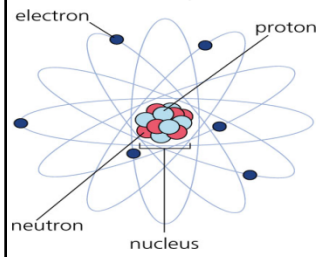
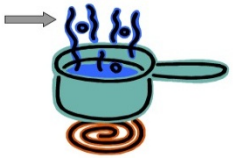
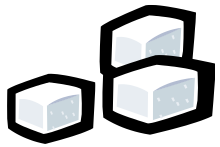
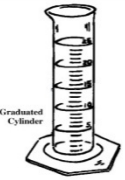
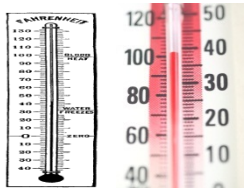
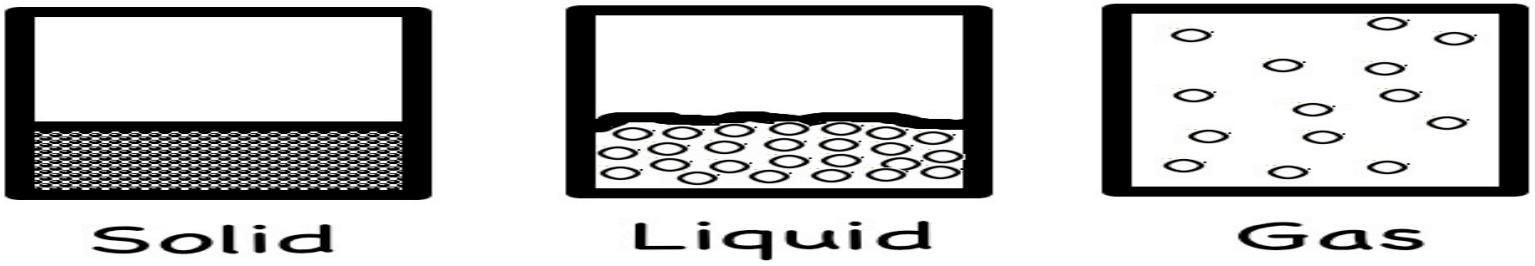
Properties of Matter

What are the three states of matter? •**SOLID** •**LIQUID** •**GAS**	Everything is made of what? •**MATTER**	Smallest unit of matter is called ___? •**ATOM** 	No Definite Shape No Definite Size Free flowing molecules •**GAS** 	Definite Shape Definite Size Tightly Packed Molecules •**SOLID** 
No definite shape Loosely Joined Molecules Takes The Shape of its Container •**LIQUID** 	What does a ruler measure? •**LENGTH** **(in inches, centimeters, or millimeters)**	What units of measurement do scientist use for Volume? •**LITERS** (L) •**MILLILITERS** (mL)	The measure of the amount of matter ("Stuff") an object is made of? •**MASS** **(measured in grams)**	Tool used to measure temperature? •**THERMOMETER**
 **BALANCE** (Used to measure Mass)	 **BEAKER** (Used to measure volume)	 **GRADUATED CYLINDER** (Used to measure volume)	 •**THERMOMETER** (Used to measure temperature)	 •**MICROSCOPE** (Tool used to see objects that are too small for the naked eye)

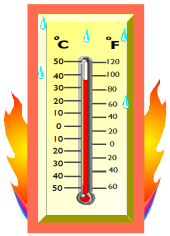
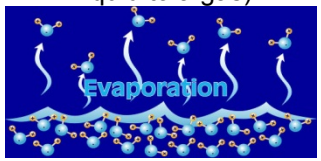
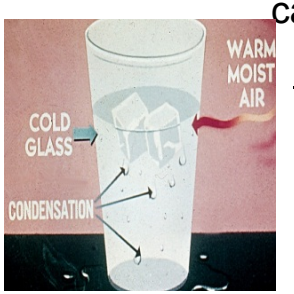
Properties of Matter

The States of Matter



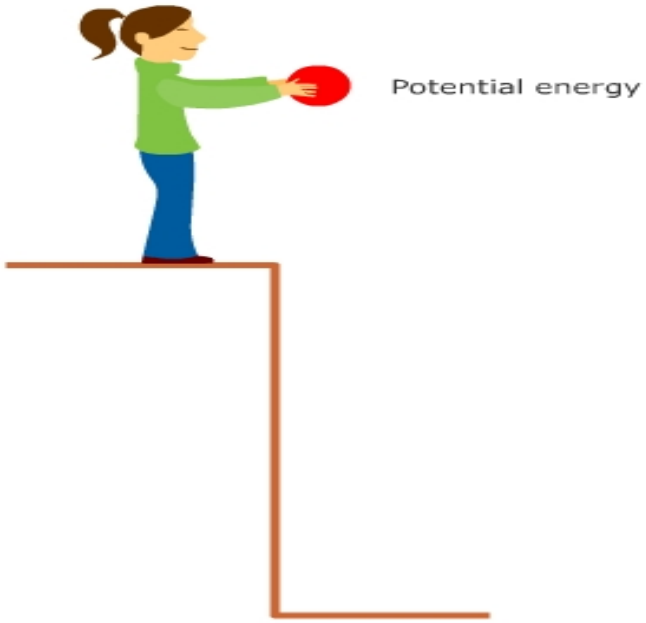
To go from a SOLID to a LIQUID ____ • **Add Heat** 	To go from a LIQUID to a SOLID • **Remove Heat** 	To go from a LIQUID to a GAS • **Add Heat** 	The measure of amount of gravity it takes to pull an object down? • **WEIGHT**	How can you determine the size of a liquid substance or the amount of space an object takes up? **By measuring its <u>VOLUME</u>**
When two or more substances are combined and **CAN** be separated? *They do not chemically bond • **MIXTURE**	When two or more substance are combined and **CANNOT** be separated? **They Do chemically bond to create a new substance* • **SOLUTION**	The universal solvent? **WATER**	Burning paper is what kind of change? **CHEMICAL CHANGE**	Cutting a tree down is what kind of change? **PHYSICAL CHANGE**

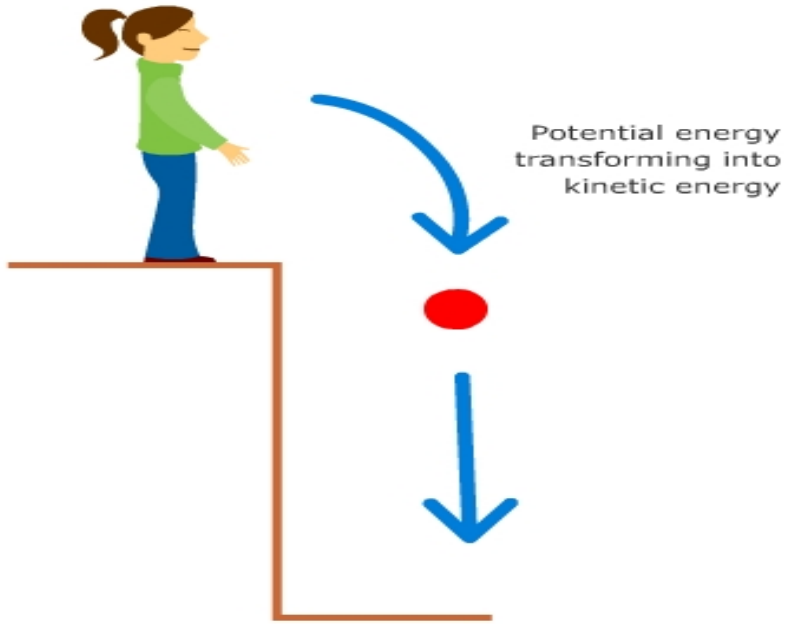
Properties of Matter

Examples of CHEMICAL CHANGES: •**RUSTING** •**BURNING**	Ways To Separate Matter: •**SIZE** •**SHAPE** •**COLOR** •**MAGNETIC ABILITY**	How Can Atoms Be Seen? •With a **MICROSCOPE**	Parts of an ATOM: •**PROTON** (+ Positive charge) •**NEUTRON** (No Charge) •**ELECTRON** (- Negative Charge) 	
If I take a apple whose mass is 3 grams and slice it in half, when I place both pieces back on the balance what will it's mass be? **•3 GRAMS BECAUSE THE MASS STAYS THE SAME.**	When you **ADD HEAT** to an object what happens to it's temperature? **The Temperature INCREASES** ***goes up ↑** 	When you **REMOVE HEAT** to an object what happens to it's temperature? **The Temperature DECREASES** ***goes down ↓** 	Adding heat to a **SOLID** causes ____? **MELTING** (*The transforming from a solid to a liquid) 	Adding heat to a **LIQUID** causes _? **EVAPORATION** (*The transforming of a liquid to a gas) 
			The removal of heat from a **GAS** causes? 	**CONDENSATION** *The transformation of a gas back to a liquid

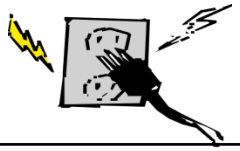
Forms of Energy

What are the TWO Types of energy?	What is the Energy of motion called?	Energy That Is Not In Motion Yet, Or Is Stored Is Called?	
•**KINETIC** •**POTENTIAL**	•**KINETIC ENERGY** 	**POTENTIAL**	





