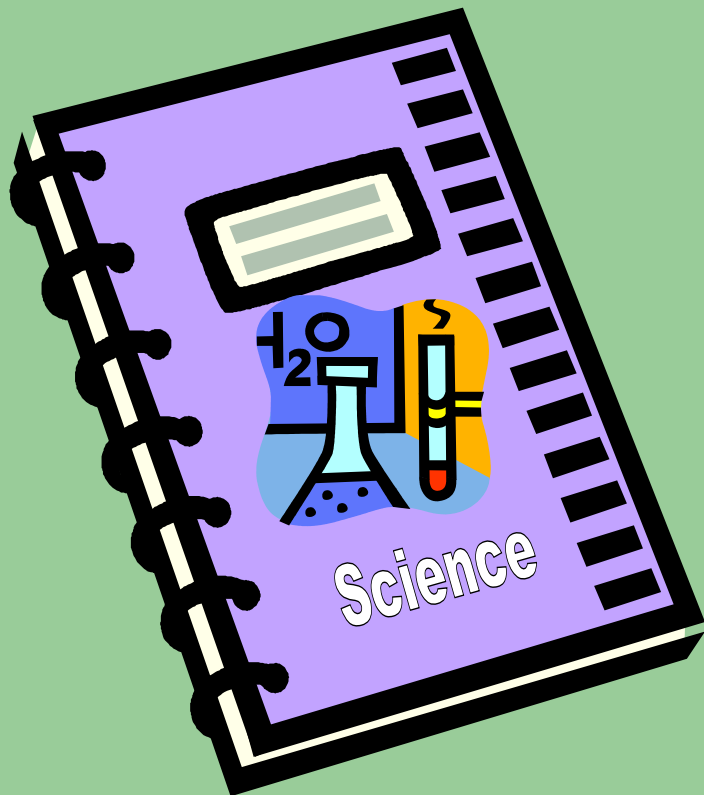
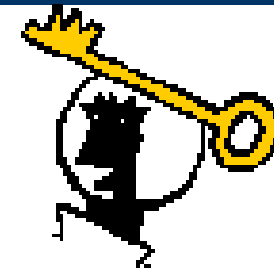


“EINSTEIN”:

Everyday Interactive Notebook of Science That Encourages Individual Notations



Your Key To Success in
7th Grade Science!



Have you ever heard yourself say .

I can't find my . . .

notes, homework, old quizzes

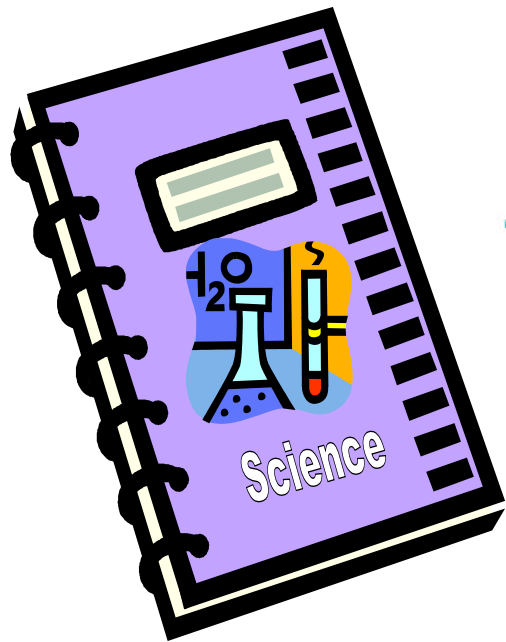
I can't remember what we did in class yesterday.

I'm sure, its in . . .
my locker . . .



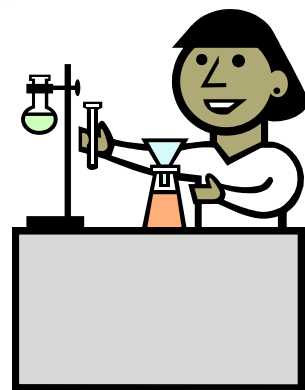
I was absent last week, did I miss anything?

Well Here's Your Answer..



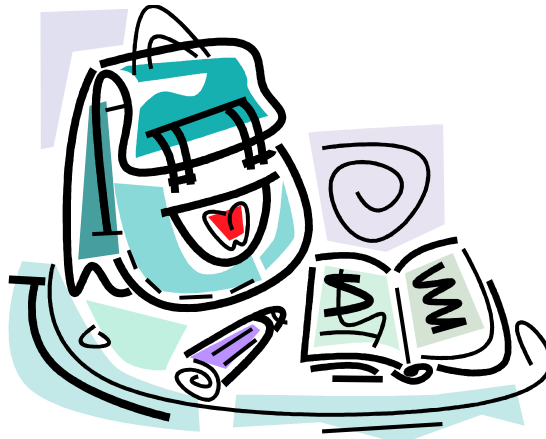
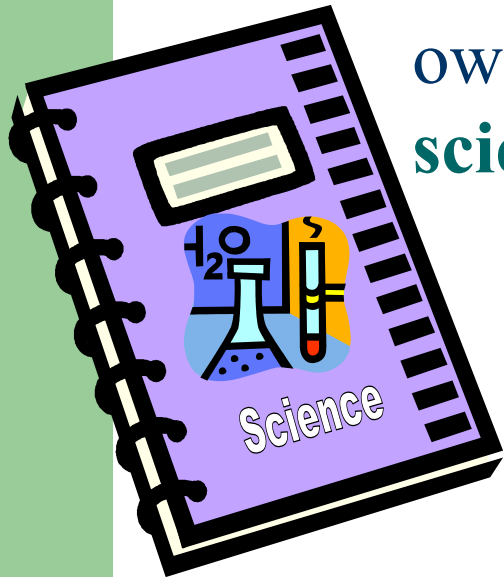
EINSTEIN

"EVERYDAY INTERACTIVE NOTEBOOK OF SCIENCE THAT ENCOURAGES INDIVIDUAL NOTATIONS"



What is EINSTEIN?

