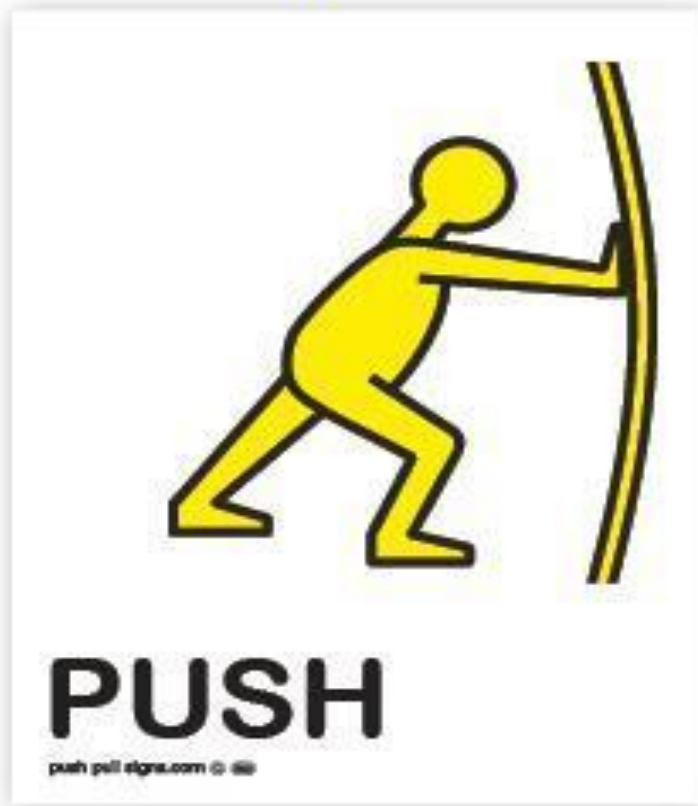


FILL IN QUESTION 1

1. What is a force

pushes and pulls - forces and motion



UNIT = NEWTONS

2. 7 forces are...

Electrical

Magnetic

Nuclear

Tensional

Elastic

Frictional

Gravitational

Go over stations and format

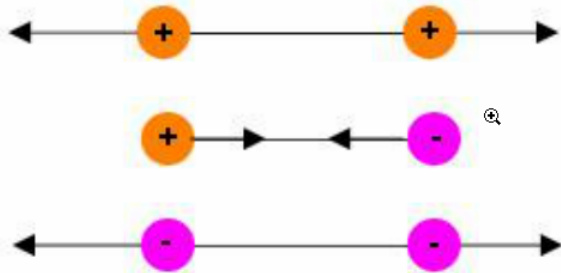
groups of 3 move around the room

Others at desk.

Working on page 2 (friction)

