Physics Notes

Force -A _____ that one body exerts on another.
Frame of Reference - The object or point from which movement is determined
Movement is relative to an object that ***appears*** stationary
Earth is the most common frame of reference
Motion - Motion is a _____ relative to a frame of reference
Inertia - tendency of an object _____ in its motion
It increases as mass increases.
Speed - Speed is _____ in a given amount of _____>
Speed = distance / time
The units for speed:
meters/second (m/sec)
kilometers/hour (km/hr)
Speed that does not change is constant speed
Average Speed - Total distance divided by the total time
Formula: Total distance / total time
Velocity -Speed in a _____.
Interesting Fact - Rockets are launched in the same direction of the earth's rotation to get an extra boost of 1800 km/hr to its speed
Acceleration - The change in _____.
Acceleration is measured in m/sec/sec or m/sec^2
Formula is:
(final velocity - original velocity)/time
Friction - force that _____ between 2 surfaces
Gravity - _____ between any two objects in the universe increases as...
mass increases, distance decreases
depends on the: types of surfaces, force between the surfaces
Balanced Forces - forces acting on an object that are _____ and _____
_____ in velocity
Unbalaced Forces - forces that are _____ opposite and equal
velocity changes (object accelerates)
Energy - Energy is the ability to do work.
Force x Distance = Work
Kinetic vs. Potential - Potential energy is _____.
Kinetic energy involves _____.
Potential Energy - Consider a roller coaster. At the top, it has potential energy. The energy is stored just as the energy in the rubber band. It is energy waiting to be used for motion.
Kinetic Energy - As the roller coaster moves toward the bottom, kinetic energy increases along with the roller coaster's speed.
Trasformation of Energy - Conservation of energy means it can change forms between kinetic and potential, _____.The total amount of energy is always the same.