Forms of Energy / Energy Transformations

What type of energy happens when an object is **ABOUT** to fall back to the ground? **POTENTIAL**	Name the FORMS of kinetic energy: **•Thermal (Heat)** **•Light** **•Sound** **•Electrical** **•Radiant**	What is the form of energy where the molecules speed up causing an increase in temperature? **•THERMAL ENERGY** (HEAT ENERGY) 	What Is The Form Of Energy That Makes Objects Visible Through Electromagnetic Rays? **•LIGHT ENERGY** 	What Is The Form Of Energy That Comes From Vibrating Particles? **SOUND ENERGY** 
What is the form of energy that is created from the movement of electrons? **ELECTRICAL ENERGY** 	What form of energy comes from the **SUN'S** rays? **RADIANT ENERGY** 	A candle gives off what TWO types of energy? **LIGHT & HEAT** 	When an objects moves or a person does work what type of energy is created? **MECHANICAL ENERGY** 	What travels quicker, sound or light waves? **•Sound travels faster through solids** **•Light travels faster through liquids and gases**
Energy that comes from plugging something into the wall or using a battery **ELECTRICAL**	Energy never… **DIES! IT IS TRANSFERRED FROM ONE OBJECT TO THE NEXT**	If Billy is tired, what is one way for him to get energy? **Eat something** **(CHEMICAL ENERGY)** 	Rubbing your hands together creates what type of energy transformation? **MECHANICAL ENERGY** ↓ **THERMAL ENERGY** 	

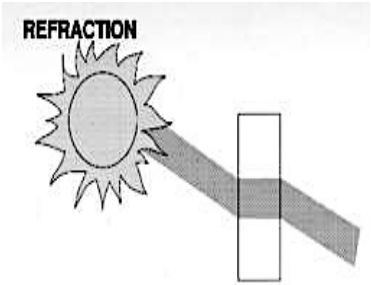
Forms of Energy / Energy Transformations

When light bounces off a surface___?

- **REFLECT**

When light bends around a surface__?

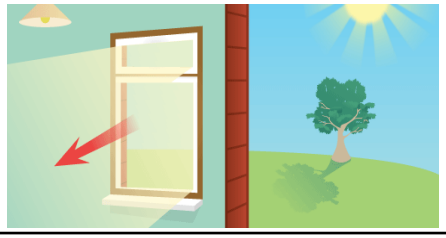
- **REFRACT**



When light passes through an object it is _____?

- **TRANSPARENT**

(Because you can see through it)



When light is blocked through an object It is_____?

OPAQUE

Sound Travels in _____?

WAVES

When light is blurred through an object it is_____?

TRANSLUCENT

What is a <u>RENEWABLE</u> resource?

A RESOURCE THAT <u>CAN BE</u> REPLACED

What is a <u>NONRENEWABLE</u> resource?

A RESOURCE THAT CANNOT BE REPLACED

Give an example of renewable resource:

- **WATER** (HYDROELECTRIC)
- **WIND**
- **SOLAR** (FROM THE SUN)
- **BIOMASS** (TRASH)

Give an example of a nonrenewable resource

- **Fossil Fuels**
- **Natural Gas**
- **Coal**

Electrical Energy created from the flow of moving water is___?

HYDROELECTRIC

Forms of Energy / Energy Transformations

Electrical Energy created from the movement of air _____?

- **WIND ENERGY**

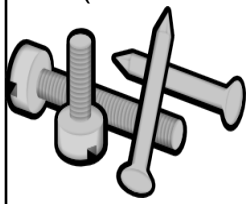
Electrical Energy created from converted light energy from the Sun?

- **SOLAR ENERGY**

A Material that allows electricity to flow freely is a __?

- **CONDUCTOR**

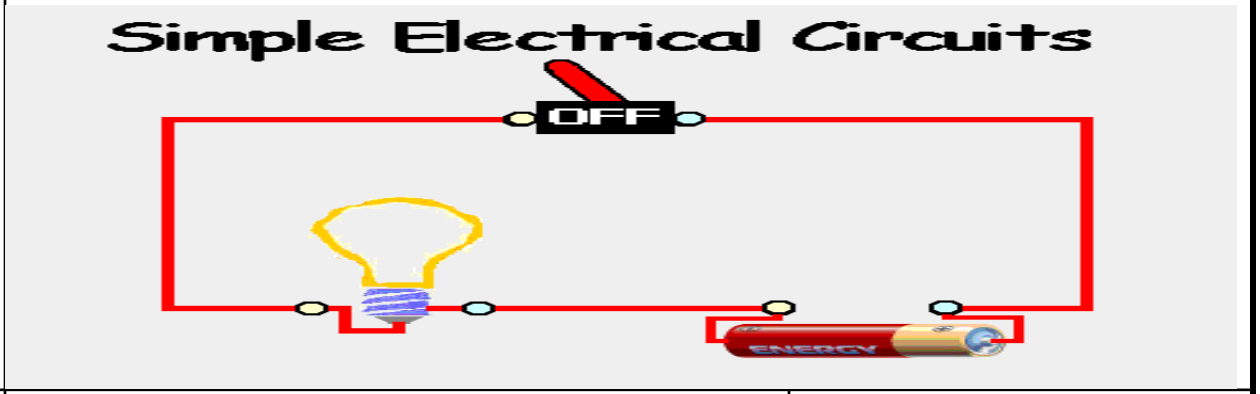
(EXAMPLE: METALS)



A Material that blocks the flow of electricity is a __?

- **Insulator**

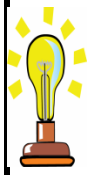
(EXAMPLE: Plastics, Rubber, & Glass)



What is a resistor?

A material that stops or reduces the flow of electricity and transforms it into a new type of energy.

Example: A light bulb / A Radio)



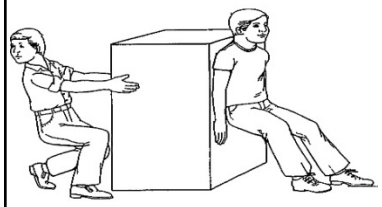
Will a open circuit work?

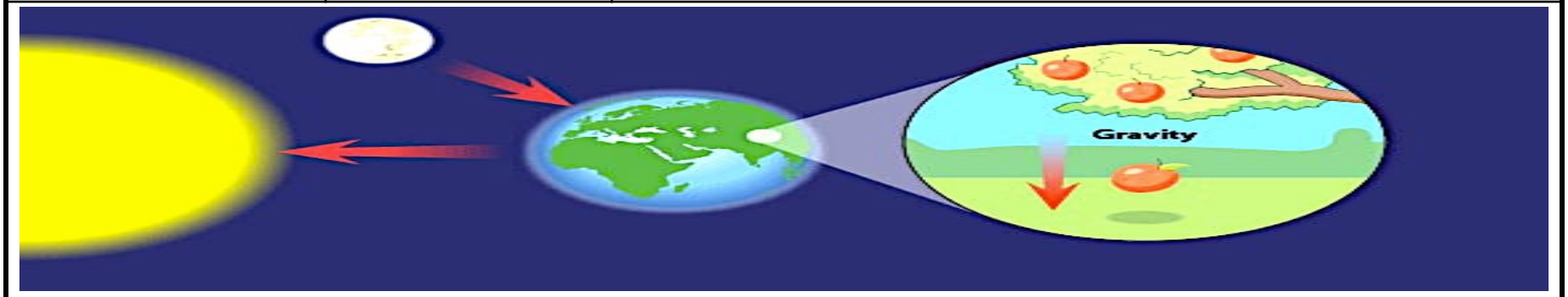
NO. Because the circuit needs to be closed in order for electricity to flow through

Sources of Electrical Energy:

- Batteries (stored electricity)
- Electrical Outlet

Motion of Objects

What is Newton's 1st law of Motion? **An object at rest will remain at rest until an outside force acts upon it. An object in motion will remain in motion until an outside for acts upon it.**	What is Newton's 2nd law of Motion? **An object's acceleration depends on the size, shape, and direction of the force acting upon it**	What is Newton's 3rd law of Motion? **An object's For every action there is an equal and opposite reaction.**	A FORCE is ___? **•A PUSH OR PULL ON AN OBJECT** 	What are the 3 forces found here on Earth? **•GRAVITY** **•FRICTION** **•MAGNETISM**
The tendency to resist a change in motion or keep objects moving in a straight line is __? **•INERTIA**	The force that attracts is __? **MAGNETISM** 	The force that holds planets and stars together, keeps the planets in orbit around the sun, makes things that go up come down again, and gives us the tides? **•GRAVITY**		



Motion of Objects

What force stops or slows down the motion of objects that rub together __?

- **FRICTION**

If the amount of force placed on an object is EQUAL then the forces are considered a : **BALANCED FORCE**

If the amount of force placed on an object is not the same then the forces are considered a : **UNBALANCED FORCE**

Motion of Objects

What can be used **REDUCE** the amount of friction?

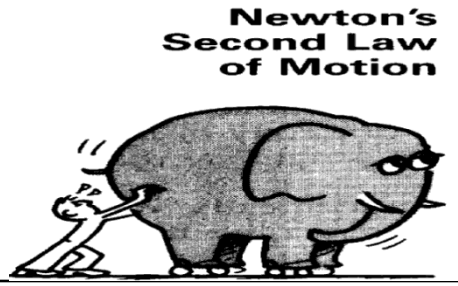
- Water
- Ice
- Oil

What is an object's speed?

