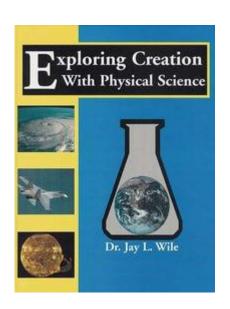
LJ-PS1

# Apologia "Exploring Creation With Physical Science" 1<sup>st</sup> Edition Lapbook Journal



This Lapbook Journal has been specifically designed for use with the book, "Exploring Creation with Physical Science" "1st Edition by Apologia Science."

Designed by
Cyndi Kinney
of Knowledge Box Central
with permission from Apologia Science
and Jeannie Fulbright.

Exploring Creation With Physical Science 1<sup>st</sup> Edition Lapbook Journal Copyright © 2010 Knowledge Box Central www.KnowledgeBoxCentral.com

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This book is dedicated to my amazing family. Thank you to my wonderful husband, Scott, who ate a lot of leftovers, listened to a lot of whining (from me!), and sent lots of positive energy my way. Thank you to my daughter, Shelby, who truly inspired me through her love for learning. Thank you to my parents, Judy and Billy Trout, who taught me to trust in my abilities and to never give up.



# **Table of Contents**

*	So now you bought itwhat do you do with it?Whole Thing
*	Setting up the binderPg 3
*	What's in these files?Pg 3
*	What to printPg 3
*	What's in each section, supplies needed, etc
*	On Your Own Journal Pages
*	Study Guide Lapbook Journal Booklet Templates & Background PagesPg 4-5
*	Help! I need pictures of the booklets
*	Lab ReportsPg 6
*	Frequently Asked Questions
*	Cover for Lapbook Journal (goes in front of binder)Pg 10
*	Cover for On Your Own JournalPg 1
*	Cover for Study Guide Lapbook PagesPg 12
*	Cover for Lab ReportsPg 13



Welcome to our Lapbook Journal for Apologia's Exploring Creation With Physical Science by Dr. Jay Wile.

We are very pleased to offer this product, as authorized by Dr. Wile.

#### So...now you bought it...what do you do with it?

I'll try to answer your questions here. Please note that there are several ways to use our Lapbook Journal, and the BEST way is the way that works for your student.

**First**, purchase a 3 inch 3-ring binder, and divide it into 3 sections. Your dividers should be labeled as follows:

On Your Own Journal (OYOJ)
Study Guide Lapbook Pages (STLP)
Lab Reports (LR)

You may use the acronyms if your label space is limited.

#### Now you have your binder ready....so what next?

It's time to print! As for the order or printing...you may choose to print needed pages as you finish one module and begin the next....or you may choose to print everything up front. The choice is yours, but I would suggest marking off some time to print it all at once....that's just my opinion. Obviously, your time will dictate what you print when.

You will find 16 files within this product. These will consist of one file for each module of the book. Within each of these files (one per module), you will find the following:

- 1. On Your Own Journal Pages
- 2a. Study Guide Lapbook Pages Booklet Templates
- 2b. Study Guide Lapbook Pages Background Pages
- 3a. Lab Reports (Supplies, Introduction, & Procedure filled out already)
- 3b. Lab Reports (No information already filled in...only the report itself with the title of the experiment at the top)

Now I will go into detail about how to print each of these files, what type of paper to print them on, and how to use them.

As I said on the previous page, there are 16 files (one for each module of the book) included in this product, and within each of these files, you will find the following:

- 1. On Your Own Journal Pages
- 2a. Study Guide Lapbook Pages Booklet Templates
- 2b. Study Guide Lapbook Pages Background Pages
- 3a. Lab Reports (Supplies, Introduction, & Procedure filled out already)
- 3b. Lab Reports (No information already filled in...only the report itself with the title of the experiment at the top)

#### On Your Own Journal Pages

<u>Supplies Needed</u>: Regular White Copy Paper (unless you desire differently)

These pages will be solely devoted to the "On Your Own" questions that appear throughout each of the modules. Instead of the student having to re-write the questions in a notebook, we have provided the questions in a "Notebooking" styled setting. There will be ample space for the students to answer the questions within these Journal Pages, and the borders and graphics provide a decorative page for documenting learning.

We recommend that these pages be printed on regular, white paper. There is no need to print these pages on any special type or color, unless that is your preference.

For each module, print these pages, and file them all together under your "On Your Own Journal Pages" divider tab. As your student comes to these questions, he will go to this section to document his answers.

#### Study Guide Lapbook Pages Booklet Templates & Background Pages

<u>Supplies Needed</u>: Regular White Copy Paper, Colored Paper, White Cardstock Paper (if desired), Glue, Scissors, Metal Brad Fasteners (if desired), Ribbon (if desired), Staples

This section is used with the Study Guide at the end of each module of the book. Instead of writing the questions and answers into a regular notebook, the student would complete these booklets to place into his binder.

#### Study Guide Lapbook Pages Booklet Templates & Background Pages...cont.

This section provides more of a "hands-on" opportunity for your students. It is similar to the traditional lapbooks, but there are no folders in which to place the booklets.

We recommend that you print these on the following types of paper:

- \* Study Guide Lapbook Pages Booklet Templates: colored paper, any weight (we use 24#, multi-colored paper)
- \* Study Guide Lapbook Pages Booklet Templates Instructions: white copy paper (these will ultimately be thrown away, so the weight of the paper isn't important)
- \* Study Guide Lapbook Pages Background Pages: white cardstock (These can be printed on white paper, if you prefer. We print on white cardstock because it is more durable, holds the weight of the booklets, and holds up to years of "thumbing through" the pages.)

These lapbook-style booklets will provide a 3-dimensional aspect to your student's learning experience. Science has proven that the more senses a student uses when learning and reviewing new material, the more he will retain. So, by adding this section, your student will be able to use his own hands to create these memories. Also, the colors and shapes of the booklets will stimulate memory as well.

At the end of each module, allow the student time to create these booklets, and place them randomly (be creative!) on the Study Guide Lapbook Journal Background Pages (print as many copies of these as you need).

This is the most time consuming portion of the Lapbook Journal, and I know that time is very precious. So, if you simply cannot make time for creating ALL of the booklets, or if your student is at first resistant to this hands-on method, you may choose to have your student only complete a few of the booklets...maybe the ones that cover areas in which he needs extra study.

Allow the student to have fun with this section. As he cuts, glues, and folds, he will be creating something to look back on for years to come. He will also be creating something that will be WONDERFUL when it comes time to review! There is NO better way to learn, in my opinion, than for the student to be intensely involved in the process by using his hands.

