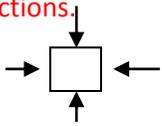
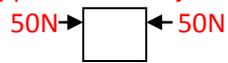
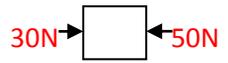


Speed, Velocity, and Acceleration Vocabulary

Vocabulary Word	Definition
1. Reference point	A place or object used for comparison to determine if an object is in motion.
2. Position	A place where someone or something is located or has been put
3. Direction	The line along which anything moves with reference to the point or region toward which it is directed.
4. Velocity	Speed in a given direction.
5. Speed	The distance an object travels per unit of time.
6. Motion	The action or process of moving or of changing place or position ; movement.
7. Acceleration	The rate at which velocity changes.

Balanced and Unbalanced Forces Vocabulary Words

Word	Book Definition	Examples
1. Inertia	The property of a body by which it remains at rest or continues moving in a straight line unless acted upon by a directional force.	You stay in the seat of your car because of your seatbelt (outside force), when slamming on the breaks suddenly.
2. Newton	An SI unit of force equivalent to the force that produces an acceleration of one meter per second on a mass of one kilogram.	I applied 10N of force to move the box.
3. Reaction	An equal but opposite force exerted by a body when a force acts upon it.	When you fire a gun the force pushes the bullet out and at the same time the force of the bullet pushes into the gun and the holder which pushes into you.

4. Newton's First Law	An object will keep doing whatever it is doing, whether it is sitting still or moving, unless the forces acting on it become unbalanced.	A book sitting on a table not moving until a force has been applied to it.
5. Newton's Second Law	If you place force on an object it will accelerate.	$F=ma$ (Force=mass x acceleration)
6. Newton's Third Law	When one object exerts a force on a second object, the second object exerts a force back that is equal, but in the opposite direction.	There is force pushing against an object in all directions. 
7. Balanced Force	When the net force of an object IS zero. There is NO change in the motion of the object. The object is either motionless or maintaining a constant speed.	Equal force is being applied to an object. 
8. Unbalanced Force	When the net force of an object is GREATER than zero. There WILL be a change in the motion of the object. A motionless object will begin to move, while an object already moving will change its speed or direction.	Unequal force being applied to an object. 

Word	Book Definition	Examples
9. Force	A push or pull acting on an object.	Pushing a child on a swing.
10. Friction	A force that opposes motion between two surfaces that are touching.	Rubbing your hands together.
11. Gravity	A force of attraction between two masses.	Releasing a ball from a high surface will cause the ball to drop towards the ground.
12. Magnetic Force	Force of attraction or repulsion exerted by a magnet.	Opposite poles will attract (North to South). Same poles will push away (North to North).

Energy Vocabulary Chart

Vocabulary Word	Actual Definition	Your Definition	Example/Picture
1. Energy	The ability to do work. The two main types of energy are kinetic and potential.		
2. Kinetic Energy	Energy of matter in motion.		Rolling a Bowling Ball
3. Potential Energy	Energy an object has because of its position (Stored Energy).		Object at the top of a roller coaster.
4. Chemical Energy	Internal energy stored in the chemical bonds between atoms.		
5. Thermal Energy	The total energy of all particles in an object.		
6. Mechanical Energy	The sum of the potential and kinetic energy. Energy associated with the movement and position of an object.		
7. Conservation of Energy	A principle stating that energy cannot be created or destroyed, but can be altered from one form to another.		
8. Electromagnetic Energy	Form of energy that travels through space as waves.		Radio Waves, X-Rays
9. Electrical Energy	The energy of electrically charged particles moving from one place to another.		Electrolysis
10. Energy Transfer	Energy transfer refers to the movement of energy from one object or material to another. The main ways that energy transfers includes: radiation, heat conduction, convection, electrical power transmission and mechanical work.		Convection, for instance, entails the movement of currents of warm air.

Simple Machines Vocabulary Chart

Vocabulary Word	Actual Definition	Your Definition	Example/Picture
1. Simple Machines	Any of the basic mechanical devices for applying a force.		
2. Inclined Plane	A flat supporting surface tilted at an angle, with one end higher than the other, used as an aid for raising or lowering a load.		

3. Pulley	A wheel, with a grooved rim for carrying a line, that turns in a frame or block and serves to change the direction of or to transmit force.		
4. Lever	A bar that pivots on a fixed support, or fulcrum, and is used to transmit torque.		
5. Wheel and Axle	The wheel and axle is generally considered to be a <u>wheel</u> attached to an <u>axle</u> so that these two parts rotate together in which a force is transferred from one to the other.		
6. Mechanical Advantage	The ratio of the force produced by a machine to the force applied to it, used in assessing the performance of a machine.		
7. Efficiency	Efficiency is a measure of how much more work must be put into a machine than you get out of the machine.		