- The **DISTANCE** (how far) it travels over a period of **TIME**.

The more mass an object has the [?] the force needed to move it.

- **GREATER**

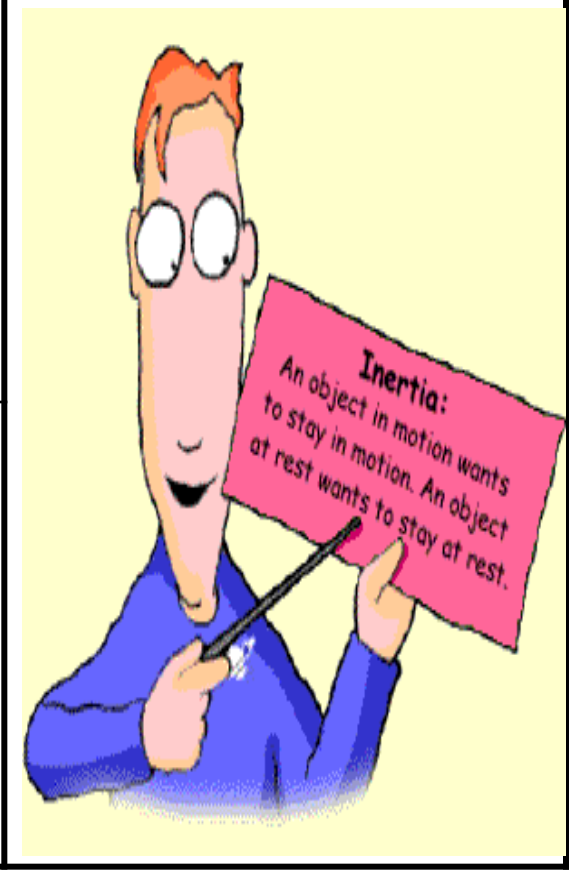


Speed of an object can be measured with what?

SPEEDOMETER

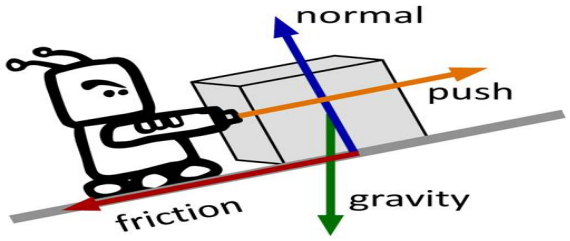
If an object is at rest how can it be put into motion?

- By Applying a **FORCE** to it (a push or a pull)

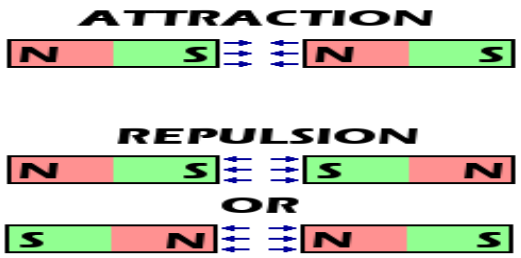


The force that resists motion when two objects RUB or TOUCH is called _?

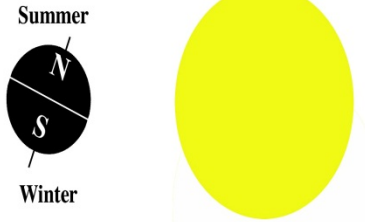
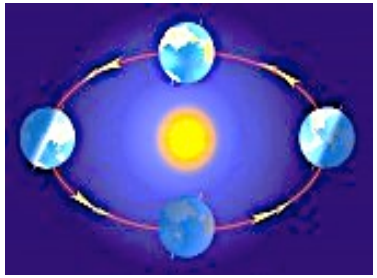
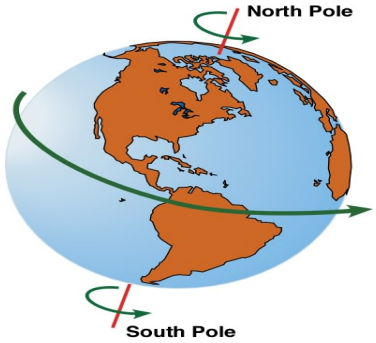
FRICTION



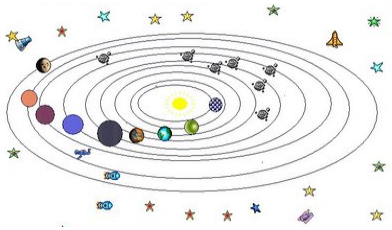
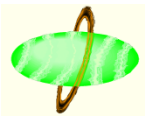
In order for magnetic poles to attract they must be __? **OPPOSITES**



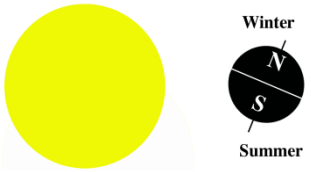
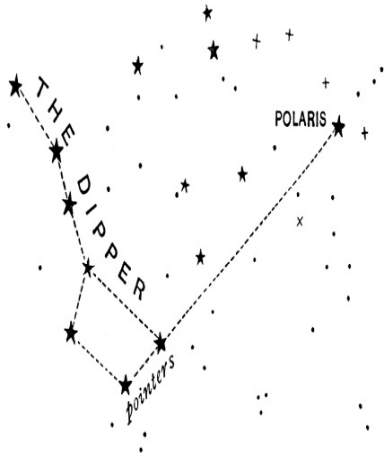
Earth In Space & Time

What determines the TEMPERATURE of a planet? **ITS DISTANCE FROM THE SUN**	Earth ROTATES and REVOLVES around_____ **THE SUN**	What is the sun? **A STAR at the center of the solar system that gives off light and heat energy**	The season when Earth is tilted toward the sun and is giving us the greatest amount of direct sunlight? **SUMMER** 	How long does it take Earth to **REVOLVE** around the sun? **365 DAYS** 
Characteristics of the **OUTER** Planets: **•Colder Temperatures** **•Made Mostly of Gas** **•Farther away from the sun** **•Take longer to orbit the sun**	Characteristics of the **INNER** Planets: **•Rocky Surfaces** **•Warmer Temperatures** **•Orbit the Sun quicker than the outer planets**	My - **Mercury** Very- **Venus** Educated - **Earth** Mother- **Mars** **(Inner planets)**	Just - **Jupiter** Served- **Saturn** Us - **Uranus** Nachos – **Neptune** **(Outer Planets)**	How long does it take the Earth to ROTATE on its axis? **24 HOURS** 

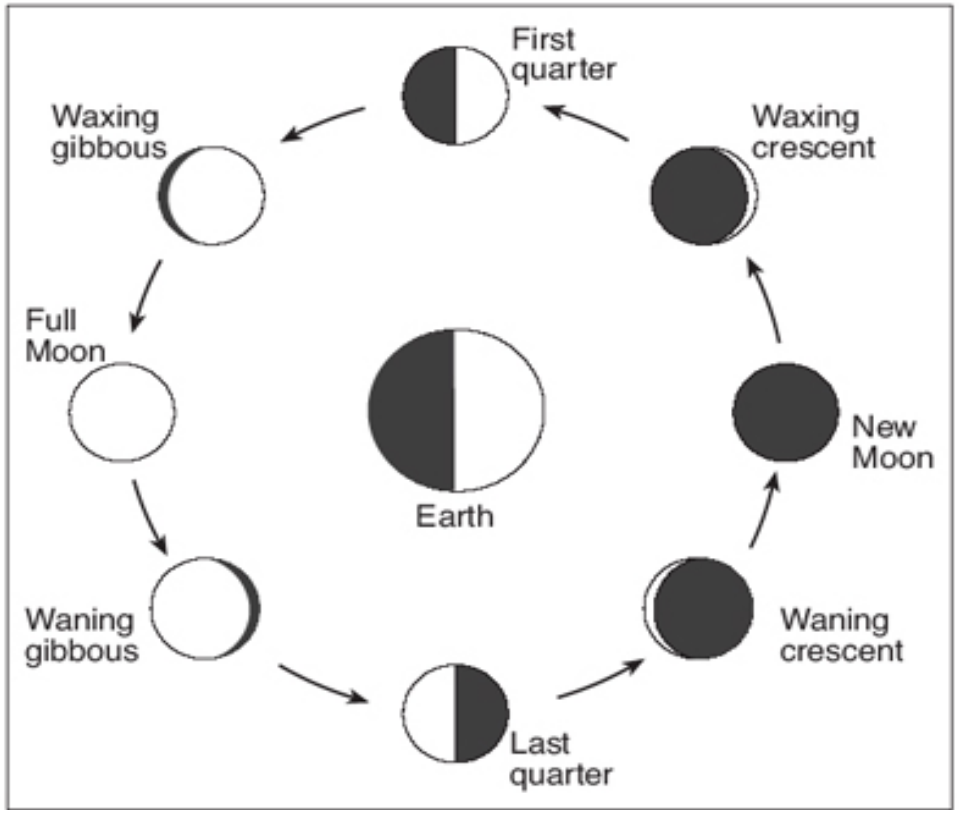
Earth In Space & Time

What is our home galaxy? **MILKY WAY**	What gives us seasons? **The Earth's 23.5 degree tilt on it's axis**	The planets that have no moons are _____? **MERCURY & VENUS**	A collection of planets, moons, asteroids, and comets that orbit around the Sun **•SOLAR SYSTEM** 	Collections of stars, dust, gases, and objects that orbit around stars are called a __? **GALAXY** 
A sphere of very hot, glowing gas the produces light energy is a __? **STAR**	The moon does what to the Earth? **REVOLVE** (TO ORBIT, OR MOVE IN A CIRCULAR PATH AROUND) 	The red planet **•MARS** 	The planet that rotates on its side, has rings made up of ice and dust is ___ **•URANUS** 	
		What is a light year? **The distance light travels in a given year**	The 3rd rock from the sun? **EARTH** 	Why are the outer planets called the "Gas Giants?" **Because they are made up of mostly gas**