*The Study Guide Lapbook Background Pages – SPECIAL NOTE:* You will need to print as many of these as necessary. How many you need depends on how many booklets that your student made. Allow your student to arrange the completed booklets in any order they desire – be creative! You may need a bunch of these pages printed if he really gets the hang of this!

#### Pictures of Completed Booklets in the Study Guide Lapbook Pages

We are in the process of assembling each and every booklet that is found in the Study Guide Lapbook Pages section. We will be adding all of these pictures to our website soon. Just go to: http://www.knowledgeboxcentral.com/aplajopi.html

#### **Lab Reports**

**Supplies Needed**: Regular White Copy Paper

This section is where the student will document all of the work done on the lab experiments within each module.

I conducted a poll before finalizing this section. I wanted to know if parents would like the Lab Reports to be partially completed....or whether they would rather have the student write in all of the information themselves. The responses were split right down the middle. Then, a really smart mom emailed and said, "Why don't you just put both formats in the Lapbook Journal?" So....that's exactly what I did!

There are 2 different sections of each file that are devoted to Lab Reports. There will be a section that gives you Lab Reports with the Experiment Title & Number, Supplies, Introduction, & Procedure already filled in. The back of these reports has no information filled in – this is where the student will document his observations, conclusions, etc. and draw any diagrams necessary. The other section gives you Lab Reports with ONLY the Experiment Title & Number filled in...the rest is blank. So, choose which works for you. You may even want to try both...or you may change midway through the year...or depending on your time that week. The choice is yours!

Print these on regular white paper, unless you WANT to print them on cardstock. They are meant to be printed double-sided, but feel free to print them as a 2-page report, if that works better for you (or for your printer!). PLEASE NOTE: Some Lab Reports are longer than others (3-4 pages max), so be aware when printing. File them in the "Lab Reports" section, and refer to them each time your student performs a lab experiment.

**SPECIAL NOTE**: Lab Reports vary from 2 to 4 pages in length....so make sure that you are printing ALL pages for each lab. Do not assume that there are only 2 pages.



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#### **Frequently Asked Questions:**

1. What if I don't have enough time to do all of this? What's ok to leave out?

If you are really pushed for time, please don't feel that you have to "do it all!" I am cursed with this syndrome, and it rears it's head every time I get in a new piece of curriculum. YOU alone know what is best for your student, school, and family.

With that said, I'll say this. If I had to choose something to omit, I would probably first allow my student to use the Lab Reports that are partially filled in. This will save a lot of time....and frustration on the part of the student. If I still needed to omit something, then I would probably allow the student to answer some of the Study Guide questions verbally and only do some of the Lapbook Pages. However, I would be sure to NOT choose the lapbook booklets that deal with the easiest subject matter to leave out. I would allow the questions that deal with the easiest subject matter to be answered orally, and require that the others be answered within the booklets.

2. What if I only have white paper, and I cannot afford to get (or don't have time to get) colored paper or cardstock?

We have made suggestions as to the colors and paper types that we would suggest, but they are ONLY suggestions. If your daughter is really into pink, and everything has to be pink....then print the whole thing on pink! If you are cramped for extra money, and you only have white paper, then print it all on white! I assure you that the color of the paper will not KEEP your child from learning. There is scientific research to support the improvement in memory when using colored paper, but who says the child can't color the paper themselves (the lapbook booklets)...draw pictures on them...make them his own. Or...just leave them white. The choice is ALWAYS yours.

3. My friend wants to use this Lapbook Journal too. Can I let her use my copy? Oh, and my Co-op might want to use it too.

Our copyright states that any Ebook or CD is purchased for use by ONE household. If your Aunt Mary, Cousin Martha, and all of their children live in YOUR household (God Bless You!), then that includes them. You may print as many copies of the material as you need from the Ebook or CD for those in your household. However, PLEASE do not share these with friends and family who do NOT live with you.

As for Co-Ops, we do have a Co-Op License available. All you have to do is purchase the Ebook or CD version of the product as well as the Co-Op License through our website. In the "comments" section of the purchase, state which product(s) will be used at the Co-Op. That's it! It doesn't matter how many children are represented in your Co-Op....print away!! I assure you that it's WAY less expensive than for each family to purchase their own copy. You can all split the cost, and it comes out great for everyone.

4. Why are there very few color graphics in this product?

After much research, we believe that the children of this generation are visually overstimulated. Between video games, internet, and television, there is very little left to the imagination. While colors play an important role in memory and retention of information, OVER-stimulation with colors has just the opposite effect.

Research ALSO shows that colored shapes have an effect on the memory that is amazing. Students will remember colored shapes much more than they will remember colored graphics on white paper.

Another reason.....colored ink costs homeschool moms TONS!

Without colored graphics, students will create their own! Allow them to draw pictures, color the borders, use their imaginations.

For these reasons, we have chosen to use few color graphics. We feel that this decision, although not the popular one, will benefit your students in the long run.

5. What's the difference between the 1<sup>st</sup> and 2<sup>nd</sup> Editions of the textbooks?

#### This is the explanation FROM Apologia:

- \* Dr. Wile has been answering student questions on each of these courses for seven years or more. Those questions have allowed him to realize what sections of the books could be written more clearly. Thus, these editions of our courses are even more understandable than the first editions!
- \* The student text has graphic icons that tell the student when there is a related multimedia presentation on the optional multimedia CD.
- \* There are course websites that have links to materials which provide extra help as well as interesting news related to each field.
- \* There are cumulative tests in the solutions and tests guide if the parent/ teacher wants to give the student quarterly, semester, or final exams.
- \* The tests in the solutions and tests guide contain a point system that aids the parent/teacher in grading them.
- \* Finally, even though the module tests are found in the solution and test manual (so the parent/teacher always has a copy of them), a second set of tests is also provided in a perforated booklet. This will allow the student to be given the tests without referring to the solutions and tests manual.
- 6. What if I don't have a printer, or my printer isn't working?

Most print shops will allow you to email your document to them for printing. Or, you may choose to burn the Ebook to a CD and take it to them for printing.

7. Is it OK to burn the Ebook to a CD?

Yes, absolutely! In fact, I would suggest it. My computer crashed last year, and I lost SO many wonderful homeschool products that were in Ebook format!! (still crying!)

