elementalscience

Homeschool Science with a classical bent

2011-2012 Catalog

A Word from the Author

Dear Reader,

Hi! I am a homeschooling mom, with several years of teaching experience. I also hold a BS in Biochemistry from Virginia Tech. As I was researching curriculum for my own daughter, I felt there was a void in homeschooling science curriculum. I felt there were no affordable and interesting lesson plans that would instill a love of science while teaching my daughter the basic facts of that area of science. It was out of this need that I wrote the programs of Elemental Science. It is my plan to complete the series by offering plans for all three stages of the Trivium (grammar, logic and rhetoric) as well as plans for your kindergartner. I am committed to offering excellent materials at reasonable prices to help you get science done! It is my hope that Elemental Science will be a welcome addition to your homeschooling adventure.

Blessings,
Paige Hudson

What's Inside

Welcome

Elemental Science offers science curriculum with a classical bent. Each one of our programs has been written with you in mind. Our teacher's guides lay out 36 weeks of plans for you so that you can take the time to actually do science. Our student books contain all the sheets your student will need to create a beautiful notebook full of lasting memories. Each level is written with the goal of making science fun and accessible for you and your student!

Not sure what you're looking for?

Our programs are divided into several levels...

- Early Years-These programs are meant for your preschooler .
- Grammar Stage-These programs are meant for your 1st through 4th grader.
- Logic Stage-These programs are meant for your 5th through 8th grader.
- Rhetoric Stage (yet to come)-These programs will be for your high school student.

With the exception of our Early Years programs, which are general overviews of science, each level is further divided into scientific disciplines...

- Biology-These programs study the science related to animals, the human body and plants.
- Earth Science & Astronomy-These programs study the science related to the Earth, rocks, planets and stars.
- Chemistry-These programs study the principles of chemistry.
- Physics-These programs study the principles of physics.

Key Features of our programs

Each of our programs...

- Have weekly experiments that coordinate with what you are studying
- Use living books for your reading assignments
- Have a coordinated and customized student book that contains all the sheets and drawings you need for the year
- Include plans for ongoing projects and additional activities to enhance your studies

Plus, all our teacher's guides contain both a 2 day and 5 day schedule, so you can choose how many days a week you do science. Our grammar stage series includes quizzes and our logic stage series includes tests that you can use to assess what your students are learning.

The Elemental Science Story

Elemental Science began when I was researching programs for my daughter to use for first grade. In my research I was unable to find a program that was affordable, fit with the classical education model and was fun to do. So, I began to write my own program.

One day, in early 2008, as I was busily working on the program my husband asked me what I was doing.

"I'm writing a science program for our daughter's first grade year," I said.

He replied, "That seems like an awful lot of work for one student. Why don't you just buy a program?"

I politely informed him, "There's nothing out there that fits what I want." I then proceeded to list off all my criteria and the programs I researched including why they didn't fit.

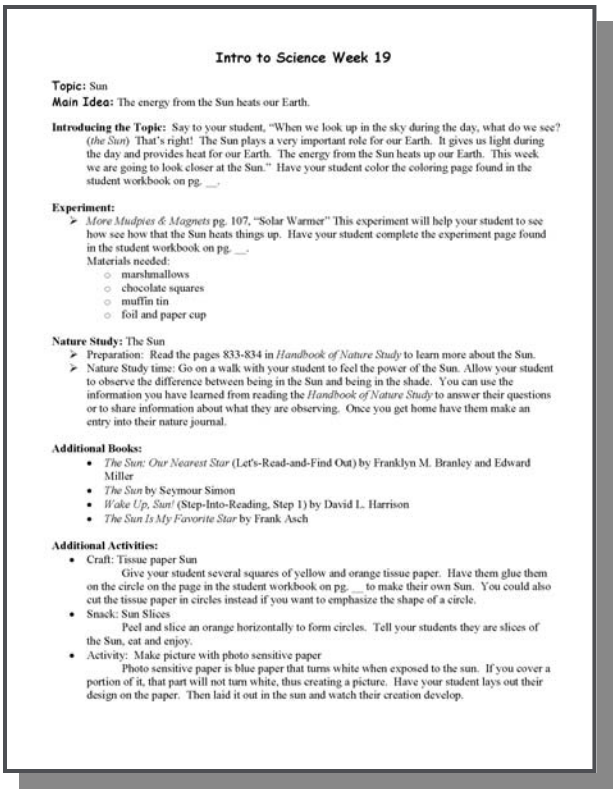
"Well, if you couldn't find what you wanted, don't you think others can't find it either? You should try to sell it," he said. That day the idea for Elemental Science was born.

We started small. At first you couldn't even purchase the program from our website! But over time, our product line grew and we streamlined the ordering process making it easier for our customers. We've remained focused on providing high quality science materials at affordable prices, so that you can get science done!

As we look forward to the future, we plan on expanding our product line to contain programs for preschool all the way up to your high schooler. We also look forward to adding additional options to our main product line. We plan to continue to update our current programs as needed. Most of all, we are committed to providing you with the same type of customer service we would expect to receive.

A Look Inside Our Early Years Teacher's Guides

Helping you introduce science to your student!



Intro to Science Week 19

Topic: Sun
Main Idea: The energy from the Sun heats our Earth.

Introducing the Topic: Say to your student, "When we look up in the sky during the day, what do we see? (*the Sun*) That's right! The Sun plays a very important role for our Earth. It gives us light during the day and provides heat for our Earth. The energy from the Sun heats up our Earth. This week we are going to look closer at the Sun." Have your student color the coloring page found in the student workbook on pg. __.

Experiment:
- *More Mudpies & Magnets* pg. 107, "Solar Warmer" This experiment will help your student to see how see how that the Sun heats things up. Have your student complete the experiment page found in the student workbook on pg. __.
  Materials needed:
  - marshmallows
  - chocolate squares
  - muffin tin
  - foil and paper cup

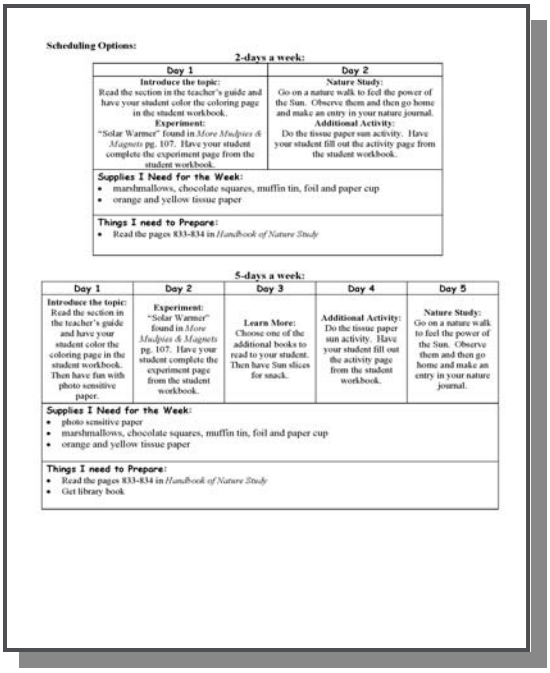
Nature Study: The Sun
- Preparation: Read the pages 833-834 in *Handbook of Nature Study* to learn more about the Sun.
- Nature Study time: Go on a walk with your student to feel the power of the Sun. Allow your student to observe the difference between being in the Sun and being in the shade. You can use the information you have learned from reading the *Handbook of Nature Study* to answer their questions or to share information about what they are observing. Once you get home have them make an entry into their nature journal.

Additional Books:
- *The Sun: Our Nearest Star* (Let's-Read-and-Find Out) by Franklyn M. Branley and Edward Miller
- *The Sun* by Seymour Simon
- *Wake Up, Sun!* (Step-Into-Reading, Step 1) by David L. Harrison
- *The Sun Is My Favorite Star* by Frank Asch

Additional Activities:
- Craft: Tissue paper Sun
  Give your student several squares of yellow and orange tissue paper. Have them glue them on the circle on the page in the student workbook on pg. __ to make their own Sun. You could also cut the tissue paper in circles instead if you want to emphasize the shape of a circle.
- Snack: Sun Slices
  Peel and slice an orange horizontally to form circles. Tell your students they are slices of the Sun, eat and enjoy.
- Activity: Make picture with photo sensitive paper
  Photo sensitive paper is blue paper that turns white when exposed to the sun. If you cover a portion of it, that part will not turn white, thus creating a picture. Have your student lays out their design on the paper. Then laid it out in the sun and watch their creation develop.