Electrical

● + -



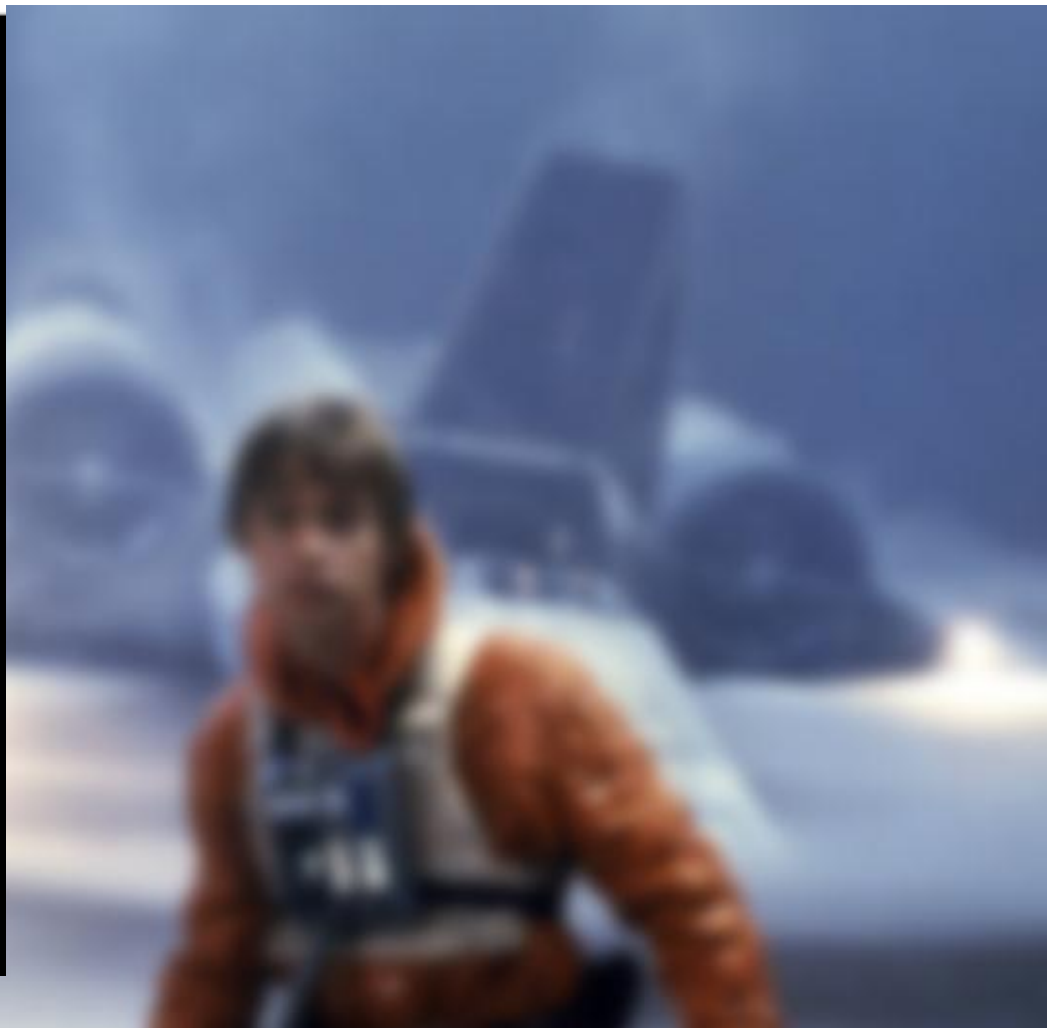
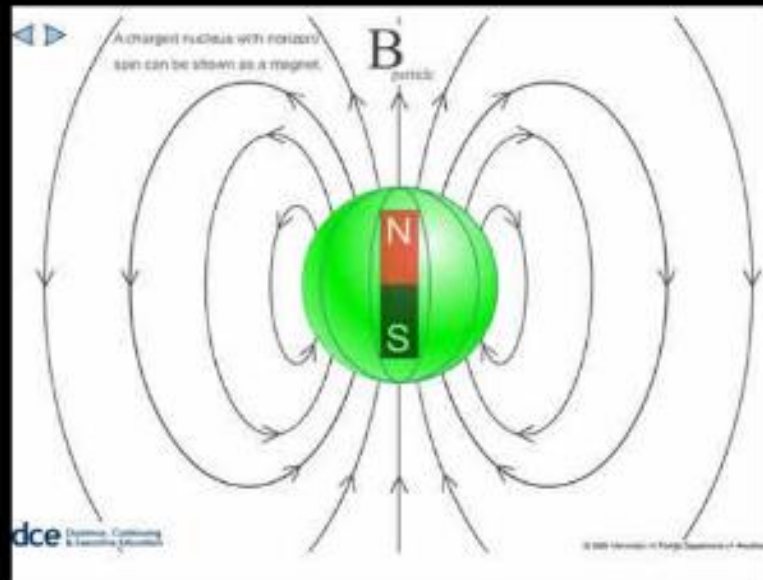
Like charges repel and opposite charges attract

- Forces caused by protons and electrons.
- The objects don't have to be touching.
- Moving pushing and pulling electrons is how we create electricity.
- Static Electricity is the building up of electrons on one surface



MAGNETIC

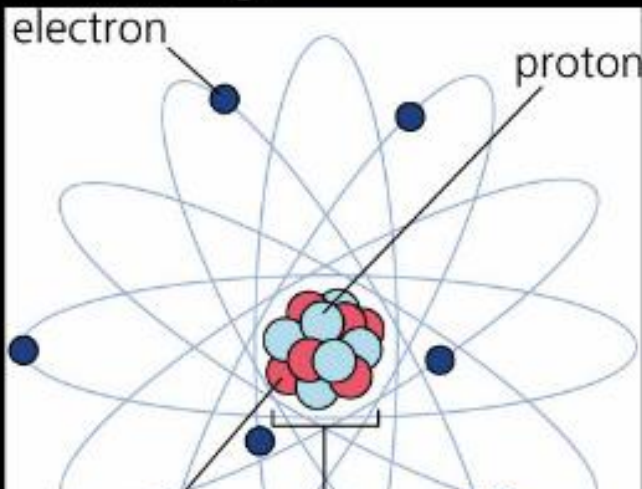
- North and south



- **Iron, Nickle and Cobalt can all be magnetic.**
- **Sends out magnetic Field and has a North and South Pole**
- **Cutting a magnet in $\frac{1}{2}$ is like cutting earth worm in half... Each new magnet has both a North and a South**