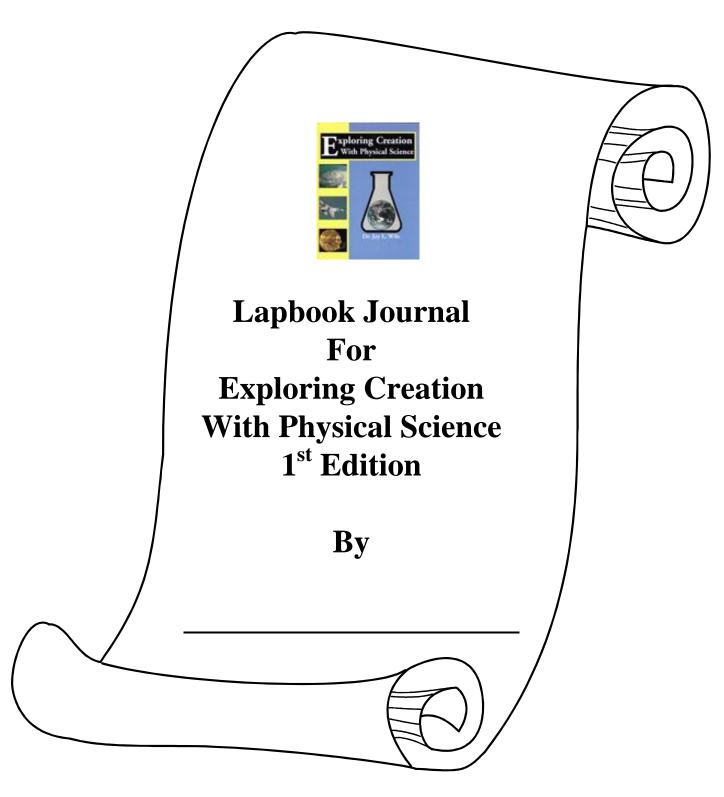
8. What if I'm not creative, crafty...etc....and I don't really want to be?

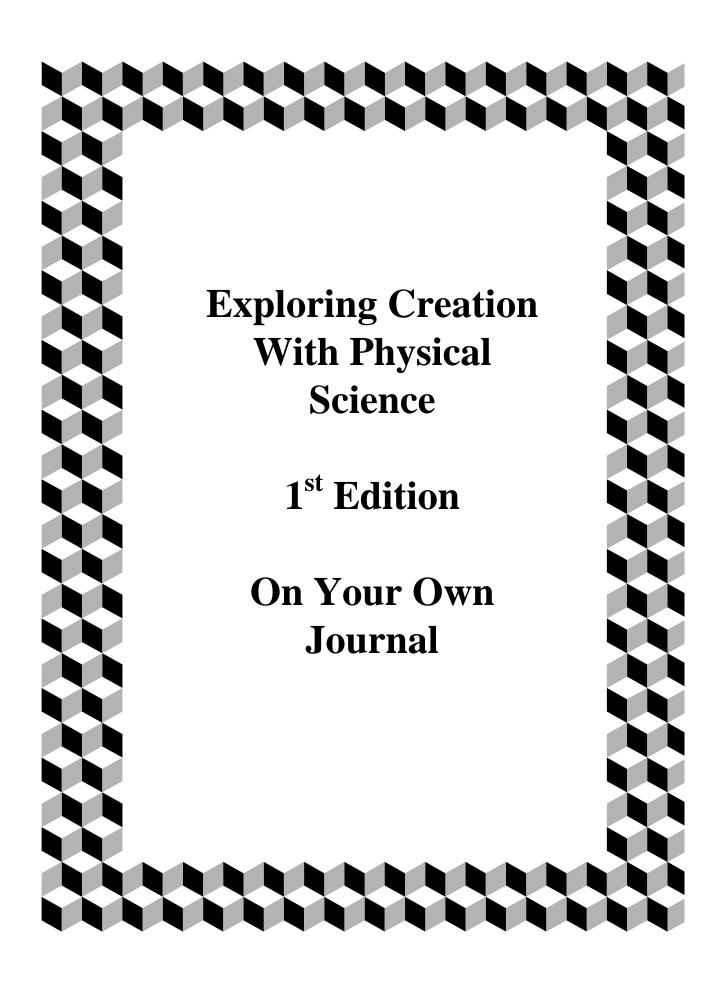
That's ok. Not everyone enjoys working with "hands-on" products. That's why this product will work for you! All of the planning is done, and the instructions are written so that the student can read and follow them without assistance from an adult!