Each week your plans will include a weekly topic and a script for you to use to introduce that topic. The plans also include weekly experiments and nature study plans. There is a list of additional books for you to use when you go to the library. Every week also includes plans for two activities and snack ideas for you to use. The teacher's guide includes more than you will need to introduce your student to the world of science.

The teacher's guide also lays out two scheduling options to give you maximum flexibility when planning. There is a two day a week option and a five day a week option. You can use the pre-planned schedules or use the blank templates provided to create your own.



Scheduling Options:

2-days a week:

Day 1	Day 2
Introduce the topic: Read the section in the teacher's guide and have your student color the coloring page in the student workbook. **Experiment:** "Solar Warmer" found in *More Mudpies & Magnets* pg. 107. Have your student complete the experiment page from the student workbook.	**Nature Study:** Go on a nature walk to feel the power of the Sun. Observe them and then go home and make an entry in your nature journal. **Additional Activity:** Do the tissue paper sun activity. Have your student fill out the activity page from the student workbook.
Supplies I Need for the Week: • marshmallows, chocolate squares, muffin tin, foil and paper cup • orange and yellow tissue paper	
Things I need to Prepare: • Read the pages 833-834 in *Handbook of Nature Study*	

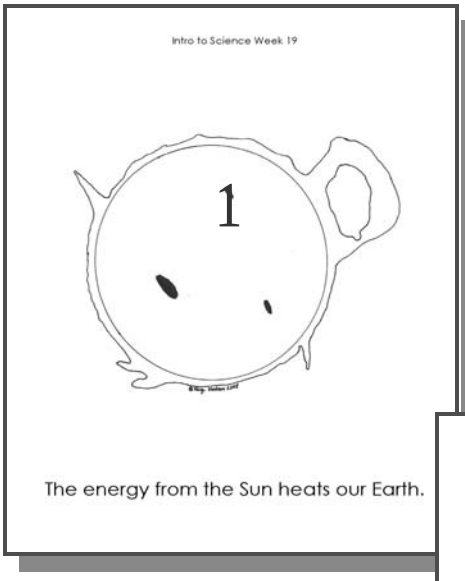
5-days a week:

Day 1	Day 2	Day 3	Day 4	Day 5
Introduce the topic: Read the section in the teacher's guide and have your student color the coloring page in the student workbook. Then have fun with photo sensitive paper.	**Experiment:** "Solar Warmer" found in *More Mudpies & Magnets* pg. 107. Have your student complete the experiment page from the student workbook.	**Learn More:** Choose one of the additional books to read to your student. Then have Sun slices for snack.	**Additional Activity:** Do the tissue paper sun activity. Have your student fill out the activity page from the student workbook.	**Nature Study:** Go on a nature walk to feel the power of the Sun. Observe them and then go home and make an entry in your nature journal.
Supplies I Need for the Week: • photo sensitive paper • marshmallows, chocolate squares, muffin tin, foil and paper cup • orange and yellow tissue paper				
Things I need to Prepare: • Read the pages 833-834 in *Handbook of Nature Study* • Get library book				

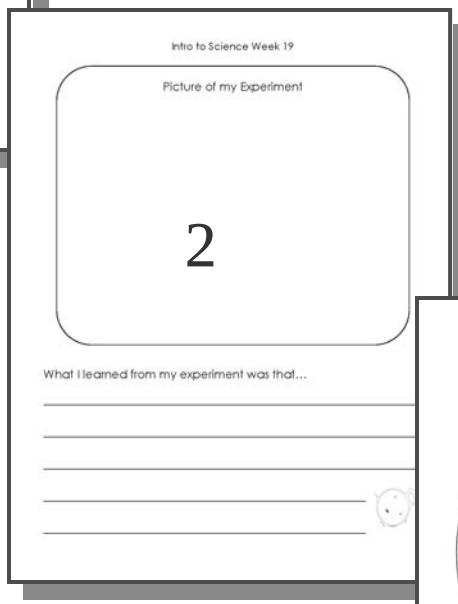
A Look At Our Early Years Student Pages

Uniquely designed to help you create lasting memories with your student!

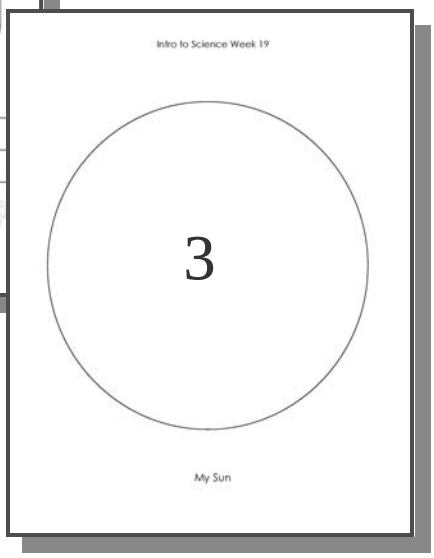
Our Student Pages include the pages you will need to complete the activities found in the teacher's guide.



1. There are coloring pages with the weekly theme.



2. There are experiment pages for you to use.



3. There are activity pages for you to use when completing the additional crafts.

Exploring Science

Coming in late Summer 2011!!

Exploring Science is a complete 36 week set of plans to introduce your early elementary student to the world of science. It is designed to be used with K4 or K5 students. It will contain weekly topic and introduction, experiments from *Science Play*, nature study and suggestions for additional books and crafts. Two scheduling options are included so that you can choose if you want to do science two days a week or five days a week. The student pages include all coloring pages, experiment sheets and activity pages that you will need for your student.

Exploring Science Experiment Kit

Coming Soon!

Intro to Science

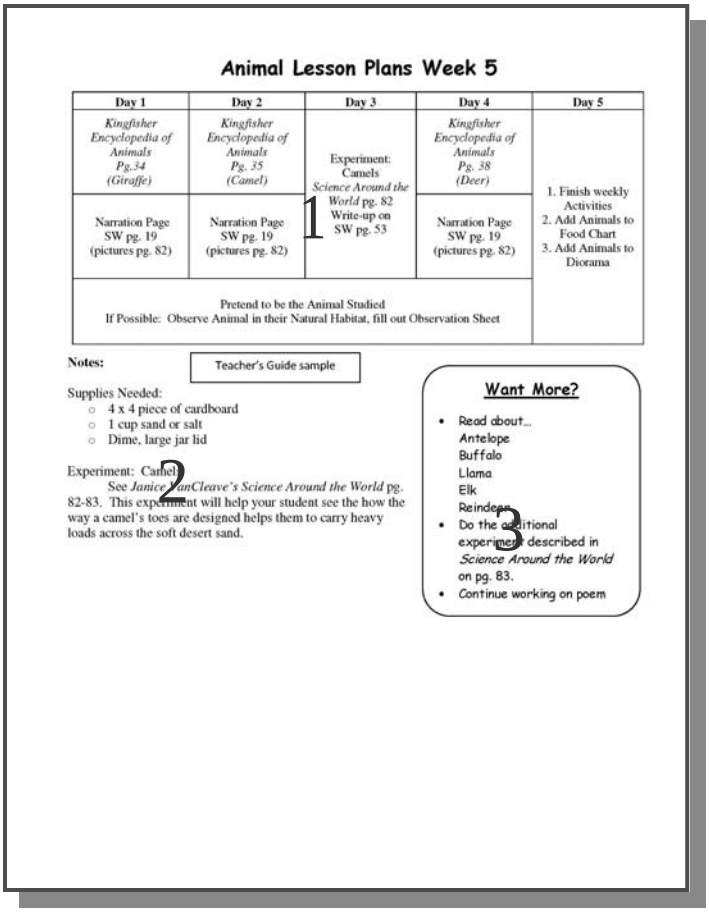
Intro to Science is a complete 36 week set of plans to introduce your early elementary student to the world of science. It is designed to be used with K and 1st graders, but the plans include ideas for adding in your older students. The plans include a weekly topic and introduction, experiments from *More Mudpies and Magnets*, nature study using *The Handbook of Nature Study* as a guide, plus additional books and activities. Two scheduling options are included so that you can choose if you want to do science two days a week or five days a week. The student pages include all coloring pages, experiment sheets and activity pages that you will need for your student.

