

Newton's Laws of Motion Review worksheet

1. Why don't heavy things fall faster than light things?
2. A force is required to get a ball rolling, or to stop it. Explain this.
3. Kg measures _____
4. N measures _____
5. M/s measures _____
6. What is speed?
7. To have velocity you must have _____ and _____.
8. Find the average speed of a cheetah that runs 100m in 4 seconds.
9. What is meant by net force?
10. Suppose you stand on a bathroom scale and you weigh 110N. If you stand on two scales at the same time what would they say? Explain.
11. What is static equilibrium?
12. What is dynamic equilibrium?
13. Define acceleration using words and formulas.
14. Describe acceleration in relationship to force.
15. Describe how mass and inertia are related.
16. How does mass effect acceleration?
17. Why can I say that air drag is a negative force?
18. Tell me about terminal velocity the best that you can. Don't forget to use the concepts of terminal speed and air drag. What is the relationship between Force and Mass. Explain in Detail=====
19. What force always resists or opposes acceleration?
20. $\sum F=0$ explain.
21. What unit is used for force? _____
22. What is the formula for the Equilibrium Rule? _____
23. The force that holds you up is called the _____.

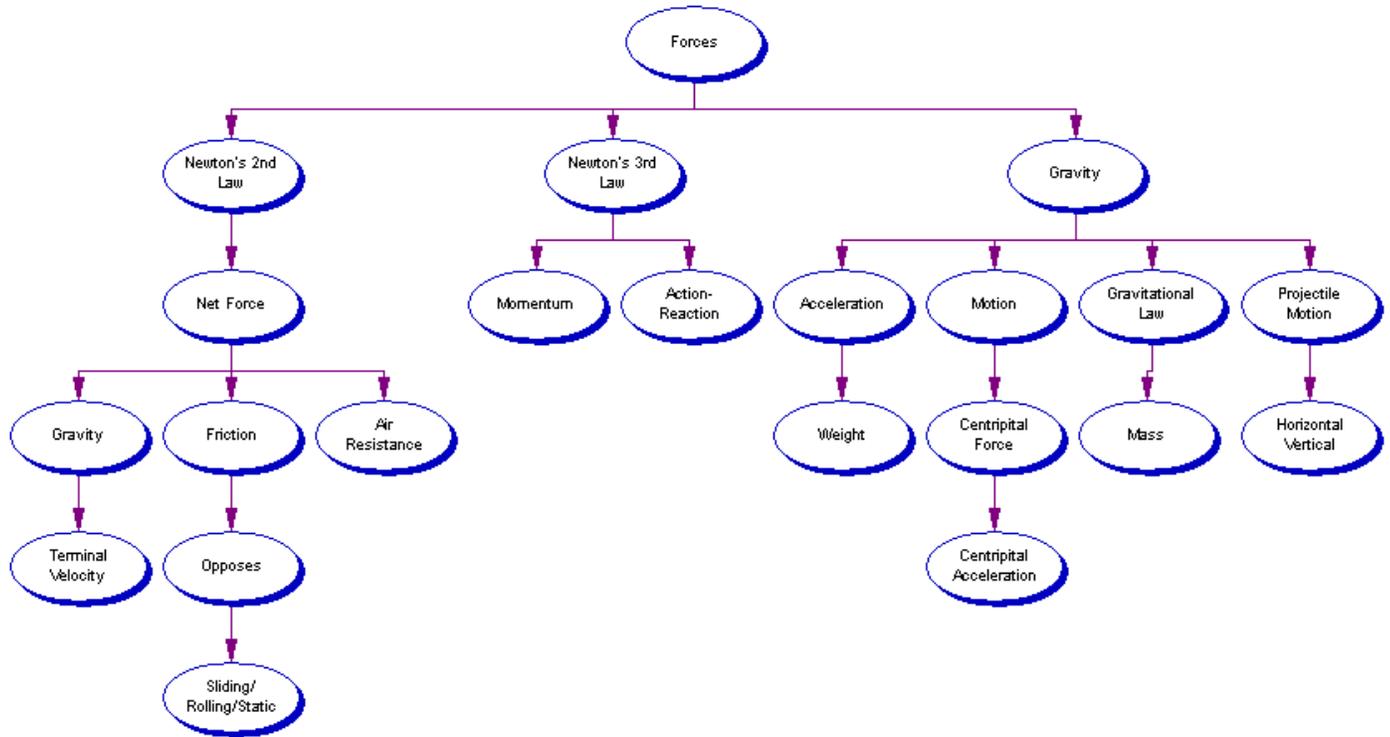
24. In the 1500's Galileo experimented and discovered many things. One of his famous experiments allowed him to discover that _____
 _____ when you drop them.
25. What is velocity? _____
26. What is Inertia? _____
27. As Burl and T.J. stand on a billboard painting staging their combined weight is 500N and the staging weighs 150N, what is the tension in the ropes if each person weighs the same? _____ each
28. Tiffany is hanging from the rings of the swing set. If she weighs 150N what is the tension in chains? _____ combined
29. I am pushing on a large box with 200N of force. Clint is pushing on the box with 200N of force in the opposite direction. Why won't the box move? (use the word equilibrium)

30. What do we mean when we say that motion is relative? _____

31. What is a vector quantity? _____
32. If a cannon is fired use $a=F/m$ to explain what happens to the cannon and the cannonball.
33. Newton's 3rd law of motion states that for every _____

34. When two forces act on one another it is called a(n) _____.
35. Jordan pushes with a force of 50N > on a crate. The friction forces are 100 N<. Will the crate move? _____ What is the acceleration of the crate? _____
36. The acceleration due to gravity is _____.
37. Acceleration $=\Delta v/\Delta t$, in words this is said a change in _____ per _____.
38. How do you find the average speed of an object in freefall?
39. As a motorcycle climbs a hill why does it undergo acceleration?
40. What is air drag?
41. _____ F_w
42. If the  force of w is 100N, then we know the force of n is _____.
 _____ F_n
43. If Katelyn pushes with a force of 125N and the crate does not move the friction force is _____.

Force Concept Chart



http://www.edtech.ku.edu/resources/portfolio/examples/T2T/matt/standards/st4_instructional/concept%20map%20force.gif