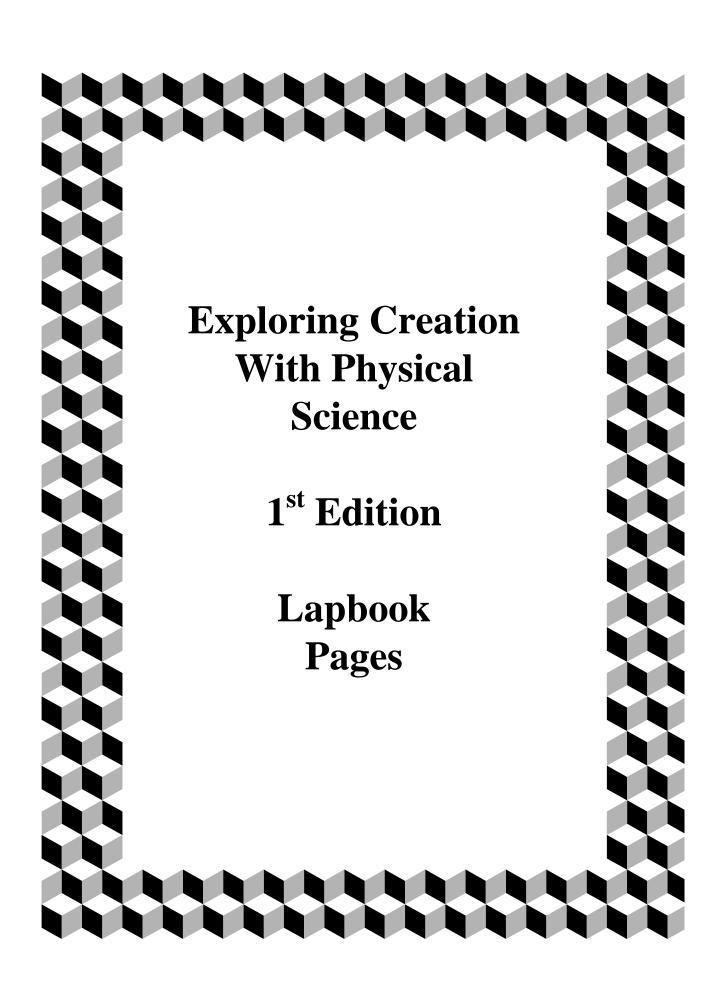


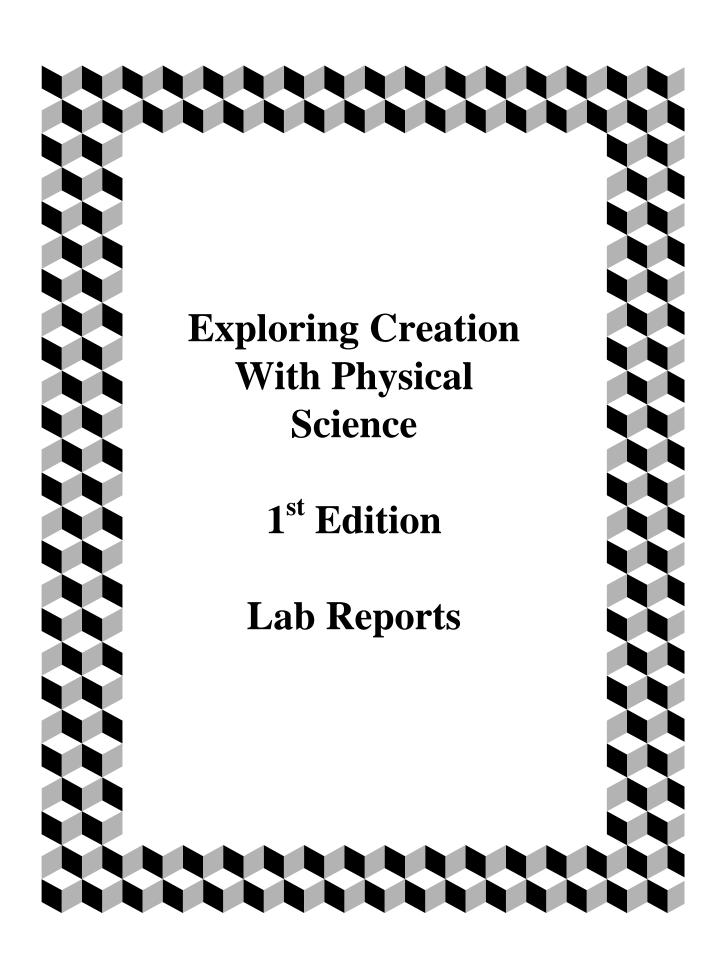
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# Physical Science 1<sup>st</sup> Edition Module 1

The following pages are divided into 5 sections, with a page like this one between each section.

# The sections are:

\* On Your Own Journal

\* Study Guide Lapbook Pages – Booklet
Instructions & Templates

\* Study Guide Lapbook Pages –
Background Pages

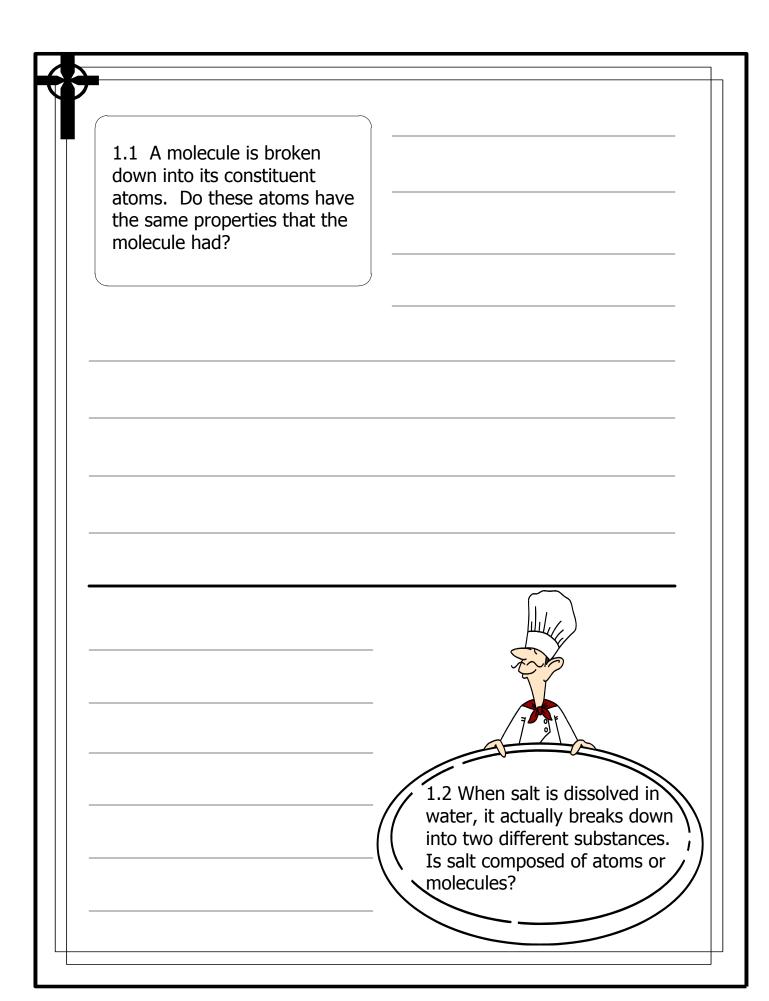
\* Lab Reports (Partially Completed)

