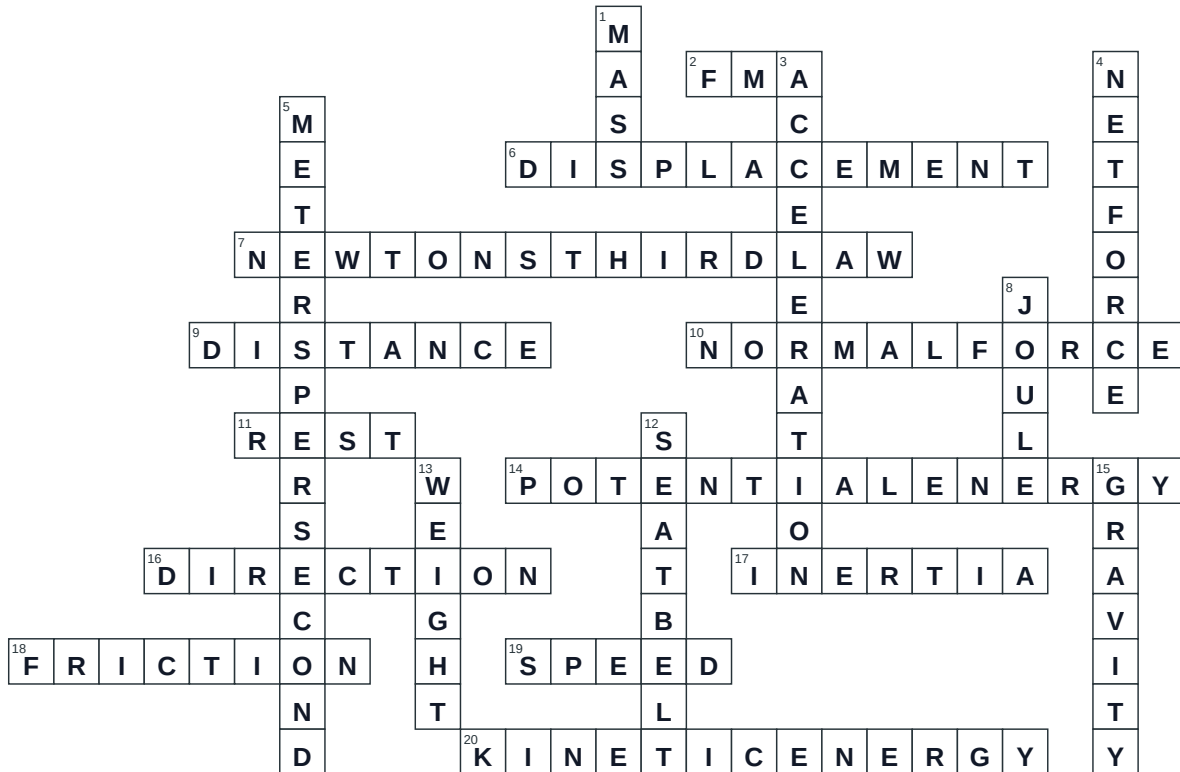
1. Measure of the amount of matter in an object
3. Change in velocity per unit time.
4. The vector sum of all forces acting on an object
5. SI-derived unit commonly used to measure speed or velocity.
8. Definition of the SI unit of energy and work
12. Exerts a force that changes the passenger's motion
13. The gravitational force acting on an object
15. In the ideal near-Earth projectile model, which force acts after launch when air resistance is neglected

Forces and Newton's Laws Crossword

Hard | 20 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

2. F = ma
6. Displacement
7. Newton's Third Law
9. Distance
10. Normal Force
11. Rest
14. Potential Energy
16. Direction
17. Inertia
18. Friction
19. Speed

ACROSS (continued)

20. Kinetic energy

DOWN

1. Mass
3. Acceleration
4. Net Force
5. Meters per second
8. Joule
12. Seat Belt
13. Weight
15. Gravity