Intro to Science Experiment Kit

This kit includes the hard to find materials and those materials that you need one of, but can only be bought in bulk. It does not include live animals, things that can be collected outdoors or common household items.

A Look Inside Our Grammar Stage Teacher's Guides

Plans to help you get science done!



Animal Lesson Plans Week 5

Day 1	Day 2	Day 3	Day 4	Day 5
Kingfisher Encyclopedia of Animals Pg.34 (Giraffe)	*Kingfisher Encyclopedia of Animals Pg. 35 (Camel)*	Experiment: Camels *Science Around the World* pg. 82 Write-up on SW pg. 53	*Kingfisher Encyclopedia of Animals Pg. 38 (Deer)*	1. Finish weekly Activities 2. Add Animals to Food Chart 3. Add Animals to Diorama
Narration Page SW pg. 19 (pictures pg. 82)	Narration Page SW pg. 19 (pictures pg. 82)		Narration Page SW pg. 19 (pictures pg. 82)	
Pretend to be the Animal Studied If Possible: Observe Animal in their Natural Habitat, fill out Observation Sheet				

Teacher's Guide sample

Notes:

Supplies Needed:
- 4 x 4 piece of cardboard
- 1 cup sand or salt
- Dime, large jar lid

Experiment: Camel
See *Janice VanCleave's Science Around the World* pg. 82-83. This experiment will help your student see the how the way a camel's toes are designed helps them to carry heavy loads across the soft desert sand.

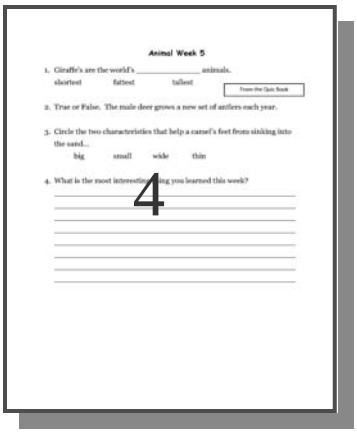
Want More?
- Read about...
  Antelope
  Buffalo
  Llama
  Elk
  Reindeer
- Do the additional experiment described in *Science Around the World* on pg. 83.
- Continue working on poem

1. Each week your readings and experiments are laid out for you. Your schedule includes page numbers for the scheduled books and for the student workbook, so that you know exactly what to read and what to do.

2. The Notes section includes important information for the week , vocabulary, supplies needed and an explanation of the experiments.

3. The Want More Box gives you suggestions of additional readings and activities that coordinate with what you are studying that week.

4. Our Teacher's Guide also includes quizzes for you to use to assess what your student is retaining.



Animal Week 5

1. Giraffe's are the world's _____ animals.
shortest fattest tallest

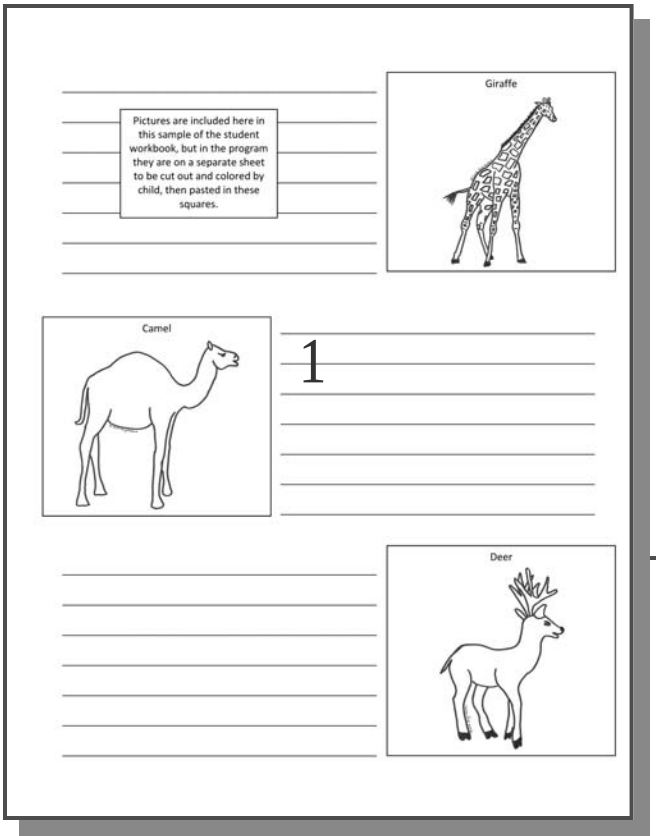
2. True or False. The male deer grows a new set of antlers each year.

3. Circle the two characteristics that help a camel's feet from sinking into the sand...
big small wide thin

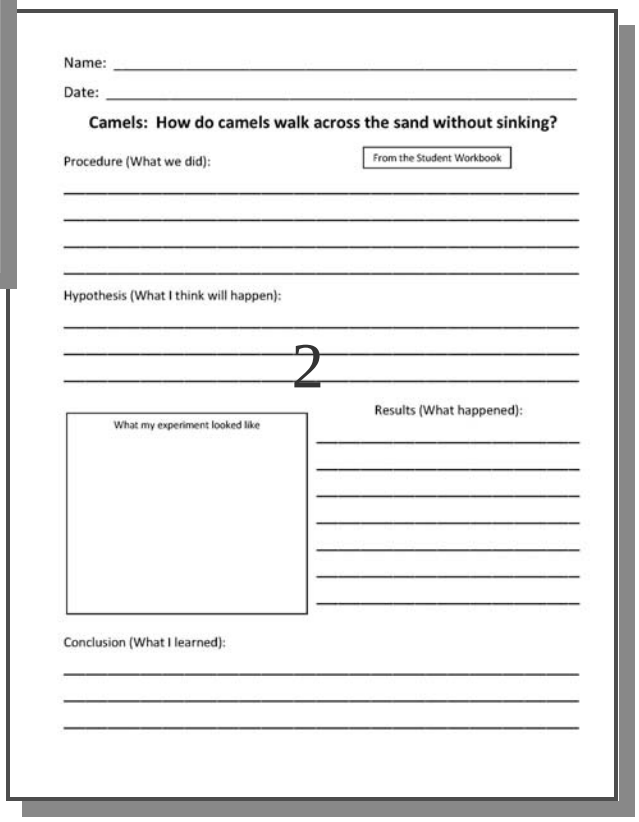
4. What is the most interesting thing you learned this week?

A Look Inside Our Grammar Stage Student Workbooks

Uniquely designed to help you create lasting memories with your student!

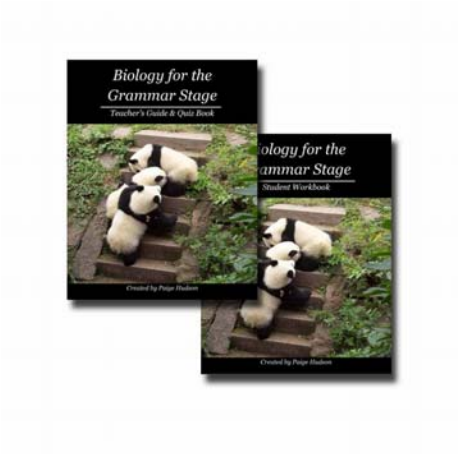


1. Our narration pages are customized for each program. All the pictures you need are included separately in case your budding artist wants to draw for themselves.



2. Every experiment that is to be written up also has it's own custom experiment page, complete with spaces for a picture of your work. The workbook also includes pages to use for the scheduled ongoing projects.