Earth In Space & Time

When it is autumn on the northern hemisphere it is what in the southern? **SPRING**	What is the shape of Earth's orbit? **ELLIPTICAL** 	What happens due to Earth's rotation on its axis around the sun? **DAY & NIGHT**	The season when Earth is tilted away from the sun and is giving us the least amount of direct sunlight? **WINTER** 	What would happen it Earth did not have a tilt? **The seasons would be the same in both hemispheres at the same time**
What are objects that orbit around a PLANET called? **•SATELITTES**	What is the name of the satellite that orbits the Earth? **•THE MOON** 	How long does it take the Moon to make a complete orbit around Earth? **About 28 days**	What causes the moon to be visible only during certain times of the month? **Because as it orbits the Earth it gets placed in between the Earth and the Sun an cannot reflect the Sun's rays off of its surface.**	A group of stars that create a pattern in the night sky are called ___? **CONSTELLATIONS** 
A mass of ice and dust that revolves around the sun and forms a tail as it gets closer to the sun is a __? **COMET** 				

Earth In Space & Time



How Many Moon Phases are there?

8

What is the only planet that can sustain life?

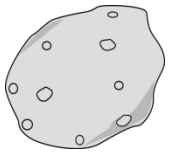
EARTH

What determines how <u>BRIGHT</u> a star looks in the night sky?

IT'S DISTANCE FROM EARTH

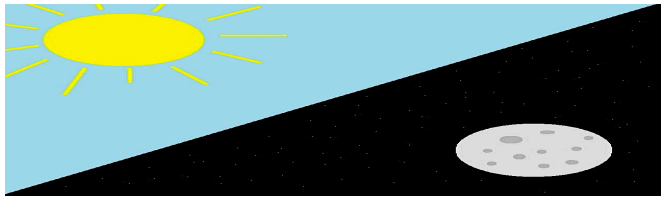
Objects made of rock and metal that orbit the sun are called?

ASTEROIDS



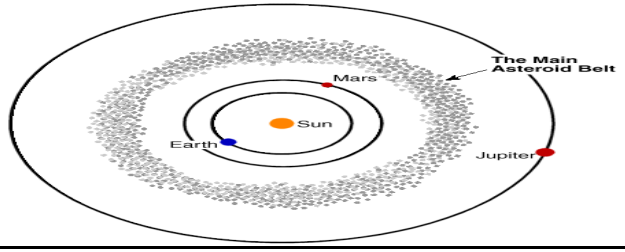
What do we receive as a result of Earth ROTATING on it's axis?

DAY & NIGHT



What separates the inner planets from the outer planets?

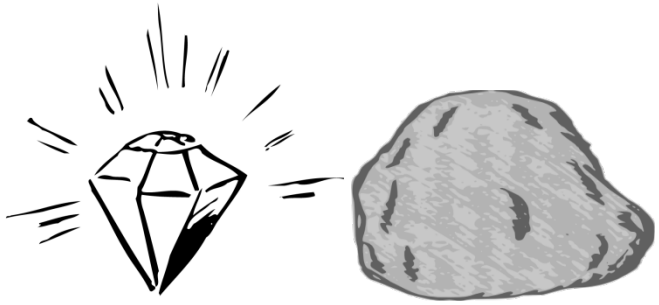
THE ASTEROID BELT



Earth In Space & Time

When are Earth's days longer?	When are Earth days shorter?	What is the shape of the Milky Way Galaxy?
During the SUMMER because there is more direct sunlight	**During the WINTER because there is less direct sunlight**	**SPIRAL**

Earth's Structures

How shiny or dull a mineral looks describes its ___?	The color of a mineral when it is crushed to a powder is its __?	The shape and smoothness of the mineral after it breaks is called_?
LUSTER 	**STREAK** 	**CLEAVAGE** 

Earth's Structures

What are the three categories of rocks?

- **IGNEOUS**
- **SEDIMENTARY**
- **METAMORPHIC**

Rocks that are formed from when molten rock (lava or magma) cools and forms crystals are __?

- **IGNEOUS ROCKS**

Rocks made from the transformation of one type of rock to another under intense heat and pressure are called__?

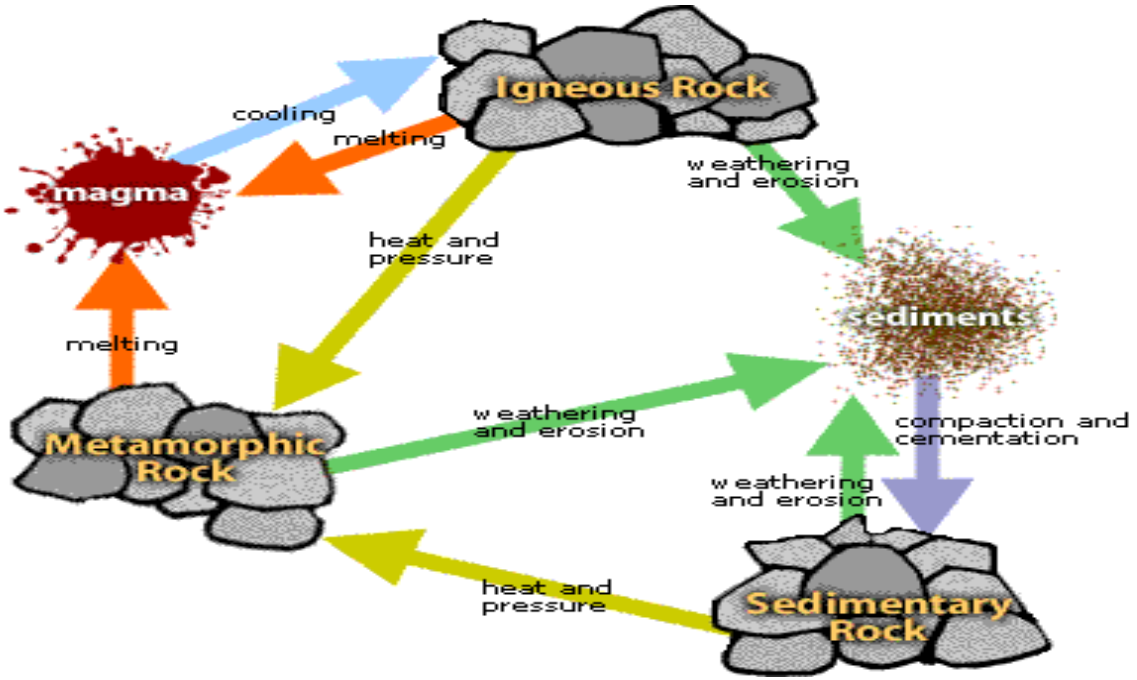
- **METAMORPHIC ROCKS**

Rocks made from deposited sediments (bits of rock and sand) and bits of plants and organic material are called _?

- **SEDIMENTARY ROCKS**

Three agents of weathering

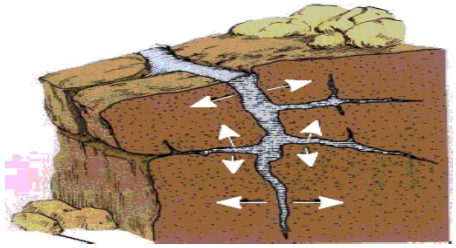
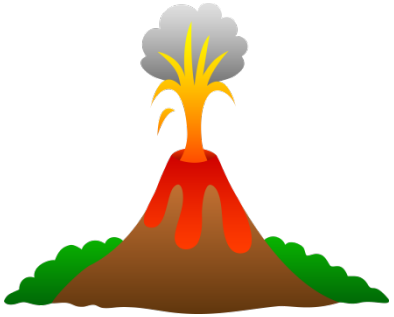
- **WIND**
- **WATER**
- **SAND**



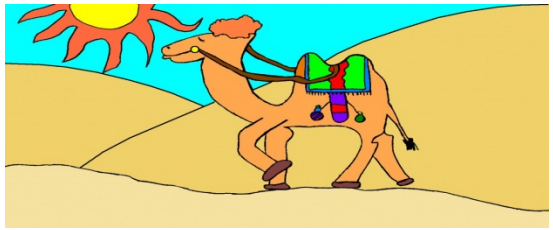
Earth's Structures

The breaking down of rock or soil through natural forces **WEATHERING**	The movement of rock by gravity, wind, water, or ice is called____? **EROSION**	What are the two types of weathering? **PHYSICAL** *(slow process)* **CHEMICAL** *(rapid process)*
The building up of sediments from one location to another that creates new landforms **DEPOSITION**	When constant water breaks down rock **PHYSICAL WEATHERING**	Types of Physical Weathering •**ICE WEDGING** •**PLANT ROOTS** •**GRAVITY**
How long does it take for weathering to happen? **100 YEARS OR MORE**	ROCKS & MINERALS CAN BE CHARACTERIZED BY THE FOLLOWING: •**COLOR** •**LUSTER-** The way the object looks in direct light (is it metallic or shiny, dull). •**HARDNESS-** What it can scratch & What scratches it •**CLEAVAGE –** The shape and smoothness of the mineral after it breaks •**STREAK**	