nuclear

- holds atoms together



- Holds atom together.**
- They bind protons and neutrons
- The **nuclear force** is about 10 millions times stronger than the chemical binding that holds atoms together in molecules
- Releasing some of this energy creates nuclear power.

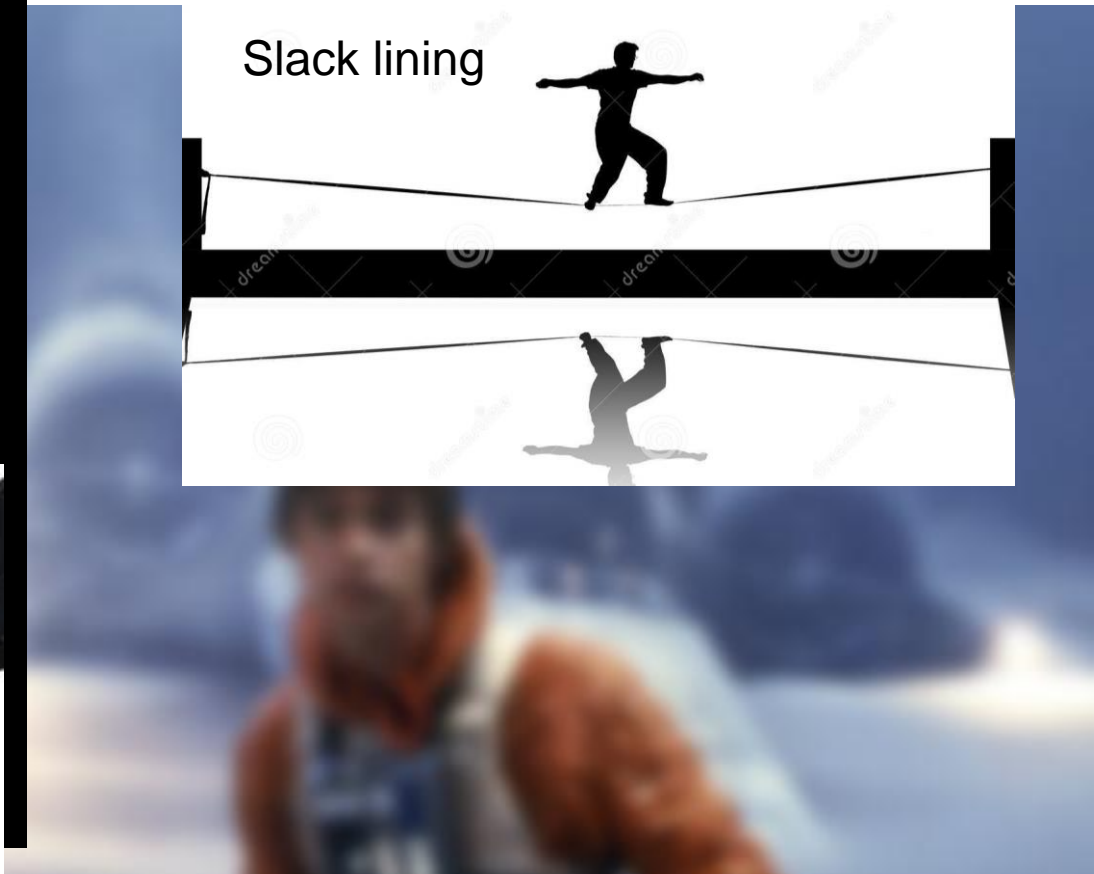
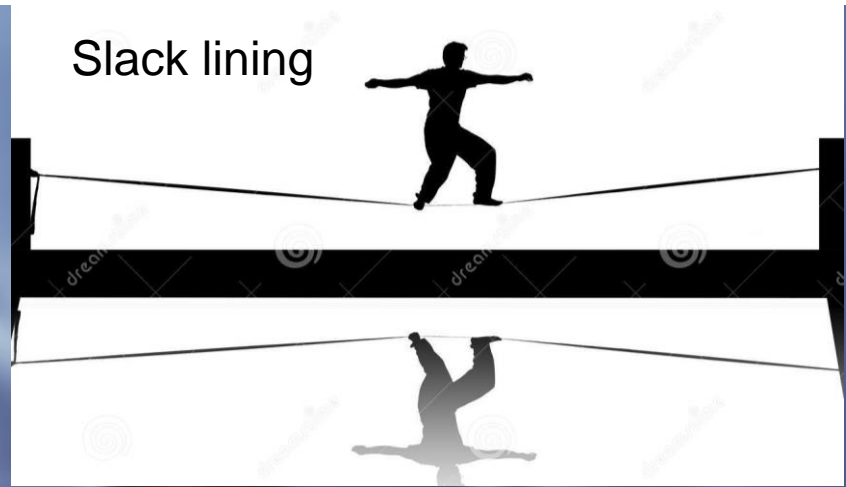
weight (gravity)