- ❖ **EINSTEIN** stands for “Everyday Interactive Notebook of Science That Encourages Individual Notations”. (But, I don’t expect you to remember that!) Just know that it is your own personalized **DIARY of learning about science.**



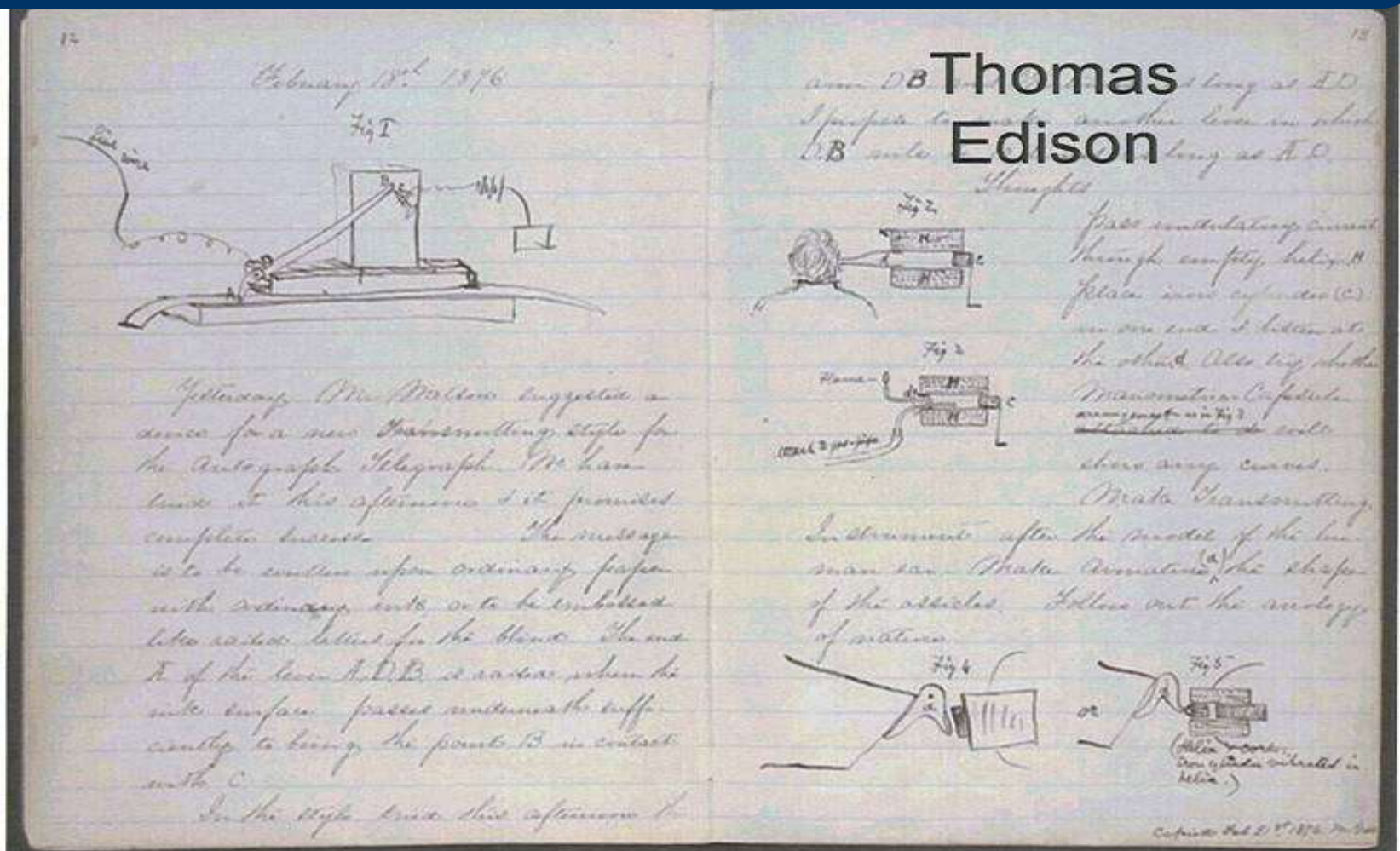
Soooo...

How can EINSTEIN help you?



- ❖ **EINSTEIN** will help you keep your work in **ONE** convenient spot...all you need to study for upcoming quizzes & tests!
- ❖ A great way to stay **ORGANIZED!**
- ❖ You can look back and **COMPARE** what you thought you knew, with what you've learned!
- ❖ **EINSTEIN** provides “formal” space for **teacher info.**, AND “informal” space for **YOU!**
- ❖ **EINSTEIN** gives you permission to be **PLAYFUL & CREATIVE** in your responses without "messing up" your notes.
- ❖ **POP quizzes & other open EINSTEIN assignments** are possible any day at any time! (Some tests may even be open **EINSTEIN**...but those will always be a surprise!)
- ❖ You will be working like a **REAL SCIENTIST!**

Real Scientist Use Notebooks



Real Scientist Use Notebooks

D
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22 9
Marianne baby diary
 954
 October 1: Yesterday Nemaye found Group 4 in the middle of the wide slope before Swallow Slopes under a large Hagenia at that point. We found their track descending across our path in nettles and went higher, to edge of Swallow Slope to make sure it had been their track before returning near Kuanguka tree to descend into nettles to find last night's nests. They were spread out over 130' with U.B. nested near Papoose, (some 4' off ground) and Simba in little nest by his side and all under shelter of Hypericum - it had poured rain the previous night. ~~On the way we had found Amok's tracks on our trail beneath the~~ The biggest puzzle was the finding of a female's nest with infant Jung of a day and a half, or approximately less than 2 months. The Jung and nest appeared to be only one day older than the other nests, but that's not for certain. My final conclusion is that Meisie has given birth even though the nest that must have been Samson's didn't have large enough dung in it. The rail then went into the Hypericums and up onto the base of Honey Man's Ridge. He found the group feeding on the opposite slopes - i.e. Ambassador's Ridge. At 12:30 I did not take notes for the first half-an-hour in hopes of locating Old Goat to see if she had an infant or if Meisie had rejoined the group. During that half-an-hour U.B. was in a huddle with Simba, Papoose, Tiger and Augustus nearest him; Petula next; Flossie and Cleo slightly below on log with Flossie feeding; Old Goat to left of my screen with Digit above her - both the furthest animals from the group bulk. There was grooming between U.B. and Pet. and Papoose and play with youngsters. My notes begin at one o'clock. Old Goat moves into day nesting spot high above group which had in part been feeding up until now (semi-sun day); Digit at first lower than she but also at same time settles into day nest spot. U.B. self-grooming on inverted lobelia top which served as his nest at this time. Tiger laying against Papoose with Augustus between them and U.B. Flossie eating a few bet further on (she had climbed up to group bulk with Cleo playing behind her with foliage. Tiger uphill from her about 6' only apart from his mother a good 140' and Simba is above him some 6'. One animal heard coughing a great deal. Digit moves off uphill and Tiger moves up abut to feed before Flossie approaches him with Cleo dorsal and takes over Tiger's nest. He only moved a few feet away and looked at her with a grin expression - open mouth and playful. Cleo goes directly over to Tiger and plops on his lap for a mild play session. Simba moves away from them at this point. Simba then further uphill alone and feeding. Papoose and Petula still laying flat. After some 10 minutes Flossie goes uphill with Cleo grabbing onto her neck and lying half-dorsal as she moves off. Flossie follows Simba's route. U.B. "again" grooming Papoose. Petula, above them, sits up as though thinking about feeding. Cleo up with Flossie tackling a small Vernonia sapling for play and feeding. U.B. still grooming Papoose's rump. Flossie feeding at 1:16 U.B. occasional looking over in our direction very intently. Tiger and Simba begin tussling together quite strenuously with Simba holding her own well. U.B. still self-grooming at 1:17. Cleo swinging above with a smile face from a small Vernonia. Tiger and Simba still tussling at 1:20 U.B. wearing his copy expression all day long. Much group harmony in evidence today despite overcast and eventual rain. Tiger and Simba rest abut. Below Petula is huddled over Augustus grooming him. At 1:21 Tiger and Simba

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The notebook is divided into TWO sections.

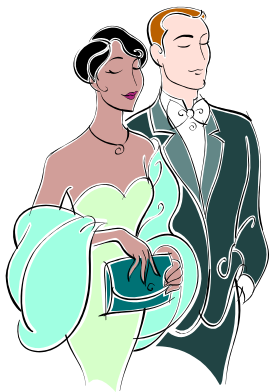
The Left (T-shirt) Side:

- The **Left Side “LOVES”** student work & is more “**informal**”. (The “T-shirt” side!) This is the side that you can use to show off your creativity. **This is your output or product side.** (Sometimes you will have choices of how to express yourself, other times it will be more specific.)



The Right (Tux) side

- The **Right side** is “**RESERVED**” and is “formal”. (The “Tux” side!) This side contains only **information given by Mrs. Showalter** or done during class time.



The notebook is divided into TWO sections.

LEFT side “loves”

STUDENT work = OUTPUT

RIGHT side is “reserved” to
TEACHER INPUT

WARMUP #1 Fill in the missing word.

Decomposer Producer Consumer

Plants are _____. Lions, tigers, and bears are _____. Worms and mushrooms are _____.



A food web is made up of several linked food chains. The energy source flows through all the parts of the food web.

4.5c

Flow of energy through food webs

All organisms are part of a food web. Several food chains, which are linked, make up a food web. A food chain identifies the roles organisms use to get the food they need to survive. The sun, which is the source of energy, is the start of food chains. Food chains also contain producers, consumers, and decomposers. A producer is a plant. Plants use sunlight to make food. The greatest amount of energy in a community is in the producers. Primary, first-level, consumers are animals that eat plants. Secondary, second-level consumers, eat an animal for their food source. You have heard these called herbivores, carnivores, and omnivores. Do you remember the difference? Decomposers are organisms that break down wastes and dead plants or animals. The sun's energy cycles through ecosystems from producers through consumers and back into the nutrient pool through decomposers.

For example, a simple food chain might be the sun, grass, mouse, fox, and maggots. In this food chain what is the producer? What is the decomposer? What is the source of energy? This food chain is part of a larger food web. Can you see that changing the mouse to a rabbit makes a different food chain but in the same food web? What other chains in this food web could we create? Can you identify which are primary/secondary consumers, producers, and decomposers?

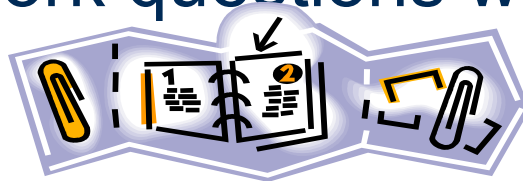


- ① eat Plants
- ② eat animal
- ③ eat both

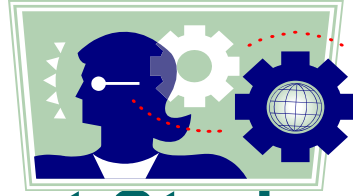
#2

LEFT SIDE : YOUR SIDE

- The **LEFT SIDE** belongs to you. The “what did you learn” or “show what you know” side.
- This side will include **diagrams, cartoons, drawings, poems, foldables, etc.**
- **Let your CREATIVITY go wild!**
- Often, homework questions will be completed on this side.



So, the Informal/Creative (T-shirt) side will always be on the left and **EVEN PAGES = 2 4 6 8 ... YOU GOT IT??!**



Left Page – Output Student Involvement (Showing Understanding and Creativity)

- Brainstorming
- Concept maps
- Questions
- Character descriptions
- “Wanted Posters”
- Finish this...
- Flow charts
- Venn diagram
- T-charts
- Cartoons
- Graphs
- Riddles
- Metaphors/Similes
- Analogies
- Analysis writing
- Reflection writing
- Poetry and songs
- Quick write
- Foldable
- Lab reports
- Concept attainments
- KWL charts
- Current events
- Newspaper articles

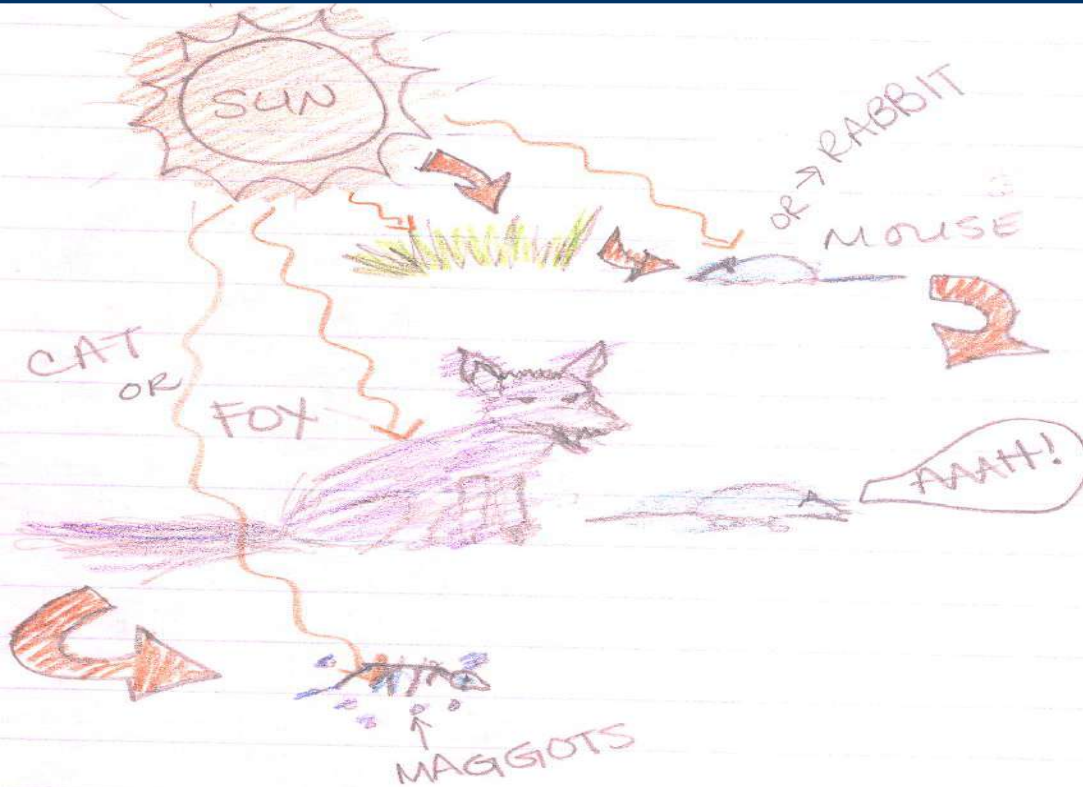


Warm-up: 1/1/2011

Fill in the missing word.