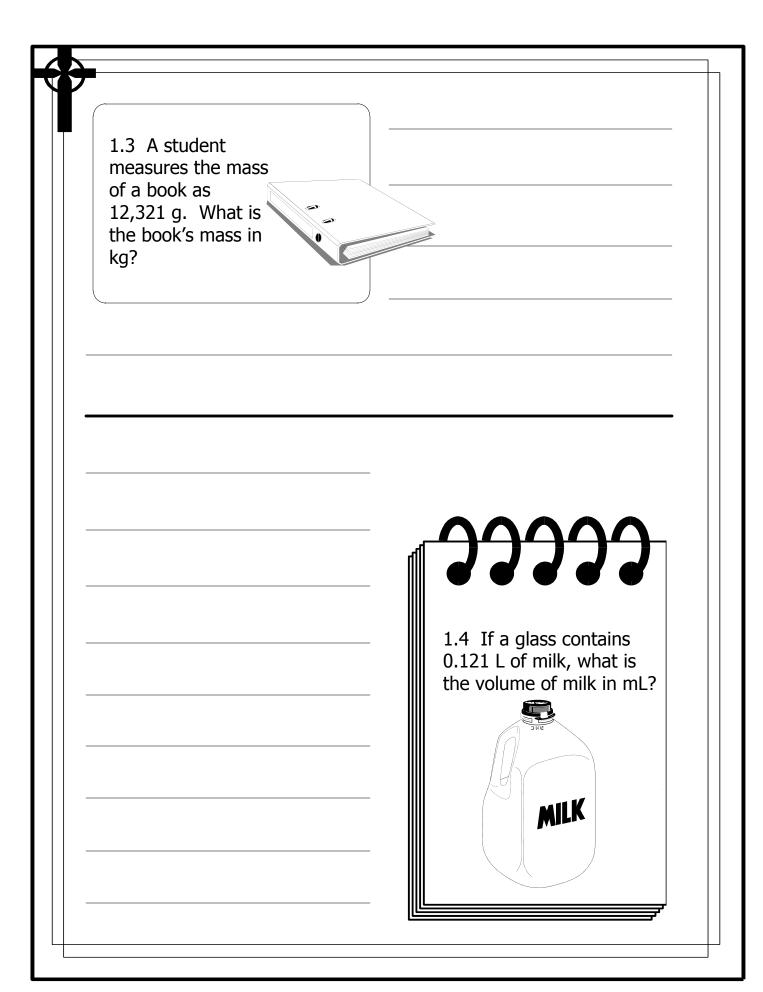
\* Lab Reports (Blank)

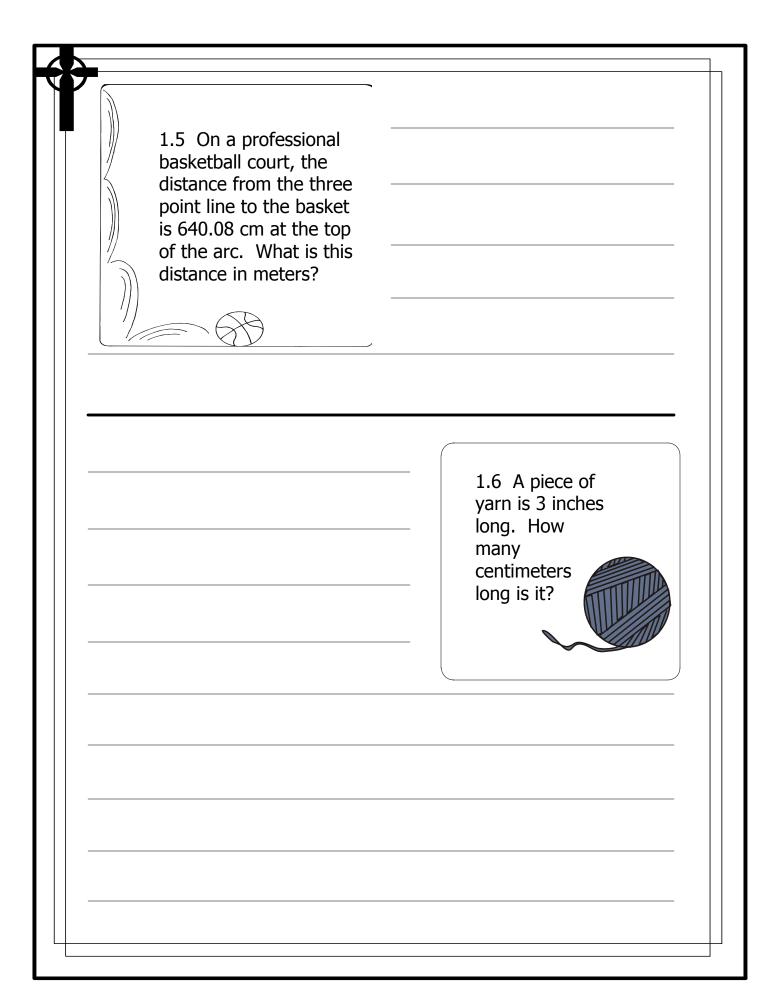
# The following section is:

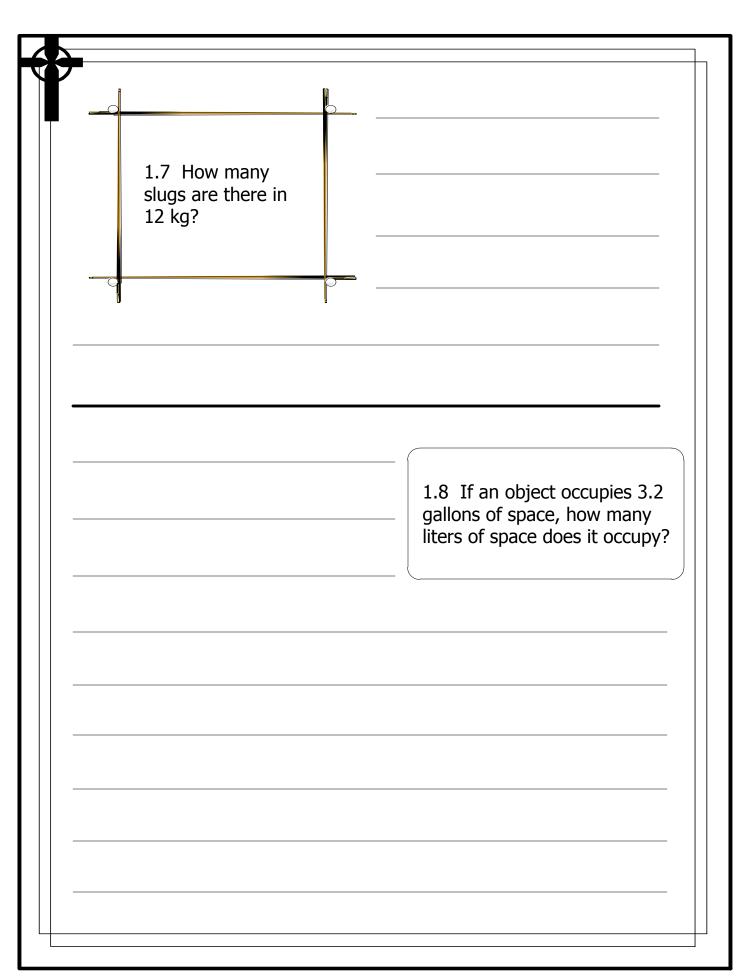
# Physical Science 1<sup>st</sup> Edition Module 1