Biology for the Grammar Stage

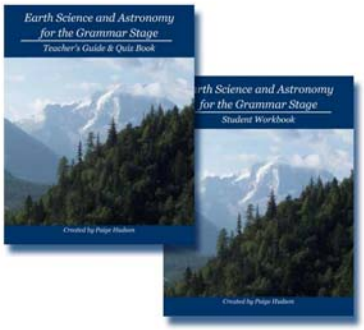


Biology for the Grammar Stage is a complete 36 week set of plans for biology. It is designed to be used with 1st and 2nd graders, but the plans include ideas to adjust the plans for use with your older students. The program lays out a 20 week study of animals using the *Kingfisher First Encyclopedia of Animals*, a 10 week study of the human body using the *DK First Human Body Encyclopedia* and a 6 week study of plants using *Plant Parts* from the Life of Plants Series. The teacher's guide includes a 2 day and 5 day schedule for reading assignments, vocabulary, experiments, narrations and ongoing projects. We have also created a student workbook to go along with the teacher's guide. The workbook includes all the pages you need for the ongoing projects, narrations and experiments that are planned, plus over 100 pictures for you to use with those pages. With all these tools at your fingertips you're sure to have an enjoyable year learning about animals, the human body and plants. Biology for the Grammar Stage is designed to be used in 1st or 2nd grade.

Biology for the Grammar Stage Experiment Kit

Coming Soon!

Earth Science & Astronomy for the Grammar Stage

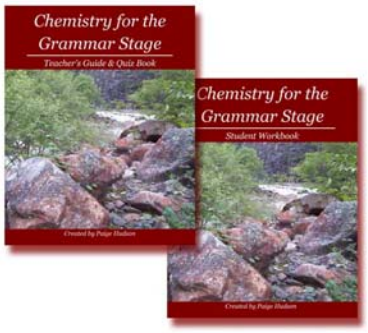


Earth Science & Astronomy for the Grammar Stage is a complete 36 week set of plans for earth science & astronomy. It is designed to be used with 2nd or 3rd graders, but the plans include ideas to adjust the plans for use with your older students. The plans lay out an 18 week study of earth science using the *Usborne First Encyclopedia of Our World* and an 18 week study of astronomy using the *Usborne First Encyclopedia of Space*. The plans include vocabulary, experiments, narrations, ongoing projects and additional readings from the *Kingfisher Young Knowledge Series*. The teacher's guide includes a 2 day and 5 day schedule for reading assignments, vocabulary, experiments, narrations and ongoing projects. We have also created a student workbook to go along with the teacher's guide. The workbook includes all the pages you need for the ongoing projects, narrations and experiments that are planned, plus 50 pictures for you to use with those pages. With all these tools at your fingertips you're sure to have an enjoyable year learning about our Earth, rocks and space.

Earth Science & Astronomy for the Grammar Stage Experiment Kit

Coming Soon!

Chemistry for the Grammar Stage

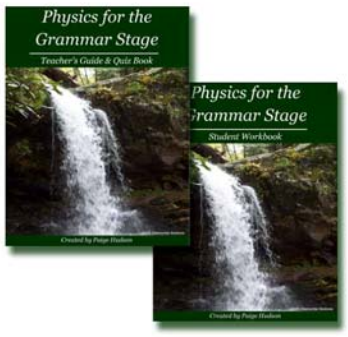


Chemistry for the Grammar Stage is a complete 36 week set of plans for chemistry. It is designed to be used with 3rd or 4th graders, but the plans include ideas to adjust the plans for use with your younger or older students. Chemistry for the Grammar stage takes you through a study of the periodic table using *Fizz, Bubble, Flash* followed by an adventure in experimentation using *Adventures in Atoms and Molecules Book 1.* The teacher's guide includes vocabulary, experiments, narrations (summary sheets), ongoing projects and additional readings from the Usborne Science Encyclopedia. It also includes a 2 day and 5 day schedule for reading assignments, vocabulary, experiments, narrations and ongoing projects. We have also created a student workbook to go along with the teacher's guide. The workbook includes all the pages you need for the ongoing projects, narrations and experiments that are planned, plus nearly 100 pictures for you to use with those pages. With all these tools at your fingertips you're sure to have an enjoyable year learning about the principles of chemistry.

Chemistry for the Grammar Stage Experiment Kit

Coming Soon!

Physics for the Grammar Stage



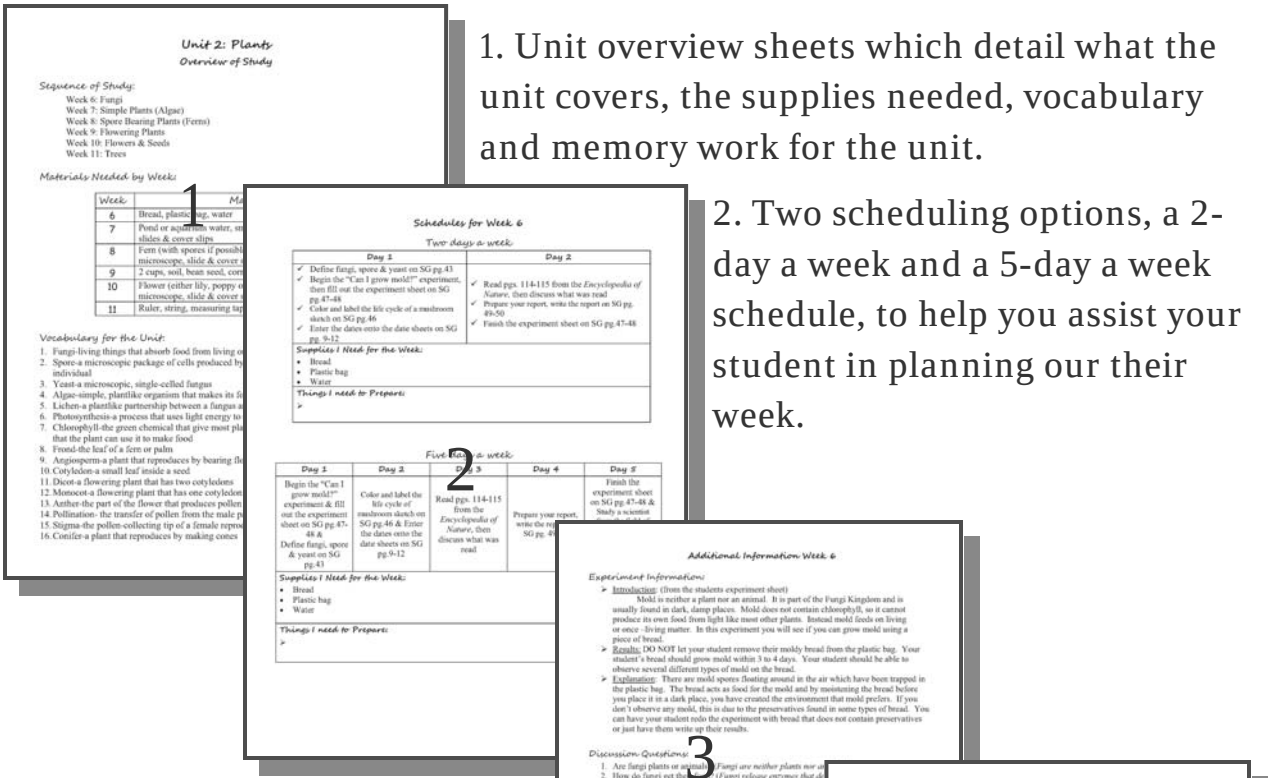
Physics for the Grammar Stage is a complete 36 week set of plans for principles of physics. It is designed to be used with 4th or 5th graders, but the plans include ideas to adjust the plans for use with your younger or older students. Physics for the Grammar Stage leads your student through an exploration of the principles of physics using *Gizmos & Gadgets* along with *Physics Experiments for Children*. Your student will study matter, friction, heat, gravity, sound, light, balance, spin, magnets and energy. You will also look at the lives of two scientists who impacted the world of physics. The teacher's guide includes a 5 day schedule for reading assignments, vocabulary, experiments, narrations and ongoing projects. We have also created a student workbook to go along with the teacher's guide. The workbook includes all the pages you need for the ongoing projects, narrations and experiments that are planned, plus nearly 60 pictures for you to use with those pages. With all these tools at your fingertips you're sure to have an enjoyable year learning about principles of physics.

Physics for the Grammar Stage Experiment Kit

Coming Soon!

A Look Inside Our Logic Stage Teacher's Guides

Giving you the tools you need to guide your middle school student through their study of a field of science.



1. Unit overview sheets which detail what the unit covers, the supplies needed, vocabulary and memory work for the unit.

2. Two scheduling options, a 2-day a week and a 5-day a week schedule, to help you assist your student in planning our their week.

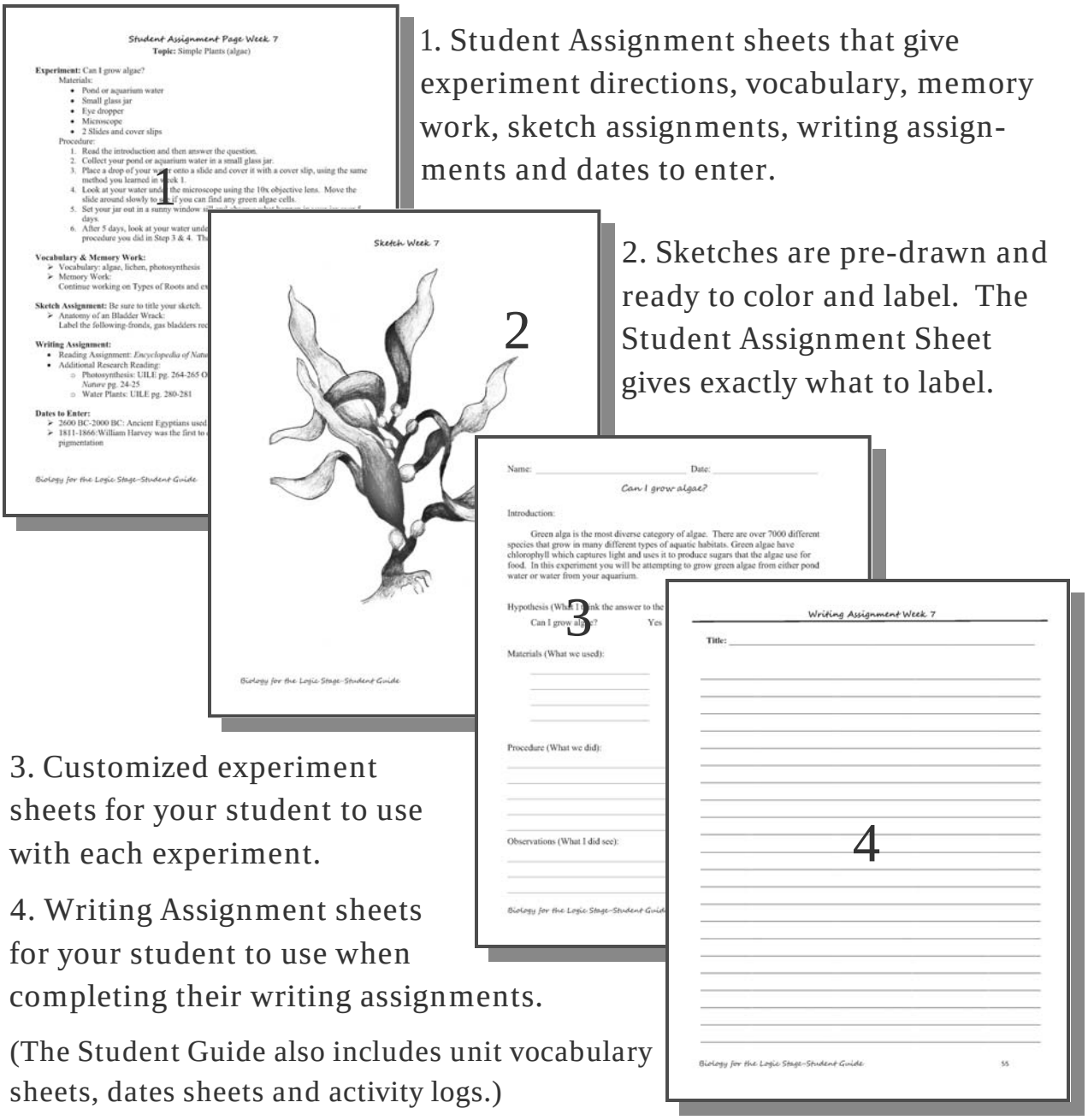
3. Additional information sheets contain the experiment explanations, discussion questions and Want More activities for you to use with your student.

4. Unit tests to help you assess what your student has learned.

(The teacher's guide also includes all the Student Assignment Sheets and answers to all the sketches!)

A Look Inside Our Logic Stage Student Guides

Intentionally planned to foster independence in your middle school student.



1. Student Assignment sheets that give experiment directions, vocabulary, memory work, sketch assignments, writing assignments and dates to enter.

2. Sketches are pre-drawn and ready to color and label. The Student Assignment Sheet gives exactly what to label.

3. Customized experiment sheets for your student to use with each experiment.

4. Writing Assignment sheets for your student to use when completing their writing assignments.

(The Student Guide also includes unit vocabulary sheets, dates sheets and activity logs.)

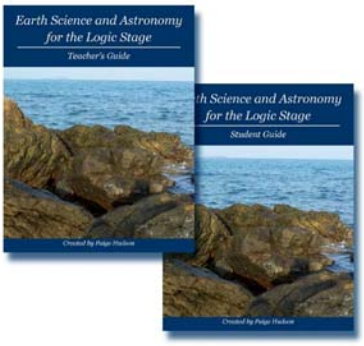
Biology for the Logic Stage

Biology for the Logic Stage is a 36 week study of plants, animal life, and the human body that focuses on digging deeper into the field of Biology. The program contains 6 units and is designed for your 5th-6th grader. Our logic stage plans help to foster independence in your student and do not require that the student has completed our grammar stage programs first. The student guide includes all student assignment sheets, sketches, experiment sheets, blank report pages, date sheets, vocabulary sheets and memory work that the student will need to complete the year. Each of the student assignment sheets contains the weekly topic to be studied, as well as dates to enter, what to label on the sketch, experiment directions, reading assignments, vocabulary and memory work. The reading assignments are taken from the *Encyclopedia of Nature* and the *Kingfisher Science Encyclopedia* as well as several optional research encyclopedias. The teacher's guide contains the student assignments sheets plus a 2 day and a 5 day schedule to help you plan out the year. The teacher's guide also gives tips on how to lead your student through the program, experiment explanations, discussion questions, answers for the student's work, and unit tests for you to use.

Biology for the Logic Stage Experiment Kit

Coming Soon!

Earth Science & Astronomy for the Logic Stage



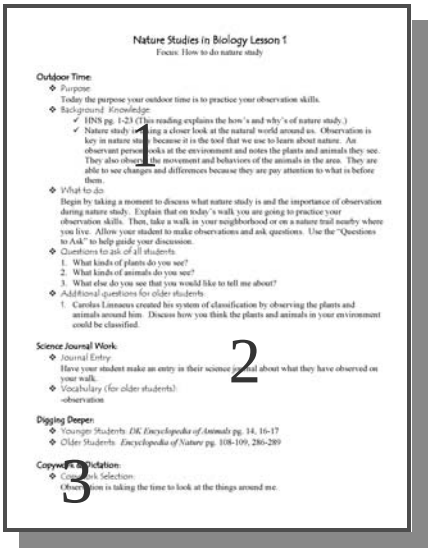
Coming in Spring of 2012!

Earth Science & Astronomy for the Grammar Stage is a complete 36 week study of earth science geology & astronomy. The program will contain 8units and will be designed for your 6th-7th grader. Our logic stage plans help to foster independence in your student and do not require that the student has completed our grammar stage programs first. The student guide includes all student assignment sheets, sketches, experiment sheets, blank report pages, date sheets, vocabulary sheets and memory work that the student will need to complete the year. Each of the student assignment sheets contains the weekly topic to be studied, as well as dates to enter, what to label on the sketch, experiment directions, reading assignments, vocabulary and memory work. The teacher's guide contains the student assignments sheets plus a 2 day and a 5 day schedule to help you plan out the year. The teacher's guide also gives tips on how to lead your student through the program, experiment explanations, discussion questions, answers for the student's work, and unit tests for you to use.