Earth's Structures

75% of the Earth is covered with **WATER**	When water freezes in the cracks of rocks causing them to split is called __? **ICE WEDGING** (Physical Weathering) 	When plants grow in between rocks causing them to crack and split is called __? **PLANT ROOTS** (Physical Weathering) 
Give an example of a sediment (tiny pieces of rock) **SAND** 	Large imprints usually found on the surface of the moon. **CRATERS** 	A hole or mountain from which lava flows? **VOLCANO** 

Earth's Systems & Patterns

What is a land formation? **Physical Features on the Earth's Surface**	Land formations **•Mountains** **•Glaciers** **•Desserts** **•Craters**	How has weathering effect different types of land? **IT CHANGES THE SHAPE OF THE LANDFORM.**
Natural Elevations on the Earth's surface are __? **MOUNTAINS** 	What are massive rivers of ice called ___? **GLACIERS** 	Cold regions of the earth that typically have large amounts of snow and very cold temperatures **TUNDRA** 
Climates that have warm summers and cool winters with year-round rain or snow. Also, has the most variation in seasons and temperatures **TEMPERATE**	A region that is characterized by a humid, hot, and rainy climate typically found close to the equator **RAINFOREST** 	A region that receives very little precipitation and has a very hot and dry climate **DESERT** 

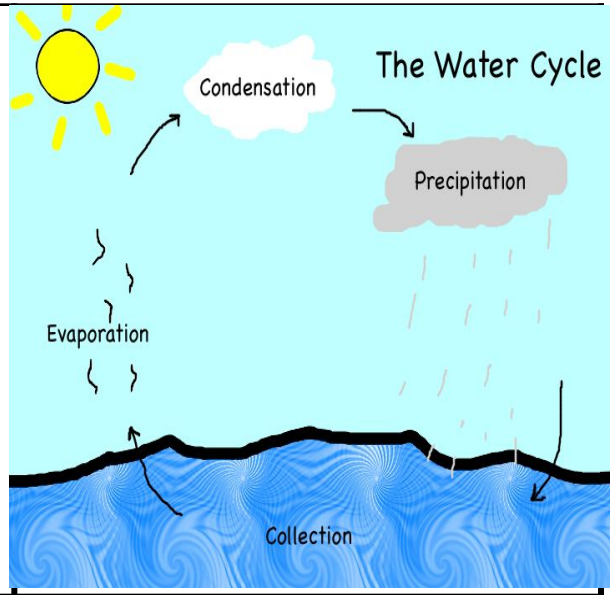
Earth's Systems & Patterns

Places with hot, dry climates where plants flourish and have large open fields

GRASSLAND

Low-lying humid regions where water accumulates and mixes with soil and plants to create bogs, swamps, and marshes

WETLANDS



The process by which water is recycled on Earth

WATER CYCLE

How many ways does water fall back down to earth?

4

- **RAIN**
- **SLEET**
- **SNOW**
- **HAIL**

The process by which plants and animals allow water to enter the atmosphere.

TRANSPIRATION

What is the process called when water vapor rises high in the atmosphere, then cools ,and forms clouds?

CONDENSATION

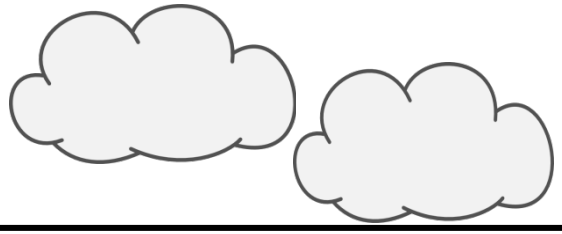
When water falls back to the Earth as snow, sleet, hail, or rain this is called

PRECIPITATION

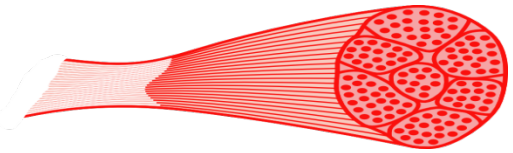
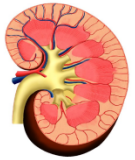
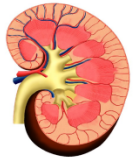
The process by which water is heated up by the sun and changes from water to water vapor

EVAPORATION

Earth's Systems & Patterns

The force exerted on you by the weight of tiny particles of air is called _____ • **AIR PRESSURE**	What are the 3 factors that determine the weather? • **AIR PRESSURE** • **TEMPERATURE** • **HUMDITY**	Puffy white or gray clouds that cumulate on top of each other and are usually found low in the atmosphere **CUMULUS** 
Clouds that look like a huge gray blanket that hangs low in the sky. Or are low on the ground or very near the ground, like fog. **STRATUS** 	Clouds very high up in the sky, looking thin and wispy, like someone pulled a bigger cloud apart into little bits of cloud, and are made up of mostly ice crystals **CIRRUS** 	 **BAROMETER** (Used to measure atmospheric pressure)
The amount of water vapor (moisture) in the air **HUMDITY**	A mass of cool, dry air that generally brings fair weather and light winds **HIGH PRESSURE**	A mass of warm, moist air that generally brings stormy weather with strong winds **LOW PRESSURE**

Organization and Development of Living Organisms

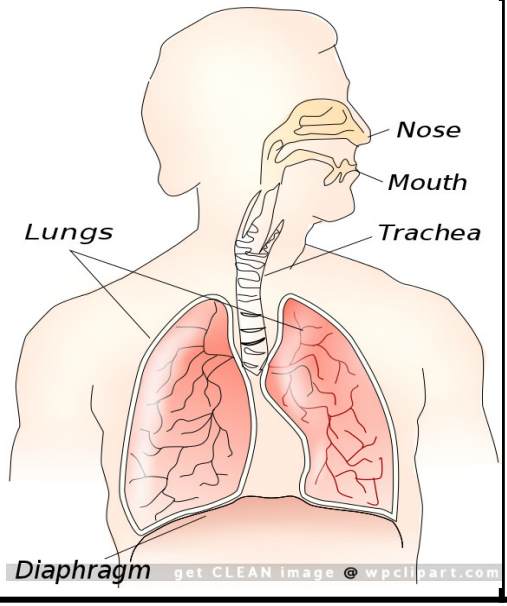
The Basic Building Blocks Of All Living Things ____ **CELLS** 	Can a liver cell change to a kidney cell? **NO CELLS STAY THEY SAME THEY JUST DUPLICATE THEMSELVES**	What do all living things have in common? **THEY ARE MADE UP OF CELLS**
A group of cells that carry out a specific job in the body is called ___? **TISSUES** 	A collection of tissues that are joined together to serve a function in the body__? **ORGANS** 	What is a body system? **A Group Of Organs That Work Together In The Body** 
The largest organ is the__? **SKIN**	___ is the organ that makes urine from waste products and excess water found in your blood. **KIDNEYS**  	The organ that controls our bodily functions, process, analyzes, and stores information, and allows the body to think, move, feel, see, hear, taste, and smell? **BRAIN** 

Organization and Development of Living Organisms

The Human body System that:

- Takes in oxygen and releases carbon dioxide.
- Is composed of: nasal cavity, throat (pharynx), voice box (larynx), windpipe (trachea), bronchi, and lungs.

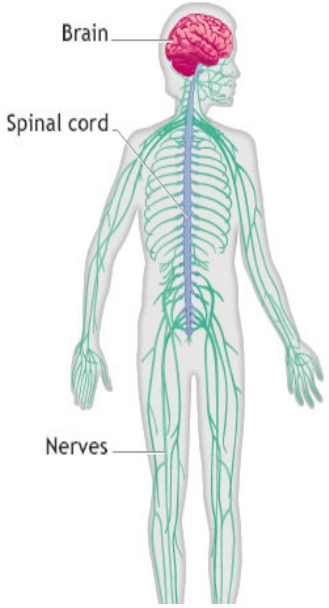
RESPIRATORY SYSTEM



The Human body System that:

- Controls bodily functions
- Sends signals from the brain to the muscles and organs.
- Is composed of: the brain, spinal cord, and nerves

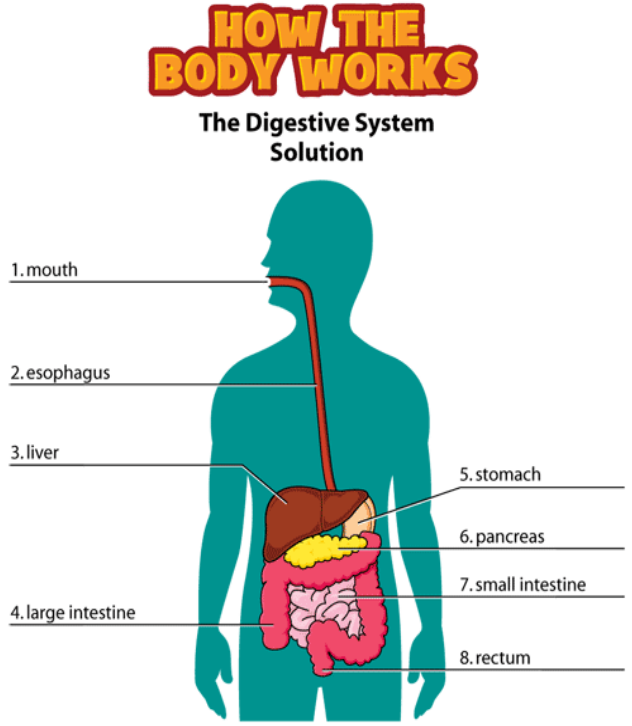
NERVOUS SYSTEM



The Human body System that:

- Breaks down food and turns it into energy for the cells.
- Is composed of the: mouth, esophagus, stomach, liver, pancreas, small intestine, large intestine, and rectum

DIGESTIVE SYSTEM



The Human body System that:

•Gives the body shape and form.