On Your Own Journal Pages

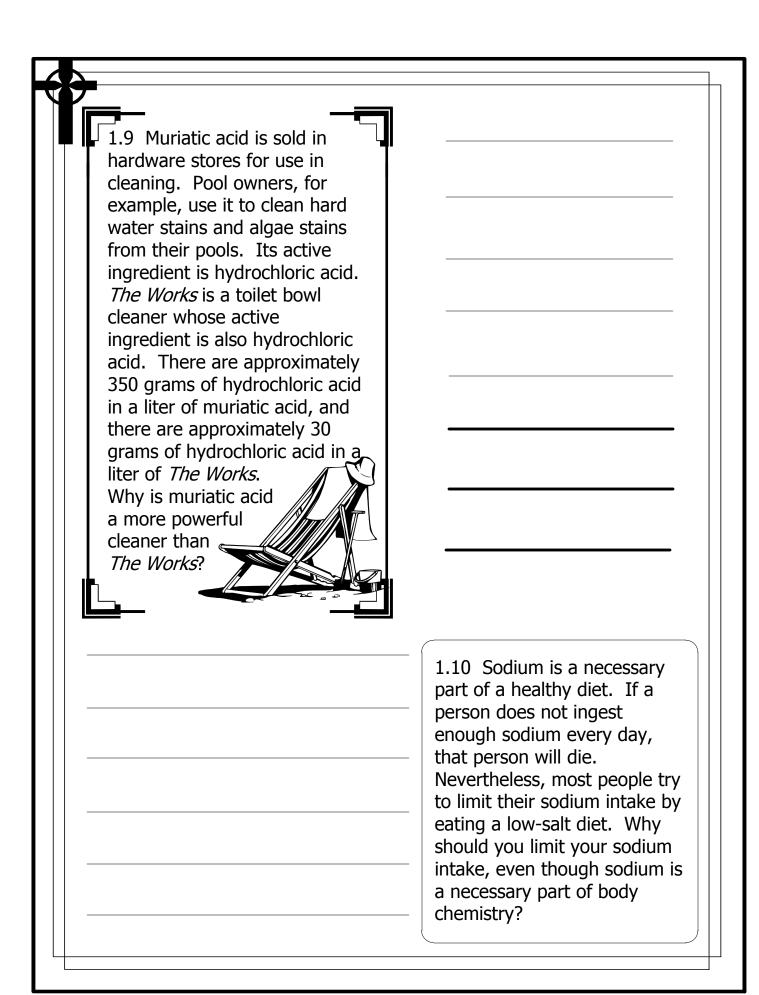








Physical Science 1<sup>st</sup> Edition – Module 1 - On Your Own Journal



# The following section is:

# Physical Science 1<sup>st</sup> Edition Module 1

# Study Guide Lapbook Pages – Booklet Instructions & Templates



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# Physical Science 1<sup>st</sup> Edition - Module 1 Study Guide Lapbook Pages - Booklet Templates Assembly Instructions

#### Question 1. a-c

Cut out along the outer black line edges of the booklet and the title label. Fold the booklet "accordion-style" so that the back of the "Concentration" section is on the bottom, and the blank section is on top. Glue the title label to the outside, on top of the booklet.

#### Questions 2-5

Cut out along the outer black line edges of all pages and labels. Fold the two largest sections along their center lines, and tuck them inside each other so that the title is on the front. Staple them at the top. Glue each question label on a separate page.

#### Questions 6-9

Cut out along the outer black line edges of all pages to this booklet. Then, stack them so that the title is on the front. Now punch 2 holes through the left side of the stack. Secure with ribbon, yarn, or metal brad fasteners.

#### Questions 10-13

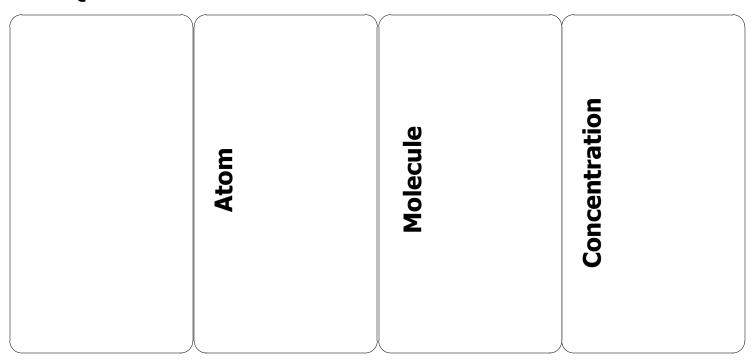
Cut out along the outer black line edges of the booklet. Then, fold along the horizontal line, so that the questions are on the outside. Then, cut along the vertical lines on the front cover (page with the questions) so that you now have "flaps" under which to write your answers.

#### Question 14

Cut out along the outer black line edges of booklet and the square inside label. Fold the booklet along its center line, keeping the title on the outside. Now glue the square label inside the booklet.

# **Study Guide Booklet Templates**

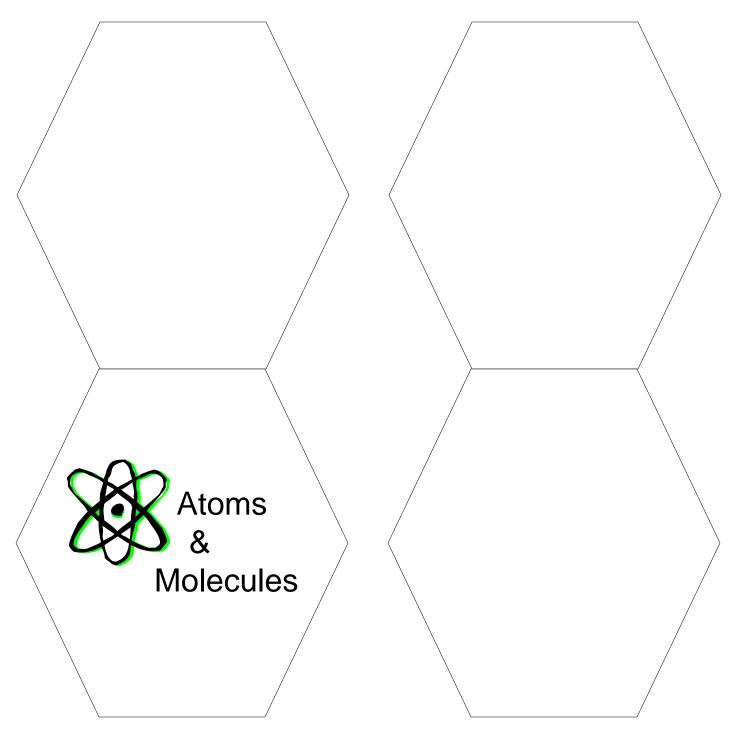
# Question #1a-c





# **Study Guide Booklet Templates**

Questions #2-5 (cont. on next pg)



Physical Science 1<sup>st</sup> Ed – Module 1 - Lapbook Pages – Booklet Inst & Templates

# **Study Guide Booklet Templates**

Fifty grams of a carbon disulfide can be broken down into 42.1 grams of sulfur and 7.9 grams of carbon. Is carbon disulfide made up of atoms or molecules?