Nature Studies Series

A Look Inside the Teacher's Guide...

Helping you to guide your students to see science in the world around them!


Nature Studies in Biology Lesson 1

Focus: How to do nature study

Outdoor Time:

- Purpose:
  Today the purpose your outdoor time is to practice your observation skills.
- Background Knowledge:
  - ✓ HNN pg. 1-23 (This reading explains the how's and why's of nature study.)
  - ✓ Nature study is taking a closer look at the natural world around us. Observation is key in nature study because it is the tool that we use to learn about nature. An observant person looks at the environment and notes the plants and animals they see. They also observe the movement and behaviors of the animals in the area. They are able to see changes and differences because they are pay attention to what is before them.
- What to do:
  Begin by taking a moment to discuss what nature study is and the importance of observation during nature study. Explain that on today's walk you are going to practice your observation skills. Then, take a walk in your neighborhood or on a nature trail nearby where you live. Allow your student to make observations and ask questions. Use the "Questions to Ask" to help guide your discussion.
- Questions to ask of all students:
  1. What kinds of plants do you see?
  2. What kinds of animals do you see?
  3. What else do you see that you would like to tell me about?
- Additional questions for older students:
  1. Carolus Linnaeus created his system of classification by observing the plants and animals around him. Discuss how you think the plants and animals in your environment could be classified.

Science Journal Work:

- Journal Entry:
  Have your student make an entry in their science journal about what they have observed on your walk.
- Vocabulary (for older students):
  -observation

Digging Deeper:

- Younger Students: *DK Encyclopedia of Animals* pg. 14, 16-17
- Older Students: *Encyclopedia of Nature* pg. 108-109, 286-289

Copywork/Dictation:

- Copywork Selection:
  Observation is taking the time to look at the things around me.

1

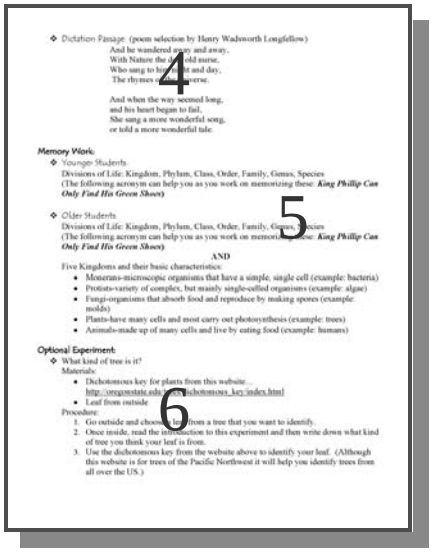
2

3

1. The Outdoor Time section lays out plans for your nature study time, include the purpose, background reading and knowledge for you, information on how to guide your nature walk and questions for you to ask along the way.

2. The Nature Journaling section includes suggestions for what to put in your student's nature journal.

3. The Digging Deeper section gives optional encyclopedia pages for your younger and older students to read.


- Dictation Passage: (poem selection by Henry Wadsworth Longfellow)

  And he wandered away and away,
  With Nature the old nurse,
  Who sang to him night and day,
  The rhymes of the universe.

  And when the way seemed long,
  and his heart began to fail,
  She sang a more wonderful song,
  or told a more wonderful tale.

Memory Work:

- Younger Students:
  Divisions of Life: Kingdom, Phylum, Class, Order, Family, Genus, Species
  (The following acronym can help you as you work on memorizing these: ***King Phillip Can Only Find His Green Shoes***)
- Older Students:
  Divisions of Life: Kingdom, Phylum, Class, Order, Family, Genus, Species
  (The following acronym can help you as you work on memorizing these: ***King Phillip Can Only Find His Green Shoes***)

AND

Five Kingdoms and their basic characteristics:

- Monerans-microscopic organisms that have a simple, single cell (example: bacteria)
- Protists-variety of complex, but mainly single-celled organisms (example: algae)
- Fungi-organisms that absorb food and reproduce by making spores (example: molds)
- Plants-have many cells and most carry out photosynthesis (example: trees)
- Animals-made up of many cells and live by eating food (example: humans)

Optional Experiment:

- What kind of tree is it?
  Materials:
  - Dichotomous key for plants from this website...
    http://oregonstate.edu/dept/ldplants/dichotomous_key/index.html
  - Leaf from outside
  Procedure:
  1. Go outside and choose a leaf from a tree that you want to identify.
  2. Once inside, read the introduction to this experiment and then write down what kind of tree you think your leaf is from.
  3. Use the dichotomous key from the website above to identify your leaf. (Although this website is for trees of the Pacific Northwest it will help you identify trees from all over the US.)

4

5

6

4. Copywork/Dictation: Each week you have a short copywork selection or a longer dictation passage to choose from.

5. Memory Work: Along the way there are memory work assignments for your younger and older students. Younger students will have fun poems, while older students will have lists of important facts to memorize.

6. Each week also includes an optional experiment that relates to the nature study time.

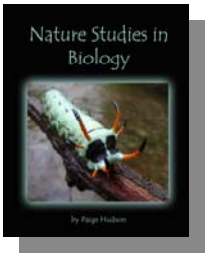
The guide also includes a glossary of terms as well as templates for your students to use when creating their nature journal. This program allow for maximum flexibility for families who enjoy nature or would like to combine all their students in one program.

Nature Studies Series

Titles in the Series....

Nature Studies in Biology: (Coming in Summer 2012)

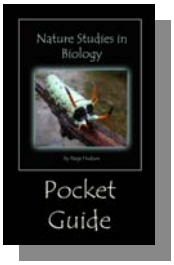
Nature Studies in Biology will lead you and your student through discovering the field of biology in nature.



Nature Studies in Biology Teacher's Guide:

The teacher's guide gives you a plan for weekly outdoor time, science journaling as well as copywork and dictation assignments. It also gives ideas for memory work, optional experiments and encyclopedia readings to help you dig deeper. The teacher's guide contains a 2 day a week and 5 day a week suggested schedule as well. It is designed to be used with grades K5-8.

Nature Studies in Biology Pocket Guide



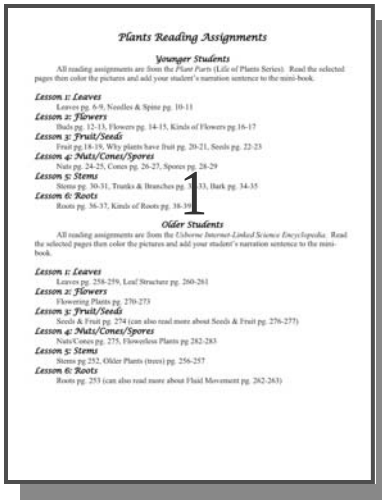
The pocket guide for Nature Studies in Biology is designed to be an easy to carry companion for your nature study time. It contains the purpose of your time, key terms, a bit of background knowledge, what to do during your outdoor time and questions for you to ask while on your walk. It is designed to work in conjunction with the Nature Studies in Biology Teacher's Guide.

My Nature Journal: Biology Edition

My Nature Journal contains all the sheets you will need for nature journaling, copywork or dictation and memory work. There are two editions of the journal, one for younger students (black cover) and one for older students (white cover). Both are designed to work in conjunction with the Nature Studies in Biology Teacher's Guide.

Lapbooking Series

A Look Inside the Guide...



Plants Reading Assignments

Younger Students

All reading assignments are from the *Plant Parts* (Life of Plants Series). Read the selected pages then color the pictures and add your student's narration sentence to the mini-book.