•Protects the organs

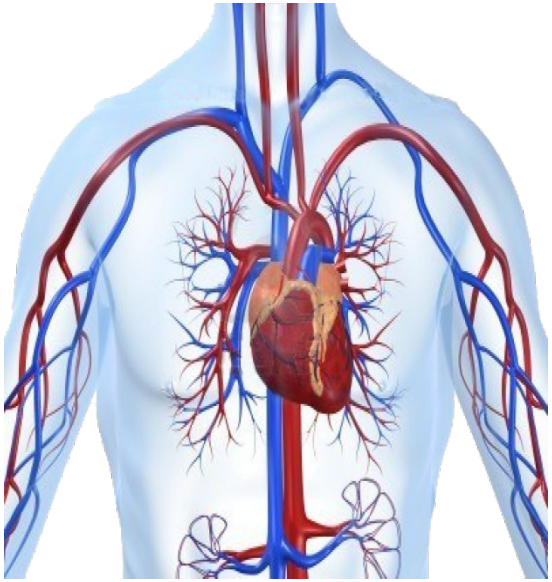
•Works with the Muscle System to enable bodily movements

SKELETAL SYSTEM

The Human body System that:

- Takes nutrients and oxygen to the cells and removes waste
- Circulates blood through the body
- Is composed of the: heart, veins, and arteries.

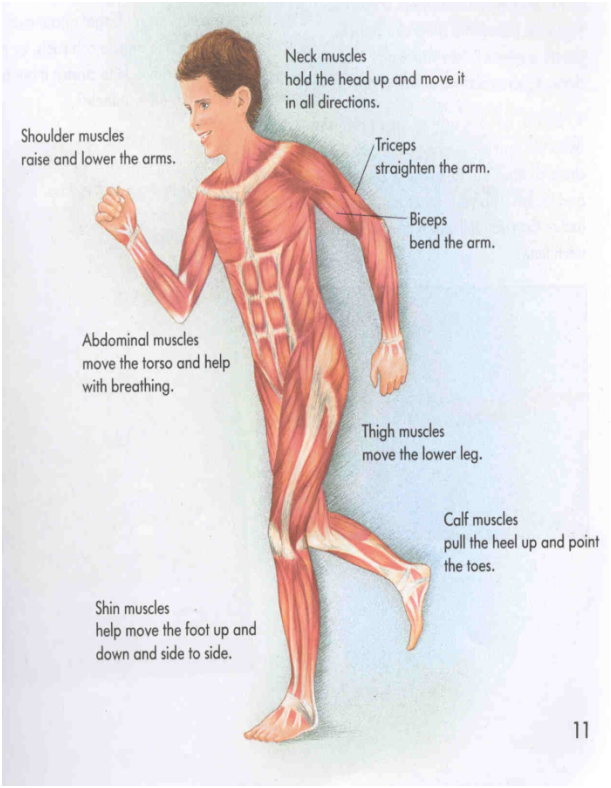
CIRCULATORY SYSTEM



The Human body System that:

- Control bodily movements and enable the body to move
- Provides strength, balance, posture, movement and heat for the body to keep warm

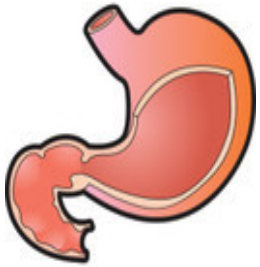
MUSCULAR SYSTEM



Organization and Development of Living Organisms

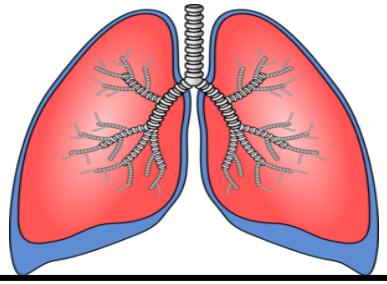
_____ is the organ that breaks down food by mixing it with juices secreted by your stomach lining and stores it for future use.

STOMACH



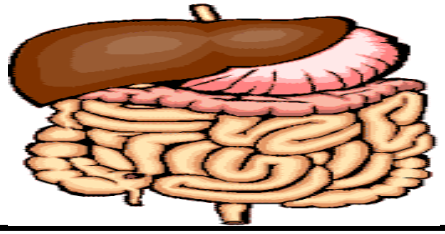
The organ that brings in oxygen from air you've breathed to your bloodstream, and exchange it for waste products, like carbon dioxide is _____

LUNGS



___ is the organ that breaks food down so that the nutrients are absorbed into the bloodstream and converts food waste products so that it can be excreted out the body.

INTESTINES



The ____ is the largest organ that protects the bones, muscles and internal organs, protects the body from outside diseases, allows you to feel and react to heat and cold, and uses blood to regulate your body heat.

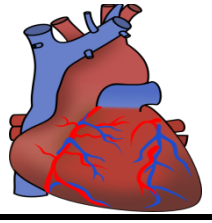
SKIN

_____ is the organ that secrets digestive enzymes and hormones that digests protein, carbohydrates, and fat for the body.

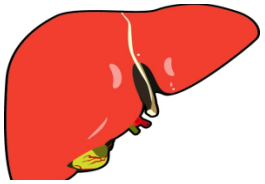
PANCREAS

____ is the organ that pumps oxygen-rich blood throughout your body and oxygen-poor blood (carbon dioxide) to your lungs

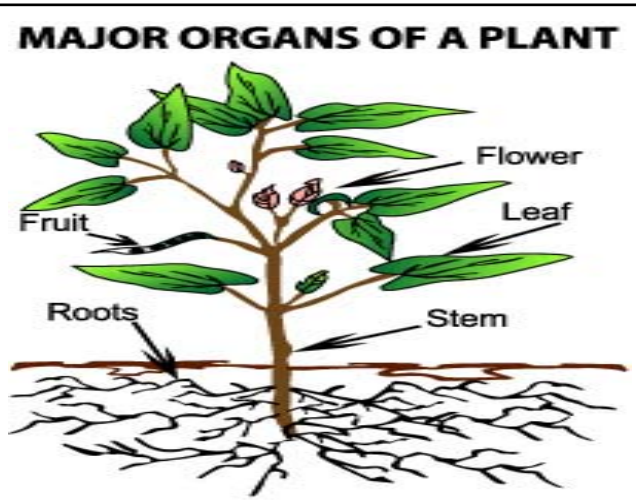
HEART



Organization and Development of Living Organisms

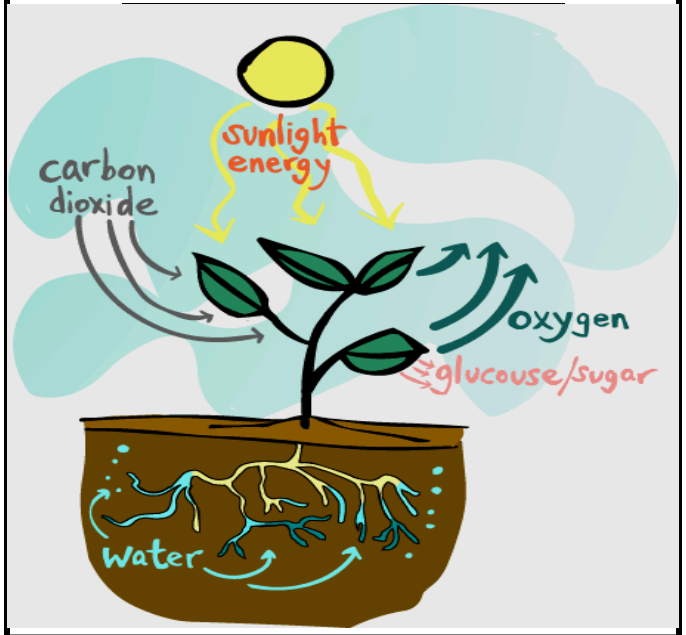
The organ that stores urine is called the _____ **BLADDER**	____ is the organ that gets rid of toxins, regulates blood sugar levels, and produces bile **LIVER** 	The part of a female mammal's body that produces eggs that are used for reproduction are called ___ **OVARIES**
What do birds, amphibians, and reptiles have in common? **THEY ALL LAY EGGS.**	What are the little holes on the leaves called that absorb the sunlight that open during the day and close at night? **STOMATS**	Why do the STOMATAS close during the night? **Because there is no sunlight to be absorbed for photosynthesis**
What organ does a plant and a human have in common? **OVARIES**	•Primary source of food for people and animals •Produce oxygen •help to keep us cool •renew the air **PLANTS**	What type of energy is converted into chemical energy in photosynthesis? **The plant converts solar energy (sunlight) into chemical energy for food**