If you put iron near a magnet, the iron will be attracted to the magnet.
Rust is made up of molecules that contain iron atoms, oxygen atoms and hydrogen atoms.
Rust is not attracted to a magnet. If rust contains iron atoms, and iron is attracted to a magnet, why isn't rust attracted to a magnet?

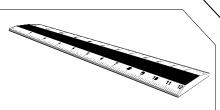
A statue is made out of copper and displayed outside.
After many years, what color will the statue be?

Have scientists actually seen atoms?

Physical Science 2<sup>nd</sup> Ed – Module 1 - Lapbook Pages – Booklet Inst & Templates

# Study Guide Booklet Templates

**Questions #6-9** 



The Metric System & Manipulating Units

Give the numerical meaning for these prefixes:

centi

milli

kilo

If you wanted to measure an object's mass, what metric unit would you use?

What English unit would you use?

If you wanted to measure an object's volume, what metric unit would you use?

What English unit would you use?

If you wanted to measure an object's length, what metric unit would you use?

What English unit would you use?

# **Study Guide Booklet Templates**

## **Questions #10-13**



How man centimeters are in 1.3 meters?

If a person has a mass of 75 kg, what is his or her mass in grams?

How many liters of milk are in 0.500 gallons of milk? (1 gal – 3.78 L)

A meterstick is 100.0 centimeters long. How long is it in inches? (1in = 2.54 cm)

# **Study Guide Booklet Templates**

#### **Question #14**

Thus, there are many environmental initiatives to lower the amount of ozone in the air. One way you can make ozone, however, is by baking bread. The nice smell you associate with baking bread is actually due, in part, to ozone. If ozone is poisonous, why is baking bread not considered a

Ozone is a poisonous gas that can build up in the air in dense cities...



# The following section is:

# Physical Science 1<sup>st</sup> Edition Module 1

Study Guide Lapbook
Background Page
(print as many as needed)

**Module #1: The Basics** 

# **Study Guide Lapbook**













# The following section is:

# Physical Science 1<sup>st</sup> Edition Module 1

Lab Reports (partially completed)

\*\*Designed to be printed double-sided, but may be printed single-sided. Some lab reports have more than 2 pages, so be aware when printing.

# **Exploring Creation With Physical Science 1<sup>st</sup> Edition**

# Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Name:			
Supplies:				
<ul><li>* Small, clear glass</li><li>* A 9-volt battery</li><li>* Scissors</li></ul>	* Baking Soda * Tap water * Two 9-inch pieces of insulated wire * Some tape			
Introduction:				
Atoms and molecules make up everything that surrounds us. Individually, they				

are simply too small to see. However, you can distinguish between different kinds of atoms and different kinds of molecules by examining the substances they make up, as well as how those substances change. In this experiment, we will observe molecules changing into atoms and atoms changing into molecules. By observing these changes, you will learn about the difference between atoms and molecules.

#### **Procedure:**

- 1. Fill you small glass 3/4 full of tap water.
- 2. Add a teaspoon of baking soda and stir vigorously.
- 3. Use your scissors to strip about a quarter inch of insulation off both ends of each wire. The best way to do this is described on page 2 of your book. Make sure there is at least a quarter inch of bare wire sticking out of both ends of wire.
- 4. Once you have stripped the insulation off both ends of each wire, connect the end of one wire to one of the two terminals on the battery. Do this by laying the wire over the terminal and then pressing it down. Secure it to the terminal with a piece of tape. It need not look pretty, but the bare wire needs to be solidly touching one terminal and not in contact with the other terminal.
- 5. Repeat step 4 with the other wire and the other battery terminal. Now you have the two wires attached to the battery, one at each terminal. Do not allow the bare ends of these wires to touch each other!
- 6. Now immerse the wires in the baking soda/water solution that is in the small glass so that the bare end of each wire is completely submerged...

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# **Exploring Creation With Physical Science 2<sup>nd</sup> Edition**

# Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Nai	ne:
Date:	Nai	ne:

#### Procedure...continued

It doesn't really matter how much of the insulated portion of the wire is immersed; just make sure that the entire bare end of each wire is fully submerged. In the end, your experiment should look something like the diagram on page 3 of your book.

- 7. Look at the bare ends of the wires as they are submerged in the baking soda/ water solution. What do you see? Well, if you set everything up right, you should see bubbles coming from both ends. If you don't see bubbles, the most likely problem is that you do not have good contact between the wires and the battery terminals. Try pressing the ends of the wire hard against the terminals they are taped to. If you then see bubbles coming from the submerged ends of the wire, then you know that electrical contact is your problem. If not, your battery might be dead. Try another one.
- 8. Once you get things working, spend some time observing what's going on. Notice that bubbles are forming on both wires. That's an important point that should be written in your laboratory notebook.
- 9. Allow the experiment to run for about 10 minutes. After that time, pull the wires out of the solution and look at the bare ends. What do you see? Well, one of the wires should really look no very different from when you started. What about the end of the other wire? It should now be a different color. What color is it? Write that color down in your notebook.
- 10. If you really let the experiment run for 10 minutes, it's very possible that your solution became slightly colored. Write in your notebook whether or not that happened and what color, if any, the solution became.
- 11. Looking at the wire that changed color, trace it back to the battery and determine the terminal (positive or negative) it was attached to. Write that in your laboratory notebook as well.
- 12. Clean up: Disconnect the wires from the battery, discard the solution, and wash the glass thoroughly. Put everything away.

# **Exploring Creation With Physical Science 1<sup>st</sup> Edition**

# Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Name:
Observations:	
Diagram:	
C	
Summary:	

# **Exploring Creation With Physical Science 1<sup>st</sup> Edition**

#### Lab Report Experiment # 1.2 Cubits and Fingers

Date:	Name:	-
Supplies:		
* A long piece of string * A person to help you * A pencil	* Scissors * A large table top * Some cellophane tape	
Introduction:		

In the Old Testament, a measurement unit for length called the cubit was used. You can find a reference to it in Genesis 6:15, for example, where God tells Noah the dimensions of the ark. Back then, a cubit was defined as the length from a man's elbow to the tip of his outstretched middle finger. There was also a smaller unit of length measurement called the finger. It was defined as the distance from the last knuckle on a man's index finger to the tip of his index finger. You should immediately see a drawback of this measuring. After all, arm length and finger length changes from man to man. As a result, the cubit that one man used was different than the cubit another man used. The same can be said for the finger. Nowadays, we use precise definitions for our measuring units so that they are the same all over the world. No matter where you go, a meter is a meter. That's not the way it used to be! In this experiment, you will make your own measuring devices for the cubit and the finger, and then you will get some practice converting between these measurement units.