- All objects w/ mass pull on other objects



- ❑ All MATTER pulls on other objects
- ❑ This pulling is called WEIGHT
- ❑ The more the MASS of the objects = GREATER PULL
- ❑ The further away the objects are = LESS PULL

- **Tensional**



- Force that happens in an object when is being pulled from both sides.
- Examples include slack lines, Tug of war, Bike chains, and suspension bridges

- **ELASTIC**



- **Changing the shape of the object like a spring or rubber band.**
- **Examples include car shocks, rubber bands, springs, binder clips**

) FRICTION

- sliding of 2 objects
- resists motion



I STARTED THIS FIRE USING FRICTION. Two sticks create enough heat to start the fire

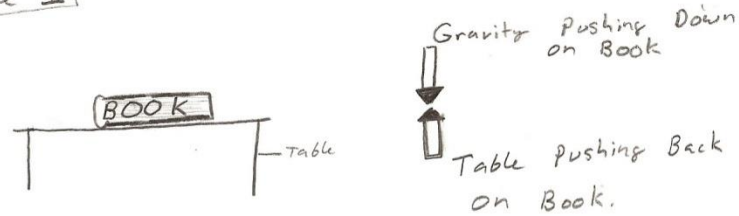
- ❑ ALWAYS Works OPPOSITE of MOTION
- ❑ SLOWS objects down (RESISTS MOTION)
- ❑ AIR causes friction also. It is known as DRAG

3. Describe Balanced Forces and their affect on an object

Balanced Forces

Practice Examples

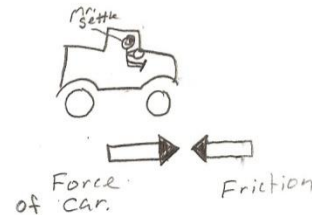
Example 1



- The two forces are balanced
- No change in motion
- The Book continues to stay motionless.

Example 2

German Autobahn going 120mph



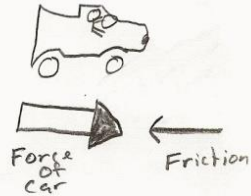
- The Force of the car & The friction are balanced
- The car continues to move at a constant speed of 120mph.

4. Describe UN-Balanced Forces and their affect on an object

Unbalanced forces

Example 1

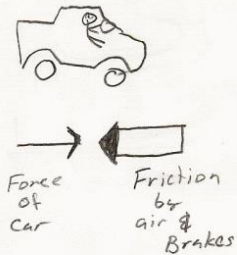
• The car gas was just pushed to the floor.



- Force of car is greater than the friction
- The cars motion changes.
- The cars accelerates

Example 2

• The driver just slammed on the brakes



- Force of Friction by the air & Brakes is greater than the force of the car.
- The cars motion changes
- The car decelerates or slows down.

5. What is meant by net force?

TOTAL FORCE ON AN OBJECT

- Pick up text book
- Find Friction (119)
- Do page 3 of notes:
 - Color, neatness, label, explain

What is friction? (use text book)	
Describe the 4 types of friction. (include labeled and colored pictures with an explanation)	
Static <u>Labeled Picture</u> <u>Explanation</u> <u>Additional Example</u>	Sliding <u>Labeled Picture</u> <u>Explanation</u> <u>Additional Example</u>
Rolling <u>Labeled Picture</u> <u>Explanation</u> <u>Additional Example</u>	Fluid <u>Labeled Picture</u> <u>Explanation</u> <u>Additional Example</u>