Organization and Development of Living Organisms

What is needed by plants to make their food? **WATER, SUNLIGHT, CARBON DIOXIDE, AND NUTRIENTS FROM THE SOIL**	What is the food called that plants make? **SUGAR**	What gives plants their green color? **The CHLOROPHYLL**
Where does photosynthesis take place? **In the CHLOROPLAST**	What 2 things do plants produce during photosynthesis? **OXYGEN & SUGAR**	If a plant is in the water and tiny bubbles are on the surface of the water, how did they get there? **Because during photosynthesis plants release oxygen.**
Where do the nutrients found in the soil come from? **The decomposers that break down the dead tissues of organisms and return nutrients to the soil from the broken down tissue.**		Where is chlorophyll found? **IN THE CHLOROPLAST**

Organization and Development of Living Organisms

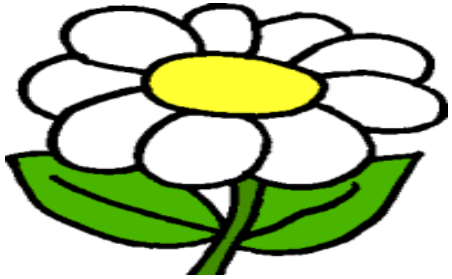
PHOTOSYNTHESIS



The part of the plant that:

- Is the reproductive structure of plant.
- Uses pollen or seeds to reproduce the plant so more are made.

FLOWER

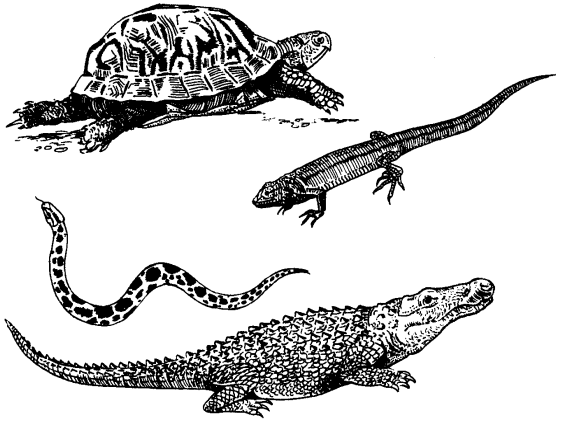


CHARACTERISTICS OF REPTILES:

•Rough, scaly skin

•Cold-Blooded

•Lays eggs



CHARACTERISTICS OF AMPHIBIANS:

•Smooth, wet skin

•Cold-blooded

•Lays eggs

•Lives in the water

CHARACTERISTICS OF BIRDS:

•Covered in feathers

•Warm-blooded

•Lays eggs

•Have backbones

CHARACTERISTICS OF MAMMALS:

•Warm Blooded

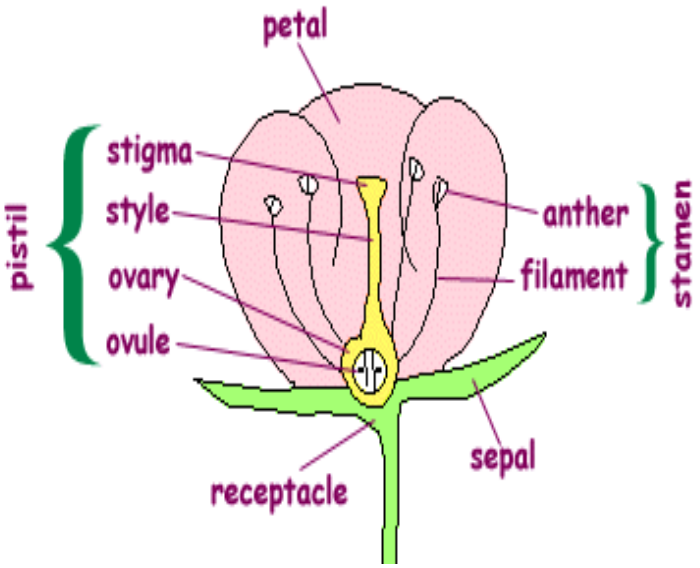
•Covered in Fur or Hair

•Gives Live Birth

•Have lungs and breathe air

•Have backbones

Organization and Development of Living Organisms

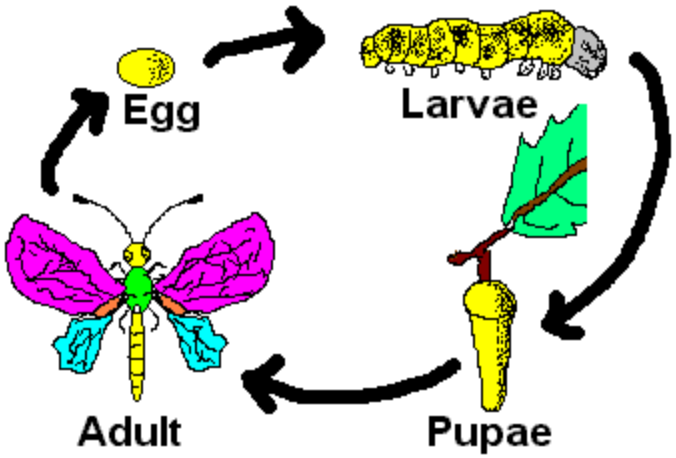


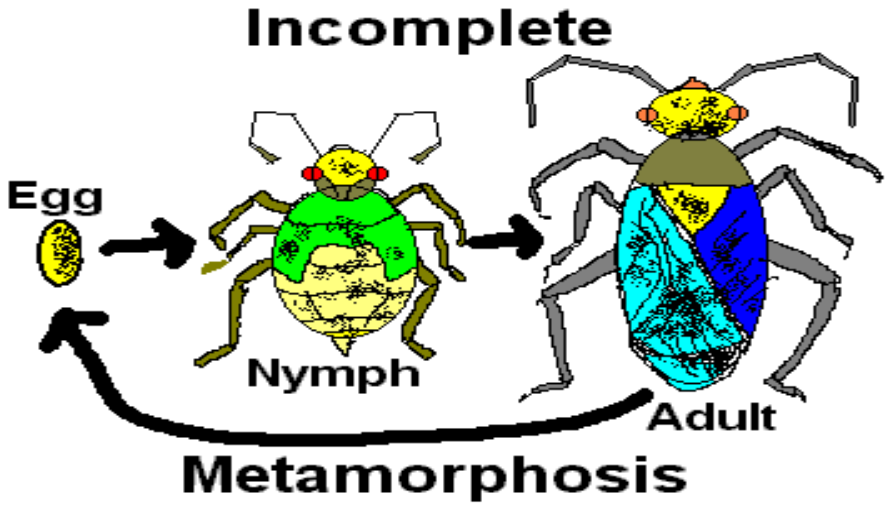
The reproductive structure of the plant:

- **Stamen**- Catches and holds the pollen
- **Pistil-** protects and stores the ovaries and eggs.

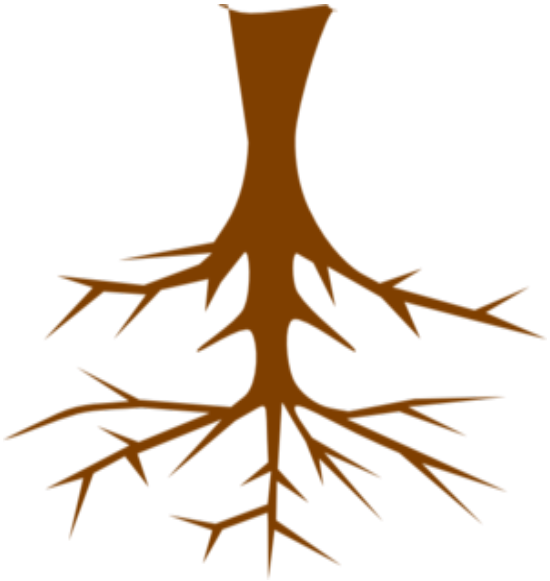
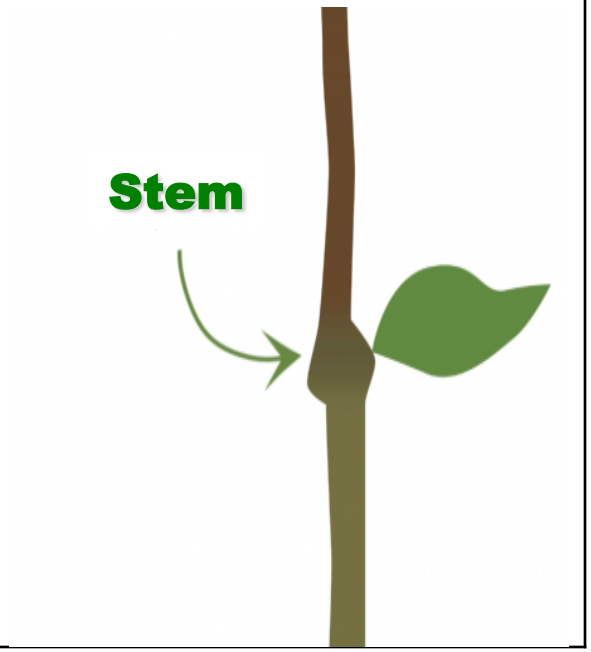
What do complete and incomplete metamorphosis have in common?

- **Start as an Egg**
- **End as an Adult**





Organization and Development of Living Organisms

The part of the plant that:	The part of the plant that:	The part of the plant that:
•Absorbs water and nutrients •Transports water and nutrients to STEM •Anchors the plant to maintain stability •Stores water	•Absorbs the sunlight and carbon dioxide needed for photosynthesis •Where photosynthesis takes place •Where oxygen is released into the atmosphere	•Transports water and nutrients FROM ROOTS to LEAVES •Supports leaves, fruit, and flowers •Stores Food
ROOTS	**LEAF**	**STEM**
		

Organization and Development of Living Organisms

____ is a skeleton that develops under the skin or deeper inside the body.

ENDOSKELETON

(EXAMPLE:/ VERTEBRATES)

Vertebrates

Animals with backbones

Fish

Reptile

Birds

Mammals

Amphibians

____ is a external (outer) skeleton that protects and an animals body.

EXOSKELETON

(EXAMPLE:/ INVERTEBRATES)

Invertebrates

Animals without backbones

Protozoa

Annelids

Mollusks

Echinoderms

Crustaceans

Arachnids

Insects

Interdependence, Heredity, & Reproduction

What is a food chain?

A Diagram That Shows The Relationship Between Organisms In An Ecosystem

Organisms that use the sun's energy to create food during photosynthesis are called __?

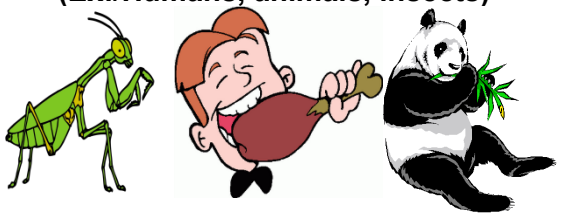
PRODUCERS

(Ex:/ plants, algae)

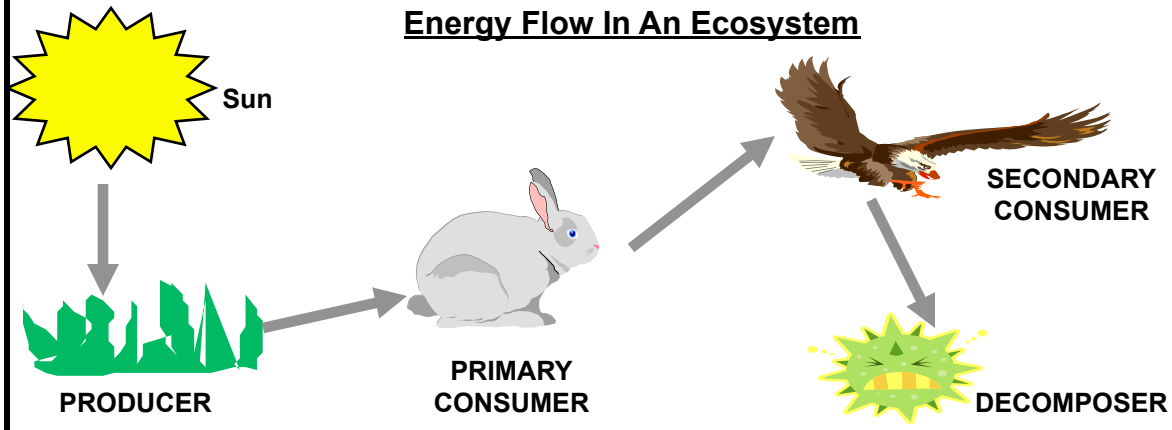
Organisms that feed on other living things for energy are called__?

CONSUMERS

(Ex:/Humans, animals, insects)



Energy Flow In An Ecosystem



An organism that gets its energy from breaking down the tissues or waste of non-living things are called ___?

DECOMPOSERS

(Ex:/bacteria, fungus)

Animals that only eat meat

CARNIVORES

Animals that only eat plants

HERBIVORES

Animals eat both meat and plants

OMNIVORES

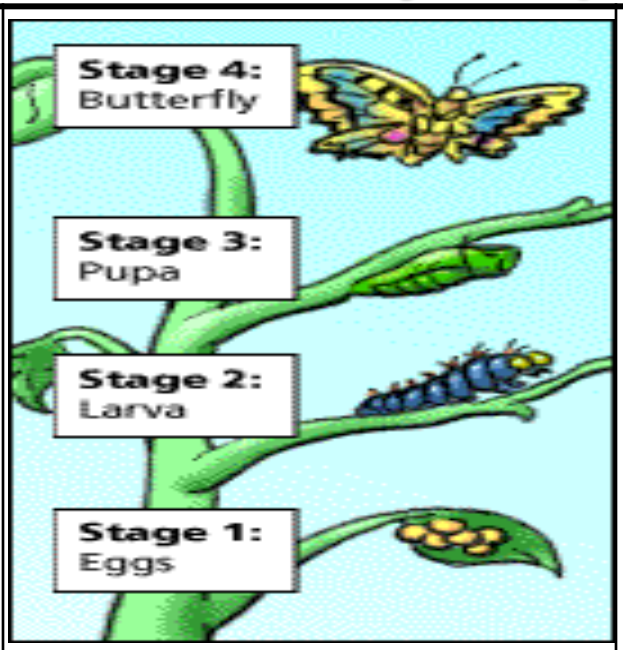
Interdependence, Heredity, & Reproduction

When an animal changes in order to survive

ADAPTATION

•Structural Adaptation is a physical change in an organisms body.

•Behavioral Adaptation is a change in an organisms habits such as eating a certain type of food, living in a certain area in order to survive



How can a change in habitat or climate effect an animal?

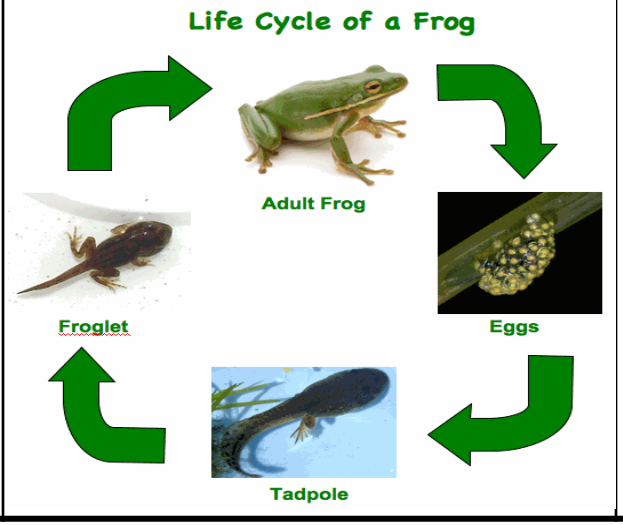
It can cause them to change their body (structural adaptation)**, eating habits, or their home** (behavioral adaptation)

Give an example of STRUCTURAL ADAPTATION:

•A Giraffe's Long Neck

•A Polar Bear's thick fur

•A Mammoth shedding it's fur and evolving into an Elephant



When two animals eat the same thing, they must _____ for the food.

COMPETE

Nature of Science

An prediction on what will occur in a scientific investigation that is based on some prior knowledge? **HYPOTHESIS** (Written as an "If___, then__ statement) *Cause and effect relationship	Looking to see what happens in an experiment? **OBSERVATION**	When different things are tested during an experiment, they are called the? **VARIABLES**
When there is one thing that remains the SAME or UNTOUCHED during an experiment in order to see if the object being tested is the cause of the change is called a ___? **CONTROL**	List the things used during an experiment **MATERIALS**	A question or wondering that leads to an investigation is called a __? **PROBLEM STATEMENT**
What is a theory? **A MODEL OR IDEA USED TO EXPLAIN, PREDICT, OR UNDERSTAND THINGS THAT OCCUR IN OUR WORLD.**	All hypothesis must be ___ **TESTABLE**	Theories help scientists to: **PROPOSE NEW IDEAS ABOUT HOW THE WORLD WORKS**

Nature of Science

How many trials should you do of an experiment? **2 OR MORE**	Pictures, tables, and charts in an experiment are called? **DATA**	Why do people invent new things? **To make our lives easier.**
Why do we collect data? **TO HAVE DETAILS ABOUT WHAT OCCURRED IN THE EXPERIMENT SO OTHERS CAN SEE WHAT HAPPENED AND TRY TO REPEAT IT.**	Where do you write if your hypothesis was right or wrong? **IN THE CONCLUSION**	If your results are different in a group experiment or you want to verify that your data is accurate what should all Scientist do? **REPEAT THE EXPERIMENT**
Why do scientist make models? **TO SAVE TIME AND MONEY**	What would happen if no one invented anything new ever again? **A Lot Of The Work We Do Today Would Be Harder To Complete**	How should data be collected? **ACCURATELY** **(Through the used of scheduled observation times and detailed notes)** **&** **PRECISELY** **(By using the correct tools *beakers, graduated cylinders, rulers, balance, etc.)**
Why do we make observations? **IN ORDER TO SUPPORT OUR FINDINGS (RESULTS) AND TO DETERMINE IF OUR HYPOTHESIS IS RIGHT OR WRONG**.		