VOCABULARY FOR FORCES UNIT

1. **Mechanical forces**-those where **you can see** the agent exerting the force
2. **Field forces**-those where the agent exerting the force is **invisible** (gravity, magnetism)
3. **Gravity**-field force that attracts all objects toward each other.
4. **Interaction**-acting together
5. **Interaction at a distance**-acting together, but having no physical contact (gravity & magnetism)
6. **Magnitude**-amount
7. **Newton**-unit for measuring forces
8. **Balanced forces**-forces that create **no motion** because both vectors are equal
9. **Unbalanced forces**-forces that create **motion** because the vectors are not equal
10. **Net force** – the sum of two or more forces
11. **Vector**-force arrow
12. **Buoyancy**-the ability to float
13. **Buoyant forces**-push up forces found in liquids and gases
14. **Distort**-to change size, shape, or form
15. **Elasticity**-the ability to go back to normal after distortion
16. **Elastic limit**-how far you can go before breaking
17. **Fracture**-the act of getting broken
18. **Strain** – a change in length
19. **Stress**-the effect of a distorting force
20. **Tension**-pulling apart
21. **Compression**-opposite forces pushing together
22. **Flexing/flexion**-bending
23. **Twisting**-turning about an axis
24. **Shearing-**opposite forces pushing together that can pass each other
25. **Spring scale**-tool used to measure forces in Newtons
26. **System**-group of objects interacting (acting together)
27. **Free body diagram**-picture
28. **Friction**-resistance force caused by molecules rubbing together
29. **Resistance**-any force that fights against you
30. **Cohesive forces**- forces of attraction between molecules of the same type
31. **Adhesive forces**- forces of attraction between molecules of a different type
32. **Kinetic friction**- (AKA **sliding friction**) friction between two objects that are moving
33. **Static friction**- friction between two objects that are not moving
34. **Rolling friction** – friction between two objects where one is rolling (for example, a wheel)
35. **Newton's first law**- an object in motion (or at rest) stays in motion (or at rest) unless acted upon by another force.
36. **Inertia**- an object's resistance to being moved. The more inertia you have the harder it is to slow down or get going
37. **Newton's second law** – force = mass x acceleration
38. **Newton's third law** – every action has an equal and opposite reaction

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