#### **Procedure:**

- 1. Hold your arm so that the elbow is bent but the rest of your arm stretches out horizontally. Open your palm so that your fingers stretch out in the same direction. Have the person helping you hold the end of the string at your elbow.
- 2. Have your helper stretch the string tightly from your elbow to the tip of your middle finger, and then have him or her cut it so that you have a length of string which runs from your elbow to the tip of your middle finger. This is your cubit.

Continued...next page

### Lab Report Experiment # 1.2 Cubits and Fingers

Date:	 Name:	

#### Procedure...continued

- 3. Next, point your index finger straight out and have your helper stretch another piece of string so that it stretches from your last knuckle (the one nearest your fingernail) to the tip of your index finger. Have your helper cut the string so that it runs the length from your last knuckle to the tip of your index finger (not your fingernail). The string should be less than an inch long. This is your measurement for the "finger" unit.
- 4. Take the string that represents your cubit and tape it down to the table top so that it is stretched out to its full length.
- 5. Now, take the string that represents your finger and measure how many of those strings are in your cubit string. You can do this simply starting at the beginning of your cubit string and stretching your finger down next to it. Use your pencil to mark where the end of the finger string is on the cubit string. Now pick up the finger string and repeat the process, this time starting at the mark you made. Count the number of times you did this, and that will tell you how many fingers are in a cubit. Most likely, this will not be a whole number. Try to estimate the fraction of the finger string it took to reach the end of the cubit string on your last measurement. In other words, if it took 18 finger strings to reach the end of your cubit string, but the cubit string only covered 1/3 of the 18<sup>th</sup> finger string, then it really took 17.33 fingers to make a cubit.
- 6. Record the number of finger strings (including the decimal) it took to reach the end of your cubit string. Now you know the number of fingers in one cubit.

Continued on next page...

#### Lab Report Experiment # 1.2 Cubits and Fingers

Date:	 Name: _	

#### **Procedure Continued...**

- 7. Unfasten your cubit string from the table top and measure the length of the table top in cubits. Do this the same way you measured the cubit before, laying the string end-to-end until you reach the end of the tabletop. Once again, if the end of the tabletop only covers a portion of the last cubit string in your measurement, try to estimate the fraction of a cubit that it covered. Record the length of the tabletop (including the decimal) in cubits.
- 8. Now repeat that measurement, this time using your finger string instead.
- 9. Do the same thing with the width of the tabletop, measuring it in both cubits and fingers.
- 10. Now, take your measurement for the length of the table top in cubits and convert it into fingers using the number of fingers in a cubit you determined in step 5. Compare your converted length in fingers to the number of fingers you actually measured. If you did the conversion correctly, the answers should be similar. They won't be exactly the same because of the inaccuracies in your measurements. Nevertheless, they should be close. If they aren't anywhere close to each other, you probably did the conversion wrong. Check the example solution for this experiment that appears after the answers to the "on your own" problems. This should tell you how to do the conversion.
- 11. Do the same thing for your measurement of table width; take your measured width in cubits and convert it to fingers. Then compare your answer to the measured length in fingers to check the validity of your conversion. Once again, the numbers should be close.

Date:	Name:
Observations:	
Diagram:	
Summary:	

### Lab Report Experiment # 1.3 Concentration

Date:	Name:	
Supplies:		
* Vinegar * Measuring cups	* 6 TUMS® tablets * 3 large glasses	* Water * Spoon
Introduction:		
Vinegar is a weak acid, a kind of substance you will learn a lot more about when		

#### **Procedure:**

1. Arrange your three glasses on a table or counter top. Put 1 cup of vinegar in the first glass, one-half cup of vinegar in the second glass, and one-fourth cup in the third.

you take chemistry. TUMS® are antacid tablets, designed to neutralize acid.

Thus, when TUMS® are added to vinegar, a chemical reaction occurs. The TUMS® tablet disappears as it neutralizes the vinegar. While this happens, gas (carbon

2. Place a TUMS® tablet in each glass.

dioxide) bubbles off the tablet.

- 3. Observe what's going on in each glass. Note in your laboratory notebook any differences you see between what's going on in the glasses. If you don't see any differences, note that as well.
- 4. After you have finished observing the experiment, pour out the contents of each glass and rinse the glasses thoroughly.
- 5. Dry the glasses and set them back on the counter or table top.
- 6. Put 1 cup of vinegar in the first glass, one-half cup of vinegar in the second glass, and one-fourth cup of vinegar in the third glass.
- 7. Pour 1 cup of water in the first glass, one and one-half of a cup of water in the second glass, and one and three-quarters of a cup of water in the third glass, so that each glass has a total of 2 cups of liquid in it.
- 8. Stir the contents of each glass thoroughly.
- 9. Now place a single TUMS® tablet in each glass.
- 10. Observe what's going on in each glass. Record in your lab notebook what you see. Note the differences between what's going on in the glasses.

## Lab Report Experiment # 1.3 Concentration

Date:	Name:
Observations:	
Diagram:	
Summary:	



### The following section is:

### Physical Science 1<sup>st</sup> Edition Module 1

Lab Reports (blank)

\*\*Designed to be printed double-sided, but may be printed single-sided. Some lab reports have more than 2 pages, so be aware when printing.

#### Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Name:
Supplies:	
Introduction:	
Data and data	
Procedure:	

## Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Name:	
Procedurecontinu	ıed	

## Lab Report Experiment # 1.1 Atoms and Molecules

Date:	Name:
Observations:	
Diagram:	
Diagram	
Summary:	

Date:	Name:
Supplies:	
Introduction:	
Procedure:	

Date:	Name:
Procedurecontinued	

Date: Name:	
Procedurecontinued	

Date:	Name:
Observations:	
Diagram:	
Diagram	
Summary:	

## Lab Report Experiment # 1.3 Concentration

Date:	Name:
Supplies:	
Introduction:	
Procedure:	

### Lab Report Experiment # 1.3 Concentration

Name: