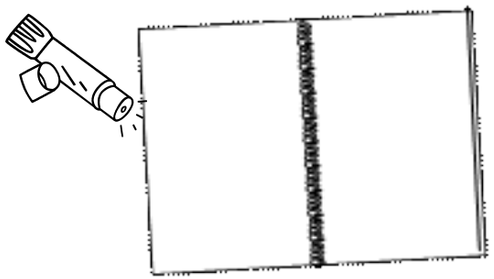
Paste this side down on the INSIDE LEFT FLAP your Interactive Science Notebook.



How to Use Your Interactive Science Notebook (ISN)...

What is an ISN?

- An Interactive Science Notebook (ISN) is your own personalized **DIARY of science learning**.
- It is a portfolio of your work in **ONE convenient spot**. This is **great for studying for upcoming quizzes & tests**.
- It is a great **ORGANIZATIONAL tool** that gives you permission to be **PLAYFUL AND CREATIVE** in your responses without "messing up" your notes.
- It allows you to THINK, RECORD AND REFLECT like a **REAL SCIENTIST**!

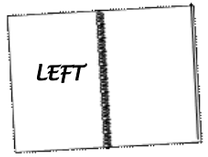
Notebook Rules:

- Have your ISN in Science class **EVERY DAY**.
- **DATE AND NUMBER** each page.
- All entries must go into the **Table of Contents**.
- **No RIPPED OUT** pages or torn corners.
- **No DOODLING** that doesn't relate to science.
- Your notebook should be used for **SCIENCE WORK ONLY**.
- BE **COLORFUL & LOVE** YOUR NOTEBOOK!

How to Get Started:

- Create your **Author's Page:** include the name of the class, titles of each unit and a colored picture to go with each.
- After the Author's page, **number** ALL of your **pages** in the upper right hand corner beginning with page 1 (**LEFT** sides are **ODD**, **RIGHT** sides are **EVEN**).
- For each unit, glue in your **Unit Overview** (left) and **Table of Contents** (right).
- **Record ALL of your assignments** in your Table of Contents (always keep it up to date!)
- Use **sticky notes** to create a **TAB** on each Unit's Table of Contents for quick access.

The "Left Side" is for "Learning"



Interactive notebooks will be used in this class daily to help you learn and remember important scientific concepts. Why do they work? This notebook style uses both the left and right brain hemispheres to help you sort, categorize and remember and creatively interact with the new knowledge you're gaining. The more you process information the more you begin to understand it. This leads to longer retention.

What goes on the Left Side? Learning goes on the left side!
ALL the information that you are supposed to learn- Some examples of input are: Cornell notes-text or power point, foldable notes, teacher lessons, vocabulary words; video and film notes; teacher questions; readings: questions and answers and sample problems.

What are Cornell Notes?

- Always start the page with the DATE and TITLE at the top of the page.
- Left sides have ODD numbered pages.
- The left page is for writing down INFORMATION you are given in class.
- Use CORNELL STYLE NOTES for lecture, discussion, text, etc.
- Write up your STUDY QUESTIONS as soon as possible after you finish the notes.
- Write legibly. Use highlighting color to make important information stand out.
- Write SUMMARIES at the end of notes to reduce the amount you have to study.

Sample Cornell Note Paper

Title:	Name: _____ Class: _____ Period: ___ Date: _____
Questions:	Notes:
Summary:	

Chapter 2 Describing Motion: Kinematics in One Dimension	Billy Jones September 3
How do objects move translationally? Develop a diagram that contains two frames of references and describe those frames. Why is it important to use frame of reference?	Mechanics is the study of objects in motion and the related concepts of force and energy. Mechanics is customarily divided into two parts kinematics, which is the description of how objects move, and dynamics which deals with force and why objects move as they do. Translational motion deals with objects that move without rotating. Reference Frames and Displacement A. All measurements are made relative to a frame of reference. B. Often we can specify a direction by using the cardinal points, north, east, south and west, and by up and down. In physics, we often draw a set of coordinate axes with x on the horizontal and y on the vertical. Displacement is defined as the change in position of the object. Displacement is the quantity that has both magnitude and direction. Such quantities are called vectors, and are represented in diagrams

ISN Grading Rubric

100 (A+) - MASTERFULLY COMPLETE AND ACCURATE SCIENCE NOTEBOOK:
Notebook exceeds all expectations, demonstrates superior and masterful understanding of the standards and essential questions. The Notebook is **100% complete** and contains elements that **go beyond the assigned work.** Included work communicates critical and analytical thinking **exceptionally well** using some combination of words, pictures, examples and diagrams.

90-99 (A) - EXCEPTIONALLY COMPLETE AND ACCURATE NOTEBOOK:
Shows understanding that is above expectations. The Notebook shows excellent understanding of the standards and essential questions.
Table of Contents reflects 100% entries to date. Pages are numbered correctly.
Revision and **polish** are used regularly to create a Notebook that is exceptionally neat and organized.
Notebook contents are NEATLY completed (100%), titled, and dated.
Left-side/Right-side topics are correct and shows mastery pattern of organization.
Notes go **BEYOND BASIC REQUIREMENTS**. Included work communicates **critical and analytical thinking** clearly using some combination of words, pictures, examples and diagrams. Uses **color** in a meaningful way and effective diagrams and pictures throughout. Shows **IMPRESSIVE, IN-DEPTH, self-reflection**.

80-89 (B) - SUBSTANTIALLY COMPLETE & ACCURATE NOTEBOOK:
Shows understanding that meets expectations.
The Notebook works as a whole to show substantial understanding of the standards and essential questions. There may be some important errors. **Table of contents** reflects at least 90% of all entries to date. Pages are numbered correctly. **Some revision and polish** are used to create a Notebook of Work that is very neat and organized.
Notebook contents may have some minor omissions but is very complete. Notebooks contents are mostly neat and **complete (at least 80%)**, dated and labeled. Pages are numbered correctly.
Left-side/Right-side topics are correct and contents organized according to class model notebook with no more than 1 assignment incorrectly placed.. Includes MOST OF THE TRAITS OF an A but **LACKS EXCELLENCE in all areas**. MOST areas **meet requirements** but don't go beyond. Included work communicates **some critical and analytical thinking** using some combination of words, pictures, examples, and diagrams but may be unclear in some areas. Uses **some color and diagrams**. Shows **IN-DEPTH self-reflection**.

70-79 (C) - PARTIALLY COMPLETE AND ACCURATE NOTEBOOK:
Shows satisfactory progress in understanding content. The Notebook is disjointed, shows **partial understanding** of the standards and essential questions.
Table of contents reflects at least 80% of all entries to date. Pages are numbered correctly.
Notebooks contents are complete **(at least 70%)**, dated and labeled, **but some may be unfinished**.
Little or no revision and polish are used to create a Notebook that is satisfactorily neat and organized.
Left-side/Right-side topics are correct, contents organized with no more than 3 assignments incorrectly placed.
Information shows a **LIMITED understanding** of content topics. FEW areas meet all requirements.
Included work communicates some thinking, but **mostly relies on re-tell using** some combinations of words, pictures, examples and diagrams. Uses **minimal color and diagrams**. Shows **LIMITED BUT REAL self-reflection**.

50-69 (F) - WORK IN PROGRESS: PLEASE REVISE & RESUBMIT!
Work shows **little or no understanding** of the standards. The Notebook is **difficult to understand** and **assignments are missing**. **Table of contents** shows LIMITED attempts of keeping current entries to date. Notebook is **disorganized**, or not satisfactorily assembled. Work is **not neat.** Notebook contents are INCOMPLETE **(50% or more).**
Left-side/Right-side is INCONSISTENT and contents are UNORGANIZED with more than 5 assignments incorrectly placed. SOME attempt at dating and labeling of entries is made.
Information and concepts show only a **SUPERFICIAL UNDERSTANDING of the subject matter**.
Included work does little to **communicate thinking** and may appear to re-tell using little combination of works, pictures, examples and diagrams. Uses **minimal color and diagrams**. Shows **LITTLE real self-reflection** if any.

0 (No Credit) - Notebook turned in, but TOO INCOMPLETE TO SCORE OR Notebook NOT TURNED IN, NO EVIDENCE of WORK DONE. Majority of pages are missing or incomplete. Inconsistent dating and labeling, and numbering. Shows minimal understanding of concepts, not neatly written.

Science Lab Report Format

Some laboratory experiments will require a "Formal Lab Report." The following are instructions to help you organize your information and produce a successful lab report. Include all of the following **headings** (**in bold**) on your lab report.

LAB TITLE

PROBLEM: State the problem you are trying to solve or the question you are trying to answer. For example – *Does the amount of stretch affect the distance traveled by a rubber band?* Always state the problem in the form of a question.

PURPOSE: Write 1-2 sentences explaining why it is important to study this problem. State why you would want to study this. How might this relate to your life? How does it affect things around you?

HYPOTHESIS: Make a hypothesis (prediction) based on the information you have as to what you think the answer to the question or problem is. Use the "If …, then… because…" format to make you hypothesis. For example: *If a rubber band is stretched farther, then it will travel farther, because force is proportional to distance.*

MATERIALS: Make a list of all the materials you will need to complete your experiment. Be sure to include amounts (quantities).

PROCEDURE: Describe step-by-step the instructions for completing the experiment. Number your steps. Make sure you include every important detail so that someone can use your procedure to complete the same experiment. Be sure to state the variables (independent, dependent), control and constants in your experiment.

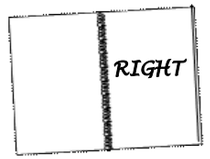
DATA: Record the data (information) obtained from your experiment in data tables. Always use graph paper and a ruler. Make sure you label your rows and columns with proper units of measurement and title your table.

RESULTS: Display your data using a graph (bar or line) then in a few sentences describe what is shown in the graph. Always use graph paper and a ruler when making your graph and label your axes with proper units of measurement and title your graph. The independent variable is plotted on the x-axis and dependent variable on the y-axis. Remember: TAILS DRY MIX.

CONCLUSION: In addition to the questions given by your teacher, answer the following questions in the conclusion paragraph using complete sentences.
- Was your hypothesis supported or rejected? Explain using your data.
- What did you learn from this experiment?
- What sources of error could have affected your experiment?
- What future experiments could you do to expand on this topic?

EXTENSION: For extra credit, design a NEW experiment based on the last conclusion question above. Include all parts from Problem to setting up the Data Table.

The "Right Side" is for "Reflection & Review"



The right page demonstrates **your understanding** of the information from the left side page through **reflection and review**. You work with the Left Side input you are learning, and INTERACT with the information in creative, unique and individual ways. Right sides have even numbered pages. The right side incorporates and reflects how you learn science as well as what you learn in science. The **12 clock questions** help focus your attention and guide your learning of the science content and concepts.

What goes on the Right Side?

* Clock Questions,	* Homework Assignments,	* Practice Problems,
* Drawings,	* Cartoons,	* Concepts maps,
* Foldables,	* Stories,	* Diagrams,
* Venn diagrams,	* Reflection writing,	* Poetry, songs & raps,
* Flow Charts,	* Graphic Organizers,	* Mnemonics,
* Vocabulary Bingo,	* Tables,	* Data and graphs .

Or ANYTHING CREATIVE that demonstrates YOUR understanding of the material!

Things to Know about RIGHT sides:

Every Right side page gets used-COMPLETELY!
Always use COLOR… It helps the brain learn and organize information.
Homework problems are right sides (but they don't take the place of processing your notes!)

The Clock Questions

1. Write a **science fiction story**.

2. Paraphrase this information into 2 sentences.

3. Create and solve **3 original test questions**.

4. Create 4 **"What if…"** statements that you can research to learn more about this topic.

5. Create a **mnemonic device, poem or song/rap** about this topic.

6. Write a letter to _____ about this issue.

7. Compare & contrast 2 or more ideas with a **Venn Diagram.**

8. Create a **concept map** to show the relationships within this topic.

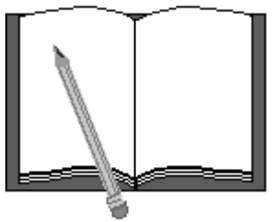
9. Make **vocabulary cartoons/visual display** from this topic.

10. Explain the application of this information to a **real life situation**.

11. Describe this topic and how you can learn it using **hand signals or a dance**.

12. Create your own **Clock ?** and complete it.

Reflection Instructions



Toward the end of each unit, you will be called upon to reflect upon your work and understanding of the science content. This writing sample **begins on the left side** of the notebook and **continues on the right**. While there is no required length, a high quality reflection **uses 1-2 pages** of the notebook.

Include the parent review (with comments and signature at the bottom of the right hand page).

High quality reflection includes your consideration of the following in reference to your best work: what you learned from the activity, how you learned from it, what aspects of the work were high quality, what you would do differently in the future (and why), what made you proud of this particular work, what made the activity worthwhile for you, how does this work impact your view of the world, what information did you learn that was new to you, etc. High quality reflection also examines your skills as a student and as a scientist. Skills you might discuss are: organization, analysis, logic, creativity, thoroughness, accuracy of information, ability to put new information together, understanding new concepts, etc.

Please note: *reasoning that it was "fun" or just that you liked it, is NOT an adequate reflection statement.*

Answer the following questions in complete sentences in a 5 paragraph essay – one paragraph for each response.

1) Select 4 items that represent your "best work" - 2 from the left side, 2 from the right side. In several reflective sentences, address the specific reasons why you chose these items as your best work as well as what these assignments reflect about your skills as a student scientist and how much you have learned.
2) Indicate your overall rating of your notebook based on the grading rubric. Explain why you have earned this rating. Has your notebook improved from past notebooks?
3) What specific study skills have you employed to be successful in this class? What organizational strategies helped you learn the most? Elaborate.
4) What are your goals for improvement in this class? List specific areas in which you feel you need to improve or need help improving and explain how you plan to achieve your goals.
5) What specific improvements can your teacher help you with to become more successful in Science? Explain.

Parent Review Instructions

Dear Parent/Guardian:

This Interactive Science Notebook represents your student's learning to date and should contain the work your student has completed in Science Class. Please take some time to look at their notebook with them, read their reflection, and discuss their learning.

At the end of each unit, respond to the following questions after the reflection:

1. The work we found most interesting was _____ because…

2. What does the notebook reveal about your student's learning habits or talents?

3. My student's biggest concern about this class is…

Parent/Guardian Signature: _____

***NOTE: This is NOT a form to fill out, it is INSTRUCTIONS-Please complete the assignment at the end of your students current unit reflection.**