Decomposers Producers Consumers

Plants are _____. Lions, tigers, and bears are _____.
Worms and mushrooms are _____



A food web is made up of several linked food chains. The energy source flows through all the parts of the food web.

The **DAY'S ACTIVITY** is placed on the **LEFT** side of EINSTEIN.

INCLUDES:

1. **WARM-UP:** Goes in the upper left corner—**EVERY** day. If one isn't posted on the board, write a summary of a concept from the previous lesson or any question you may have about the topic.

2. Lesson Activity ("Show what you know")

-This will often be your "ticket out the door", or for homework.

WARM-UP : Date

Fill in the missing word.

Decomposer Producers Consumers

Plants are _____ . Lions, tigers, and bears are _____ . Worms and mushrooms are _____

The TOP of the left side is where the daily **WARM-UP question is written & answered.** ALWAYS put the date!

This “warm-up” is either on the whiteboard or on the Promethean Board. **If there is not warm-up posted,** you should **AUTOMATICALLY** know to make a statement about what you learned the day before, or ask any questions you currently have. This should be completed in the first **THREE** minutes of class!

LEFT SIDE



A food web is made up of several linked food chains. The energy source flows through all the parts of the food web.

Your understanding/ reflection/ summary/ of the day's activity is placed on the **LEFT or OUTPUT** side of the notebook. Look at the example shown.

Notice how this entry acts as a **reinforcement** for the **RIGHT or INPUT** side.

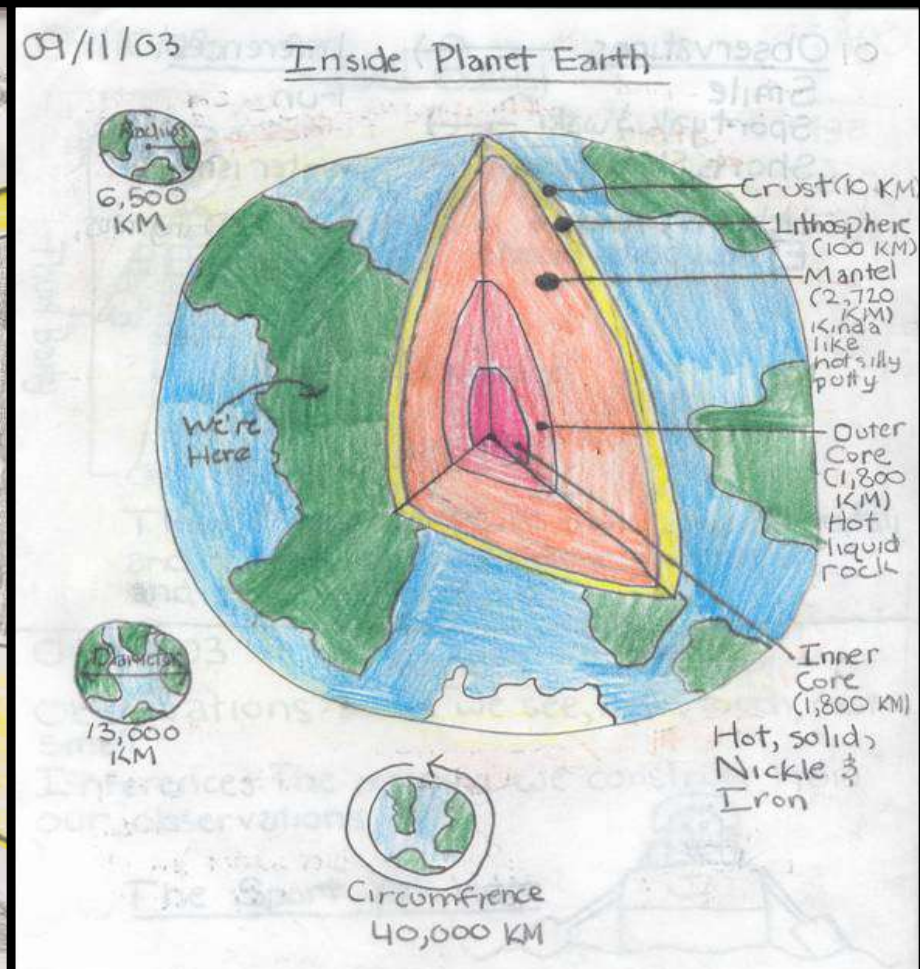
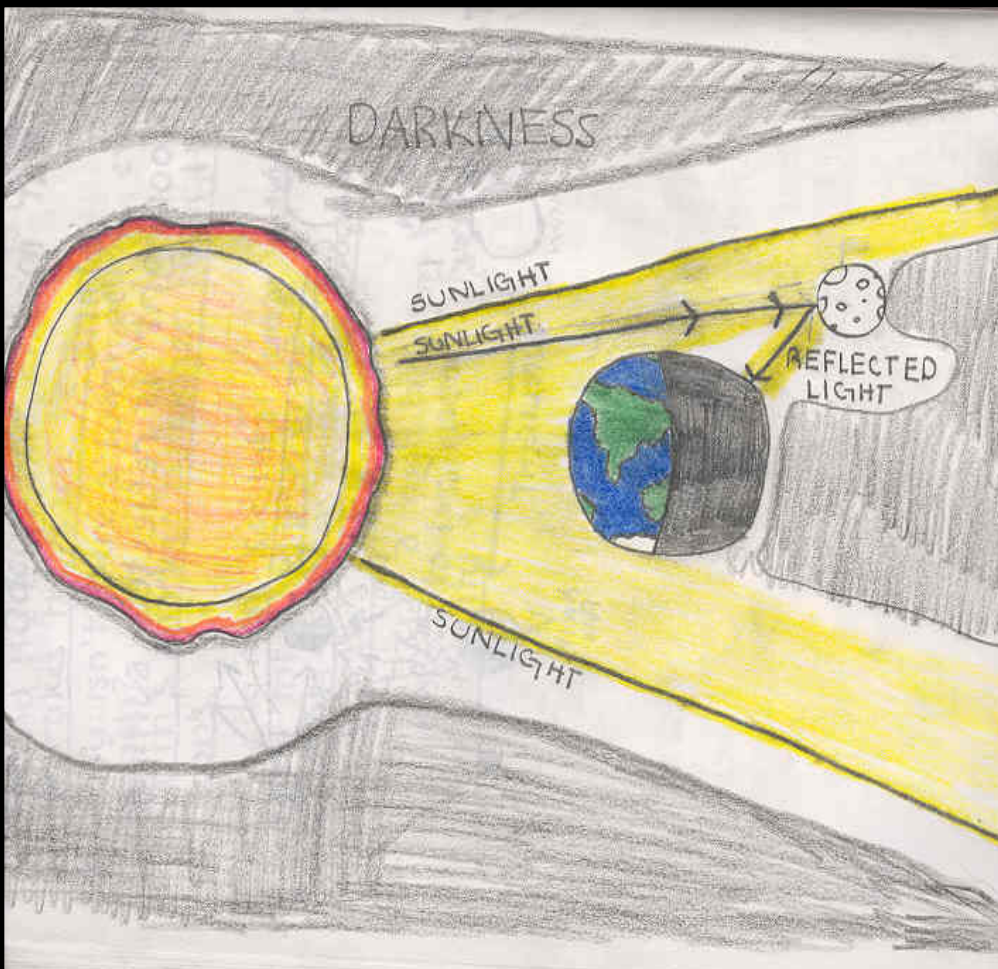
Most days, **this will be your evening's homework!**

Examples of Left Side Assignments

- Science Warm-Ups
- Graphic Organizers
- Drawings/Illustrations
- Poems, Rap Songs
- Cartoons/Comics
- Lab Analysis
- Teach Your Parent
- Homework connection
 - WS, Workbook pg, text questions, etc.



DRAWINGS/ILLUSTRATIONS



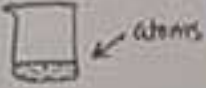
FOLDABLES

9/17/20 11

STATES


PLASMA

- State of matter that has a definite volume and definite shape.
- Atoms in a solid are held tightly together.
- Solid sublimates → gas
- Solid melting → liquid (snow)



Gas

- State of matter that has definite volume but no definite shape.
- Atoms in a liquid are held loosely together liquid
- evaporation → gas (gasoline)
- liquid freezing → solid (H₂O → ice)



9/17/20 11

24

Moon

TEK

The half of the moon that faces the Sun is facing away from us, so we don't see it!

We see half of the half of the moon that is lit by the Sun. A half of a half is only a quarter.

☾ Moon

Waxing Crescent

Last Quarter

Three Quarter Moon

First Quarter

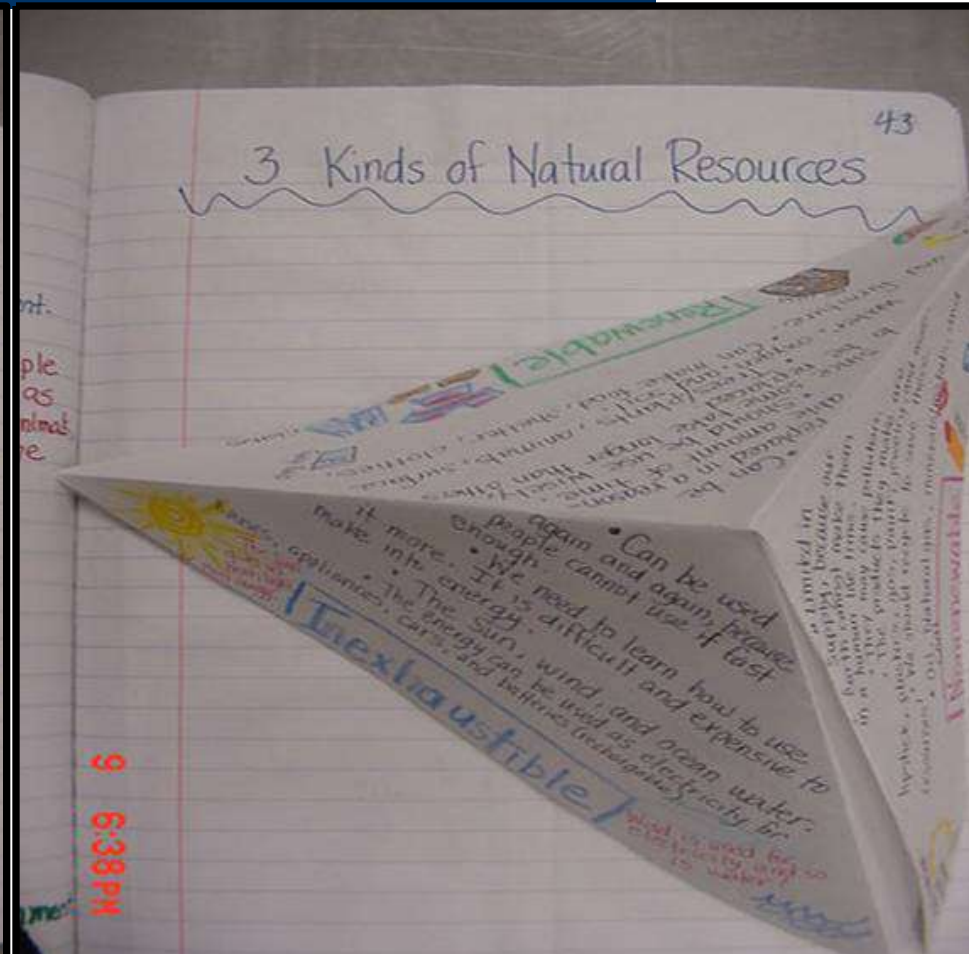
Waxing Gibbous (Full Moon)

Full Moon

Freeze Quarter

9 6:40 PM

FOLDABLES

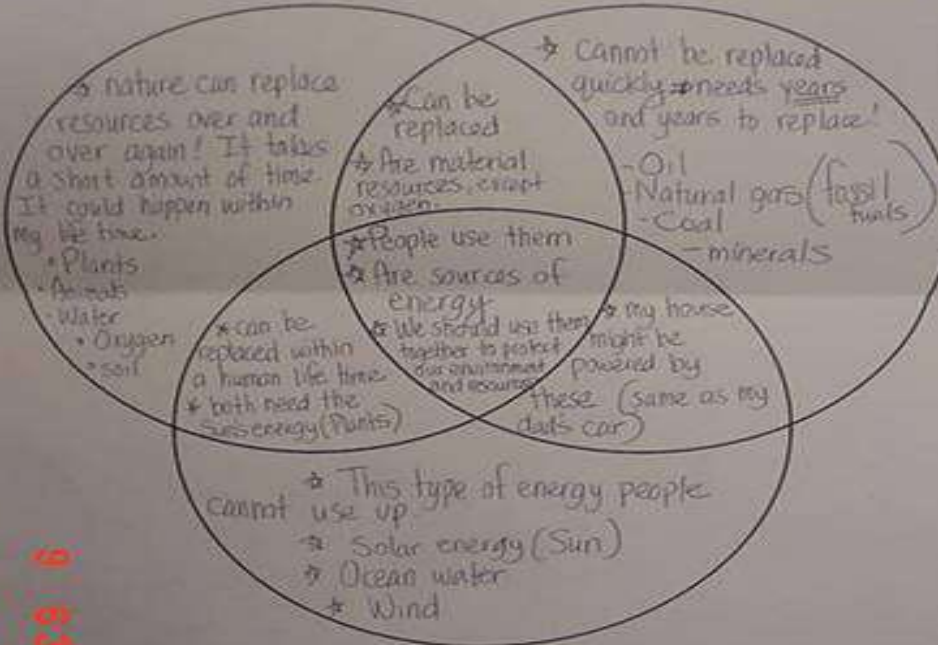


GRAPHIC ORGANIZERS

Name Cyen Trest Date _____

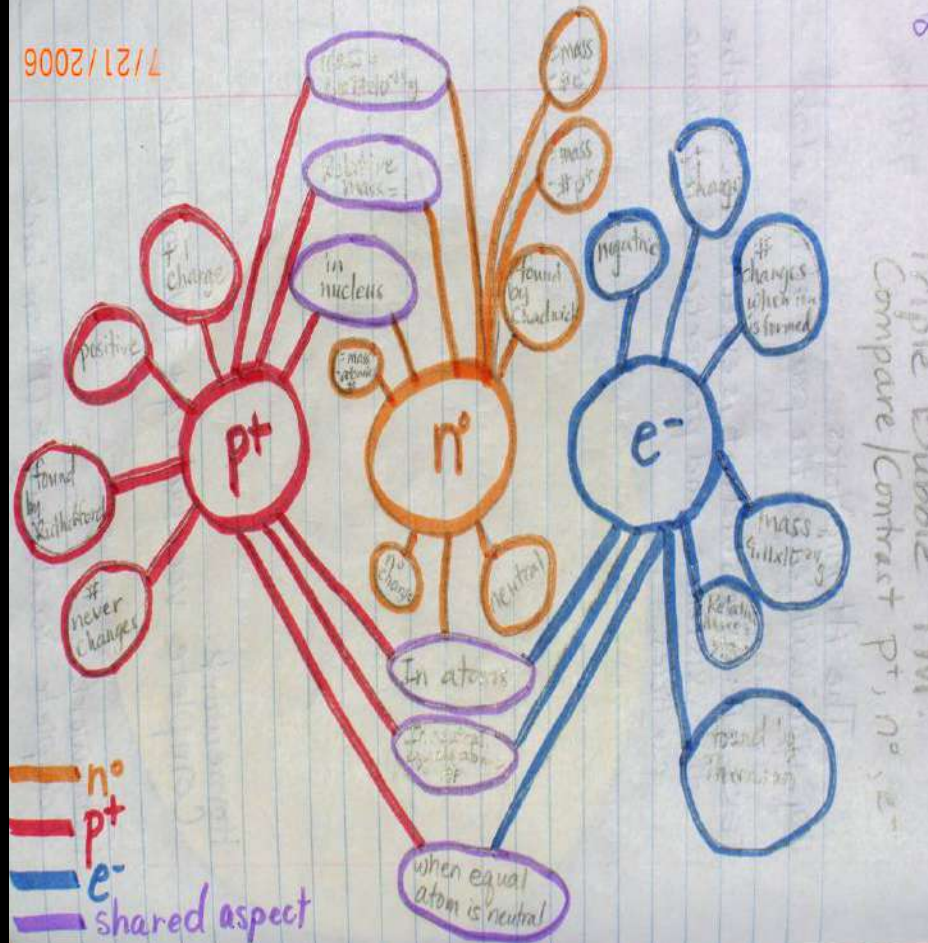
Renewable Resources

Nonrenewable Resources



9/6/2009

9007/12/1



Compare/Contrast p⁺, n⁰, e⁻

RIGHT SIDE : My SIDE



- The **RIGHT SIDE** belongs to me and should only contain **information given or “input” from Mrs. Showalter**. This can include notes, class work, handouts, study guides, etc. Nothing else should be placed on this page!
- The **RIGHT SIDE** contains (most) all **TESTABLE material**.

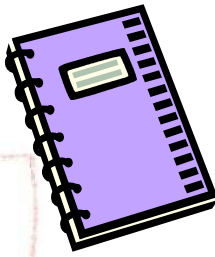


So, the Formal/Input (Tux) side has only material from me and is on the odd Pages = 1,3,5,7..YOU KNOW IT.

RIGHT SIDE

4.5c

Flow of energy through food webs



The **RIGHT** side of **EINSTEIN** contains information given to you by Mrs. Showalter. An example is shown to the right. This is the **ESSENTIAL** information that will **DEFINITELY** be testable. Nothing else should go on this side.

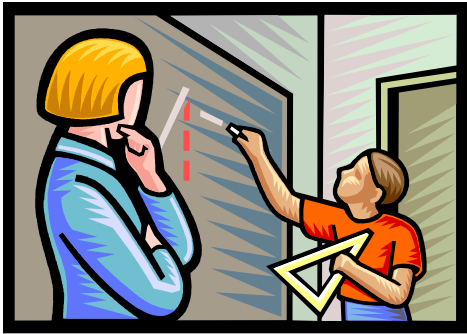
All organisms are part of a food web. Several food chains, which are linked, make up a food web. A food chain identifies the roles organisms use to get the food they need to survive. The sun, which is the source of energy, is the start of food chains. Food chains also contain producers, consumers, and decomposers. A producer is a plant. Plants use sunlight to make food. The greatest amount of energy in a community is in the producers. Primary, first-level, consumers are animals that eat plants. Secondary, second-level consumers, eat an animal for their food source. You have heard these called herbivores, carnivores, and omnivores. Do you remember the difference? Decomposers are organisms that break down wastes and dead plants or animals. The sun's energy cycles through ecosystems from producers through consumers and back into the nutrient pool through decomposers.