Lesson 1: Leaves
Leaves pg. 6-9, Needles & Spine pg. 10-11
Lesson 2: Flowers
Buds pg. 12-13, Flowers pg. 14-15, Kinds of Flowers pg.16-17
Lesson 3: Fruit/Seeds
Fruit pg.18-19, Why plants have fruit pg. 20-21, Seeds pg. 22-23
Lesson 4: Nuts/Cones/Spores
Nuts pg. 24-25, Cones pg. 26-27, Spores pg. 28-29
Lesson 5: Stems
Stems pg. 30-31, Trunks & Branches pg. 32-33, Bark pg. 34-35
Lesson 6: Roots
Roots pg. 36-37, Kinds of Roots pg. 38-39

Older Students

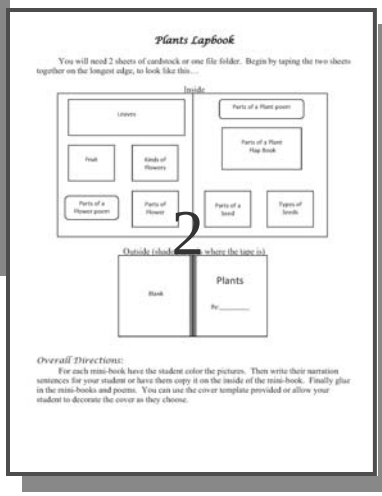
All reading assignments are from the *Usborne Internet-Linked Science Encyclopedia*. Read the selected pages then color the pictures and add your student's narration sentence to the mini-book.

Lesson 1: Leaves
Leaves pg. 258-259, Leaf Structure pg. 260-261
Lesson 2: Flowers
Flowering Plants pg. 270-273
Lesson 3: Fruit/Seeds
Seeds & Fruit pg. 274 (can also read more about Seeds & Fruit pg. 276-277)
Lesson 4: Nuts/Cones/Spores
Nuts/Cones pg. 275, Flowerless Plants pg 282-283
Lesson 5: Stems
Stems pg 252, Older Plants (trees) pg. 256-257
Lesson 6: Roots
Roots pg. 253 (can also read more about Fluid Movement pg. 262-263)

1

Lapbooking plans and templates for hands-on success!

1. Each lapbook has reading assignments for both younger and older students.



Plants Lapbook

You will need 2 sheets of cardstock or one file folder. Begin by taping the two sheets together on the longest edge, to look like this...

Inside

Leaves | Parts of a Plant poem | Parts of a Plant Flap Book | Fruit | Kinds of Flowers | Parts of a Flower poem | Parts of Flower | Parts of a Seed | Types of Seeds

Outside (shade where the tape is)

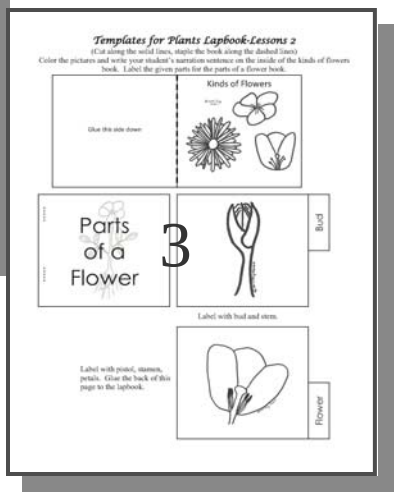
Blank | Plants | By:_____

Overall Directions:

For each mini-book have the student color the pictures. Then write their narration sentences for your student or have them copy it on the inside of the mini-book. Finally glue in the mini-books and poems. You can use the cover template provided or allow your student to decorate the cover as they choose.

2

2. Each lapbook has an overview sheet that gives the layout and basic directions for completion.



Templates for Plants Lapbook-Lessons 2

(Cut along the solid lines, staple the book along the dashed lines)

Color the pictures and write your student's narration sentence on the inside of the kinds of flowers book. Label the given parts for the parts of a flower book.

Kinds of Flowers

Glue this side down

Parts of a Flower

Bud

Label with bud and stem.

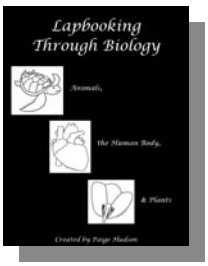
Label with pistol, stamen, petals. Glue the back of this page to the lapbook.

Flower

3

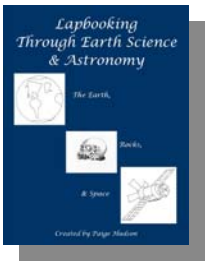
3. Template sheets are included for each lapbook. The sheets give detailed instructions for making each mini-book as well as the template for the mini-books.

Titles in the Series....



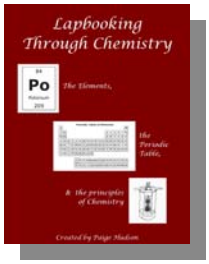
Lapbooking through Biology leads your student through a survey of animals, the human body and plants. It includes plans for 4 lapbooks along with reading assignments for your younger and older students. Lapbooking through Biology also includes all the templates and pictures that you need to complete the lapbooks. You can use this program on its own or you can use it alongside of Biology for the Grammar Stage. It is designed to be used with grades K-5.

Lapbooking Series



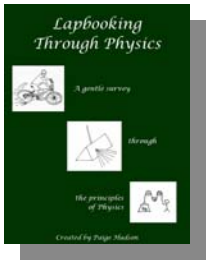
Coming in Summer of 2012!!

Lapbooking through Earth Science & Astronomy leads your student through a survey of the Earth, rocks, the planets and stars. It includes plans for 4 lapbooks along with reading assignments for your younger and older students. Lapbooking through Earth Science & Astronomy also includes all the templates and pictures that you need to complete the lapbooks. You can use this program on its own or you can use it alongside of Earth Science & Astronomy for the Grammar Stage. It is designed to be used with grades 1-6.



Lapbooking through Chemistry leads your student through a survey of the periodic table and the principles of chemistry. It includes plans for 3 lapbooks along with reading assignments for your younger and older students. Lapbooking through Chemistry also includes all the templates and pictures that you need to complete the lapbooks. You can use this program on its own or you can use it alongside of Chemistry for the Grammar Stage. It is designed to be used with grades 2-7.

Coming in Winter of 2011!!

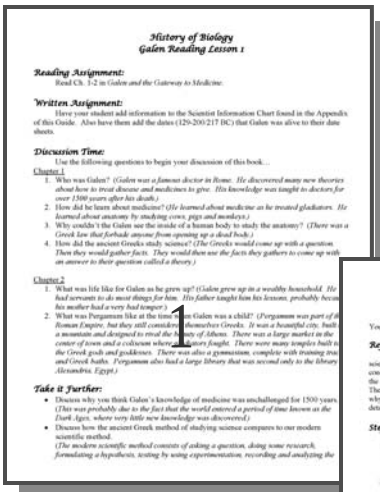


Lapbooking through Physics leads your student through a survey of the principles of physics. It includes plans for 12 lapbooks along with reading assignments for your younger and older students. Lapbooking through Physics also includes all the templates and pictures that you need to complete the lapbooks. You can use this program on its own or you can use it alongside of Physics for the Grammar Stage. It is designed to be used with grades 3-8.

History of... Series

A Look Inside the Guide...

Giving you the tools to lead your student to learn about the major scientists of a field of science!



History of Biology
Galen Reading Lesson 1

Reading Assignment:
Read Ch. 1-2 in *Galen and the Gateway to Medicine.*

Written Assignment:
Have your student add information to the Scientist Information Chart found in the Appendix of this Guide. Also have them add the dates (129-200/217 BC) that Galen was alive to their date sheets.

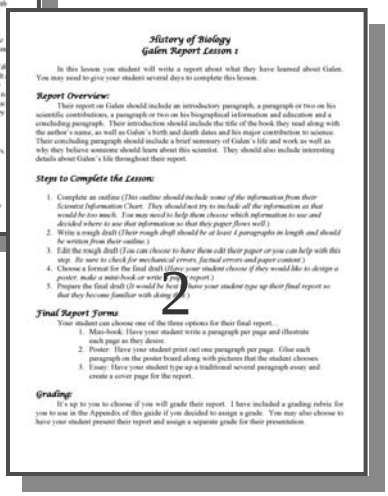
Discussion Time:
Use the following questions to begin your discussion of this book...

Chapter 1
1. Who was Galen? *(Galen was a famous doctor in Rome. He discovered many new theories about how to treat disease and medicines to give. His knowledge was taught to doctors for over 1500 years after his death.)*
2. How did he learn about medicine? *(He learned about medicine as he treated gladiators. He learned about anatomy by studying cows, pigs and monkeys.)*
3. Why couldn't the Galen see the inside of a human body to study the anatomy? *(There was a Greek law that forbade anyone from opening up a dead body.)*
4. How did the ancient Greeks study science? *(The Greeks would come up with a question. Then they would gather facts. They would then use the facts they gathers to come up with an answer to their question called a theory.)*

Chapter 2
1. What was life like for Galen as he grew up? *(Galen grew up in a wealthy household. He had servants to do most things for him. His father taught him his lessons, probably becau... his mother had a very bad temper.)*
2. What was Pergamum like at the time [illegible] Galen was a child? *(Pergamum was part of th... Roman Empire, but they still considered themselves Greeks. It was a beautiful city, built ... a mountain and designed to rival the history of Athens. There was a large market in the ... center of town and a coliseum where gladiators fought. There were many temples built to ... the Greek gods and goddesses. There was also a gymnasium, complete with training tra... and Greek baths. Pergamum also had a large library that was second only to the library ... Alexandria, Egypt.)*

Take it Further:
- Discuss why you think Galen's knowledge of medicine was unchallenged for 1500 years. *(This was probably due to the fact that the world entered a period of time known as the Dark Ages, where very little new knowledge was discovered.)*
- Discuss how the ancient Greek method of studying science compares to our modern scientific method.
(The modern scientific method consists of asking a question, doing some research, formulating a hypothesis, testing by using experimentation, recording and analyzing the

1



History of Biology
Galen Report Lesson 1

In this lesson you student will write a report about what they have learned about Galen. You may need to give your student several days to complete this lesson.

Report Overview:
Their report on Galen should include an introductory paragraph, a paragraph or two on his scientific contributions, a paragraph or two on his biographical information and education and a concluding paragraph. Their introduction should include the title of the book they read along with the author's name, as well as Galen's birth and death dates and his major contribution to science. Their concluding paragraph should include a brief summary of Galen's life and work as well as why they believe someone should learn about this scientist. They should also include interesting details about Galen's life throughout their report.

Steps to Complete the Lesson:
1. Complete an outline *(This outline should include some of the information from their Scientist Information Chart. They should not try to include all the information as that would be too much. You may need to help them choose which information to use and decided where to use that information so that they paper flows well.)*
2. Write a rough draft *(Their rough draft should be at least 4 paragraphs in length and should be written from their outline.)*
3. Edit the rough draft *(You can choose to have them edit their paper or you can help with this step. Be sure to check for mechanical errors, factual errors and paper content.)*
4. Choose a format for the final draft *(Have your student choose if they would like to design a poster, make a mini-book or write a typed report.)*
5. Prepare the final draft *(It would be best to have your student type up their final report so that they become familiar with doing so.)*

Final Report Forms
Your student can choose one of the three options for their final report...
1. Mini-book: Have your student write a paragraph per page and illustrate each page as they desire.
2. Poster: Have your student print out one paragraph per page. Glue each paragraph on the poster board along with pictures that the student chooses.
3. Essay: Have your student type up a traditional several paragraph essay and create a cover page for the report.

Grading:
It's up to you to choose if you will grade their report. I have included a grading rubric for you to use in the Appendix of this guide if you decided to assign a grade. You may also choose to have your student present their report and assign a separate grade for their presentation.

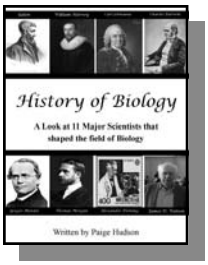
2

2. Report Lessons give 3 options for the student to use when writing their final report for a given unit.

The guide also includes any templates your student may need for writing and report assignments.

Titles in the Series....

History of Biology: (Coming in Winter 2011)



History of Biology leads your student through a brief history of the field of biology and then onto a survey of the some of the most important biologists that have lived. The guide includes reading assignments, discussion questions and written assignments. You can use this program on its own or you can use it alongside of Biology for the Logic Stage. It is designed to be used with grades 5-8.

2011-2012 Prices

EBook Information & Policy:

Currently each of our EBooks are offered as combo sets only. This includes the files for the Teacher's Guide, the Student Pages and a full color cover for the Student Pages (except our supplemental programs). EBooks are nonrefundable.

Printed Book Information & Policy:

All our printed books include media mail shipping. Books may be returned up to 35 days after purchase. They must be in new resalable condition to receive a refund. Return shipping is not included and a 30% restocking fee will be charged.

Early Years Plans:

eBook combo: $15 per program
Printed Book combo: $25.98 per program
Additional Student Pages: $11.99 when purchased with a printed combo
Teacher's Guide only: $17.99, Student Pages only: $17.99

Grammar Stage Plans:

eBook combo: $16.50 per program
Printed Book combo: $27.48 per program
Additional Student Workbook: $12.99 when purchased with a printed combo
Teacher's Guide only: $18.99, Student Workbook only: $18.99

Logic Stage Plans:

eBook combo: $25 per program
Printed Book combo: $39.99 per program
Additional Student Guide: $18.99 when purchased with a printed combo
Teacher's Guide only: $25.99, Student Guide only: $25.99

Supplemental Programs (eBooks only):

(all our supplemental eBooks include teacher instructions and all the student pages or templates needed to complete the program)
Lapbooking Series: $8.00 per program
History of Series: $12.00 per program

Visit www.elementalscience.com to make your purchase.

Typical Course of Study

All of our plans give suggestions on how to adapt the program for use with multiple grades. However, the following would be a typical course of study with Elemental Science.

Pre-School (K4)

Exploring Science

Pre-School (K5)

Intro to Science

First Grade

Biology for the Grammar Stage

Second Grade

Earth Science & Astronomy for the Grammar Stage

Third Grade

Chemistry for the Grammar Stage

Fourth Grade

Physics for the Grammar Stage

Fifth Grade

Biology for the Logic Stage

Sixth Grade

Earth Science & Astronomy for the Logic Stage

Seventh—Twelfth Grade

Logic Stage and Rhetoric Stage Plans to Come

All of the plans of Elemental Science stand alone and do not assume that you have completed our previous programs, although each year does increase in difficulty. You can begin the programs of Elemental Science at any point.

Elemental History

Adventures in America

Adventures in America includes 36 weeks of lesson plans for use with your kindergarten or early elementary student. Get ready for a year of adventure along with the brave men and women who built this country. From the Native Americans who first dwelt in the land, to the heroic Patriots who fought for liberty, to the pioneers who traveled from the towns and cities into the unknown, to legends about such "tall" heroes as Pecos Bill and John Henry, these stories will thrill and inspire your kindergarten or early elementary student.

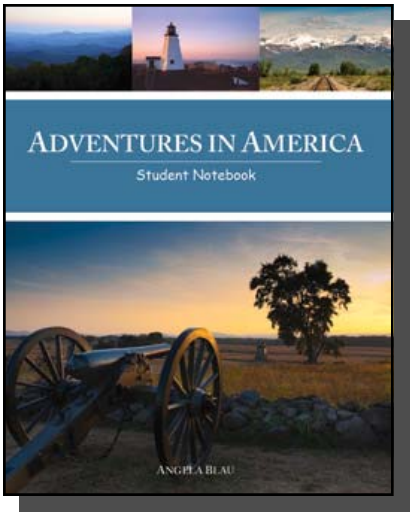
You may be planning to do a four year chronological history cycle beginning in first or second grade. However, you may not want to wait until your child is in third or fourth grade before they learn the stories of significant people in American history. This program will expose your student to these important people and their stories, and will provide a great foundation for more detailed studies in future years.

Teacher's Guide Includes:

- Easy to follow schedules for studying history 3 days a week
- 2 stories to be read from guide each week
- Guided study of all 50 states
- Scheduled Read Alouds
- Suggested readers and picture books
- Optional copywork
- Engaging hands-on crafts and activities

Student Notebook Includes:

- Weekly coloring pages relating to stories
- Narration pages
- Copywork pages
- Mapwork for states study



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Contact us at:
info@elementalscience.com