Name _____ Pd _____ Date _____

FORCES, MASS, AND WEIGHT

Using the textbook (the page is provided under each word) to fill in the chart below:

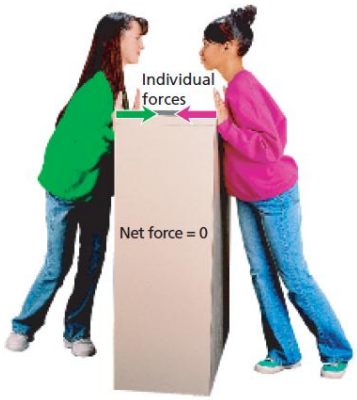
	DEFINITION	EXAMPLE OR REAL-WORLD CONNECTION
FORCE *(page 36)*	- A push or a pull * Note: the strength of a force is measured in units called __NEWTON__.	* Throwing a ball * Pushing a hockey puck on the ice
Net Force *(page 37)*	- the combination of all forces acting on an object	* You and your friend pick up a heavy box together
Unbalanced Forces *(page 38)*	- occurs when there is a net force greater than 0; this type of force causes a change in motion	* kicking a soccer ball
Balanced Forces *(page 38-39)*	- occurs when forces acting on an object produce a net force of 0; causes NO change in motion.	* leaning two playing cards against each other
FRICTION *(page 43)*	- the force that two surfaces exert on (apply to) each other when they rub against each other; the strength depends on how hard the surfaces push together and the types of surfaces involved.	* sliding your foot across the floor * roller skating * swimming * rubbing your hands together
Static Friction *(page 44))*	- the force that acts on objects that are not moving	* the table sits "static" on the floor
Sliding Friction *(page 44)*	- occurs when two solid surfaces slide over each other	* ice skating
Rolling Friction *(page 44)*	- occurs when an object rolls across a surface	* roller skating * skate boarding
Fluid Friction *(page 44)*	- occurs when a solid object moves through a fluid (water, air, oil, etc.)	* swimming * surfing

	DEFINITION	EXAMPLE OR REAL-WORLD CONNECTION
GRAVITY *(page 46)*	- a force that pulls objects toward each other	* gravity on Earth comes from the Earth's core.
Mass *(page 46)*	- the measurement of the amount of matter in an object; matter is made up of atoms and molecules	* the table is made up of atoms and molecules…it has mass!
Weight *(page 47)*	- the force of gravity on a person or object at the surface of a planet; this depends on how much mass you have and how much gravity the planet has.	* your weight on Earth is different than on the moon, even if your mass stays the same.

Directions: In the picture below, identify the type of force being exerted on the box as "balanced" or "unbalanced".

Unbalanced

Unbalanced



Balanced

*Write an example of a time when you have witnessed or created an **unbalanced** force:*

*Write an example of a time when you have witnessed or created a **balanced** force:*