① Eat plants
② eat animals
③ eat both

For example, a simple food chain might be the sun, grass, mouse, fox, and maggots. In this food chain what is the producer? What is the decomposer? What is the source of energy? This food chain is part of a larger food web. Can you see that changing the mouse to a rabbit makes a different food chain but in the same food web? What other chains in this food web could we create? Can you identify which are primary/secondary consumers, producers, and decomposers?

#2

Example of Right Side "Input"



- Notes from Promethean
- Notetaking Guides
- Movie/Video work
- Article/Textbook Readings
- Research
- Lab procedures/activities
- Study Guides
- Class work

Example of Right Side "Input"

Moon Phases / Cycles

23

★ I know the moon looks different, but I don't know why or when it changes. I learned about the words full moon (all the moon shows), half moon (only half shows) and a crescent moon (only a $\frac{1}{4}$ shows).

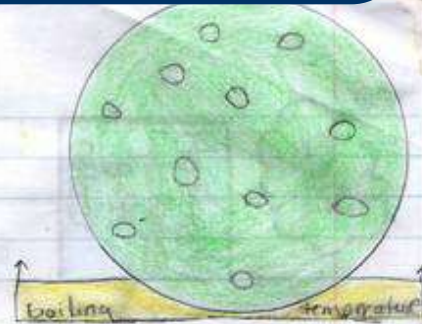
Moon Notes

- ★ The moon rotates around the earth.
- ★ One side of the moon always faces the sun.
- ★ We see different "moons" because our position around the sun changes, which changes the light of the moon as the sun hits it.
- ★ The moon does not make (produce) its own light.
- ★ The phases or positions of the moon we see depends on where the moon, sun, and earth are.
- ★ There is a new moon (can't see it), first quarter, full moon, and third quarter (half moon).



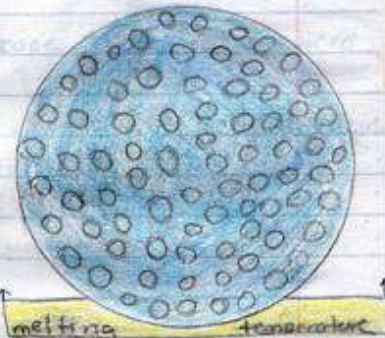
Facts of a gas:

- ★ The particles move fast and away from each other.
- ★ The temperature



Facts of a liquid:

- ★ The particles of a substance are further apart and slide by each other. (It can't cling)
- ★ The molecules move faster.
- ★ The temperature increases.
- ★ Molecules take the shape of their container.
- ★ Liquids are denser than a gas.



Facts of solids:

- ★ Particles are close together.
- ★ Molecules move slow.
- ★ The temperature of the substance decreases.
- ★ The substance contracts.
- ★ A solid keeps its shape + volume.
- ★ The particles are locked together.



Example of Right Side (?) "Input"

42

Natural Resources

A Natural Resource is a material that is useful to people that comes from our environment.

To me, a natural resource is something people get from our earth to make things or to use as energy. We get our natural resources from trees and plants, water, fossil fuels, wind, and the sun.

NATURAL RESOURCES

The diagram illustrates the following flows:

- SUN** → solar energy → solar panels
- PLANTS** → paper → house
- WOOD** → house
- WATER** → drinking water
- WATER** → electricity
- Fossil Fuels** → car
- Fossil Fuels** → electricity
- Cow** → milk → cheese
- Cow** → milk → butter

Nature Resource =

- Supplies from our environment
- Reserves from our earth
- Things you can use from our planet

9 6:38 PM

OOPS! IS
ANYTHING
"WRONG"
HERE?



Right Side? Left Side? What Goes Where?



Left Side
Student Output
Lots of Color

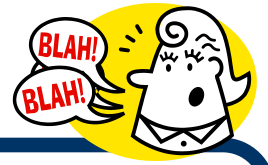
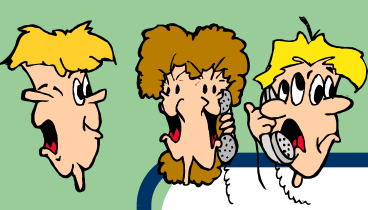
DYK that your brain remembers things in color better?

- Concept Maps
- Drawings
- Reflective Writing
- Questions
- Data and Graphs
- Songs
- Poems
- Data from Experiments
- Cartoons or cartoon strips

Right Side
Teacher Input/Content
Blue or Black Ink/pencil

Good Idea! Use colored pencils, highlighters, a key, etc. to group, accent, or categorize ideas!

- Information given in class
- Lecture Notes
- Lab Activities
- Video Notes
- Summaries
- Textbook Notes
- Procedures for experiments
- Classroom Specific Information



What Students Are Saying about Einstein....

- “...easy to do and can **REALLY** help your grades!”
- “Always update your table of contents so papers don't get messed up - or in case of a notebook check or pop quiz!”
- “It’s a great tool, keep it organized!”
- “You have to spend quality time on it to make it good...you’ll be proud of it!”
- “Keep up with everything every day. That way you don’t leave important things out. What if you get to use it on a test? ”
- “Colorize things. It looks so much better that way & is easier to study.”
- “Keep it in order, because you never know when a notebook check or pop quiz might come up!”
- “You can go back later and see how much smarter you are!”

Science Notebook Supplies



Composition books



Glue stick or tape



Scissors



HIGHLIGHTERS



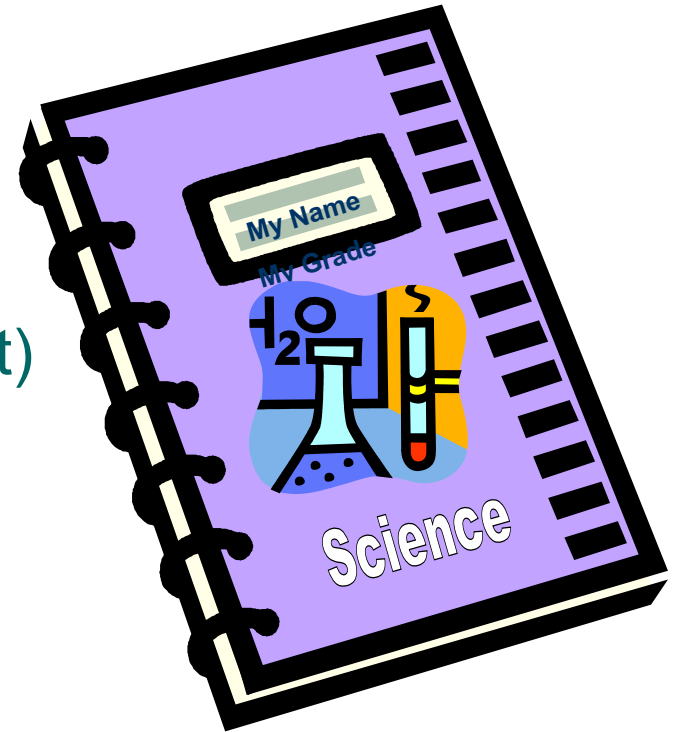
Erasable pens & pencils
(blue or black only)



Colored pencils

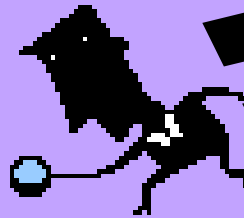
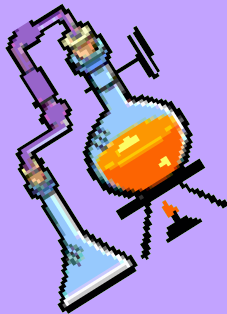
Let's Get Started!

- **Title:**
 - So & So's (first name) EINSTEIN
For ex: "Alaina's EINSTEIN"
- **Your name:** So & So (first & last)
- **Name of the course:**
 - 7-1 Science: Mrs. Showalter
- **Science Class period (1st 9-wks):**
 - 2nd, 3rd, 6th, or 7th
- **The school year:** 2010 – 2011



MY ADVENTURES IN SCIENCE

So & So's EINSTEIN
(Everyday Interactive
Notebook of Science That
Encourages Individual Notations)



Student So & So
7-1 Science/Mrs. Showalter
2nd Period
2010-2011

Step 2

This will be the first page for each unit...always starting on the RIGHT hand page.

Table of Contents: Science Safety & Skills

| Date | DESCRIPTION | Entry # /page #s |
|-------------|--------------------|-----------------------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |



(This will be the upside down back view)

Glossary or Key Terms

- Flip your notebook over
- Start from the back page
- There will be a separate glossary for EACH Unit...it does not have to be ABC order.
- Here is an example for one of our units:

Unit Glossary/Key Terms: Cells & Heredity


Term:Definition

Cell: The basic unit of structure and function in living things

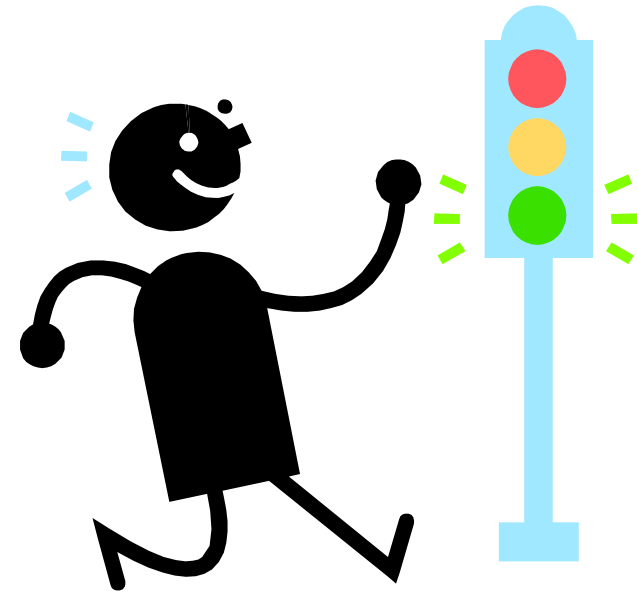
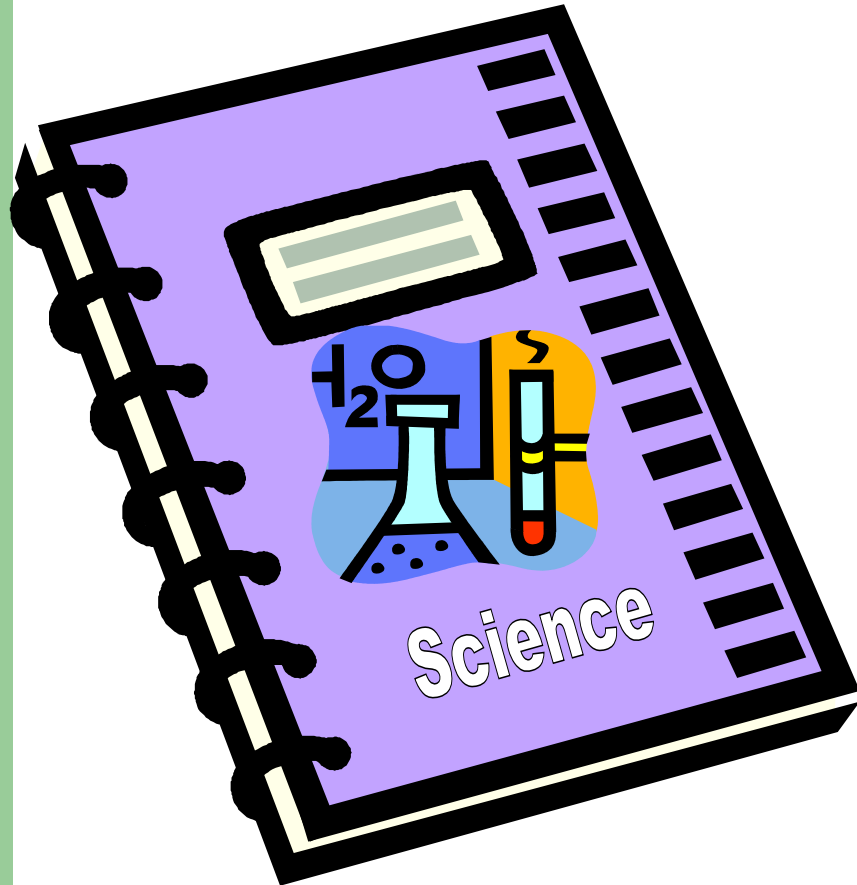
Nucleus: The control center of the cell



NOTEBOOK RULES..

- No **RIPPED OUT** pages or torn corners
- No **DOODLING** that doesn't relate to science...in particular the topic we are studying.
- Notebook should only be used for **SCIENCE CLASS** and should be brought **EVERY** day!
- **DATE AND NUMBER** each page
- All entries must go into the **Table of Contents**
- **BE COLORFUL &**  **YOUR NOTEBOOK**

WE ARE READY!



CREDITS

- Many thanks to these wonderful teachers for creating wonderful POWERPOINT slides used in this presentation:
 - Annette Holder, rockin' Science
 - Doug Saunders, bringing History Alive!
 - ScienceNotebook.com, great resource
 - Mr. Taft, student quotes
 - Mrs. Zimmerman, original PowerPoint
 - Mrs Sniker, Clover District Science Coordinator
 - Mrs. Cruse, Oakridge Middle School