Lapbooking through...

Rocks and Fossils

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Lapbooking through Rocks and Fossils

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Lapbooking through Rocks and Fossils

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Introduction

Lapbooking through Rocks and Fossils is a unique and versatile program that leads you through a survey of rocks and fossils using a lapbook to document the journey. It is designed to be a gentle approach to homeschool science education based on the Unit Study method suggested in Success in Science: A Manual for Excellence in Science Education by Bradley and Paige Hudson. This study can be used as a stand-alone science program for K-2nd grade or in conjunction with another earth science program for an older student.

What is a lapbook?

Lapbooks are educational scrapbooks that fit into the lap of the student. Typically they are a collection of related mini-books on a certain subject that have been glued into a file folder for easy viewing, but they can also include pictures or projects that the students have completed. In the same way that notebooking does not require regurgitation of facts; lapbooking causes the students to interact with the materials instead of just responding to comprehension questions.

Lapbooks are extremely versatile because they can be used in conjunction with any subject the students are learning about. They are excellent tools to use with elementary students as a way of reinforcing what they are learning because this age group tends to prefer a more creative format of notebooking.

The heartbeat of the lapbook is the mini-books that are placed inside. Each of these booklets contains information on topics related to the main subject of the lapbook. They can be in a variety of shapes and sizes, but the cover should have a picture related to the subject as well as a title. The interior of each booklet should contain several sentences detailing what the students have learned about the topic in their own words. The mini-books will each pertain to different sub-topics of the main topic. In other words, for this lapbook your main topic is our planet and your related mini-books are on rocks, types of rocks, fossils, and more.

Lapbooks serve as beautiful scrapbooks that the students can continue to learn from for years to come, which makes them a beneficial addition to the students’ science education.

What is included in this program?

Lapbooking through Rocks and Fossils includes all of the basic components of elementary science education as explained in our book.

1. **Science-Oriented Books** – The elementary student is an empty bucket waiting to be filled with information and science-oriented books are a wonderful way to do that. These books can include appropriate children’s science encyclopedias, living books for science, and/or children’s non-fiction science books. In this program, the reading assignments and additional books scheduled in the lesson fulfill this component. The reading assignments are broken for you into two levels, younger students (K-2nd grade) and older students (3rd-5th grade).

2. **Notebooking** – The purpose of the notebooking component for elementary science education is to verify that the students have placed at least one piece of information into their knowledge bucket. You can use notebooking sheets, lapbooks, and/or vocabulary words to fulfill this requirement. This unit includes all the templates and pictures you will need to
complete a lapbook on plants as well as vocabulary words to coordinate with each lesson.

3. **Scientific Demonstrations or Observations** – Scientific demonstrations and observations are meant to spark the students’ enthusiasm for learning science, to work on their observation skills, and to demonstrate the principles of science for them. This component of elementary science education can contain scientific demonstrations, hands-on projects, and/or nature studies. The coordinating activities found in this guide fulfill this section of elementary science instruction.

If you would like to read more about the concepts introduced in the above points, check out *Success in Science: A Manual for Excellence in Science Education* and the following articles from Elemental Blogging.

- **What Are Living Books?** – This article clearly shares the difference between living books and encyclopedias, especially in the context of science.
  
  <http://elementalblogging.com/what-are-living-books/>

- **The Basics of Notebooking** – This article details the basic components of notebooking along with how a few suggestions on what notebooking can look like.
  
  <http://elementalblogging.com/the-basics-of-notebooking/>

- **Scientific Demonstrations vs. Experiments** – This article explains the difference between scientific demonstrations and experiments along with when and how to employ these methods.
  
  <http://elementalblogging.com/science-corner-scientific-demonstrations-vs-experiments/>

**How can I use this program?**

Each lesson in this program was designed to be completed over several days or up to one week. The lesson contains reading assignments from the selected books. You can choose to break these selections up over the several days or do them all at once. If you are using this program with younger students, read the selected pages to them. If you are using this program with older students, you can choose to have them read the assigned pages on their own or you can read the selected pages to them.

After you complete the reading assignment, have the students tell you what they have learned from the selection. This can simply be what they found to be the most interesting or something new that they have learned from the reading. You can choose to write the sentences for them or have them copy them into the mini-book. If you are using this program with older students, I recommend that you have them do all their own writing. Once the students have finished writing, have them color the related picture on the mini-book. Once the mini-book is complete, glue it into their lapbook using the overview sheet on pg. 7 as a guide.

At another time during the week, review the vocabulary with the students. You can have them memorize each of the definitions or just go over each of the words with the lesson before adding the card to the vocabulary pocket. I have also included a set of blank vocabulary cards to use with an older student in the Appendix on pp. 26-27. If you use the blank vocabulary cards, have the students look up the vocabulary words in the science encyclopedia of your choice or dictate the provided definition to them. Then, have them write the definition on the back of each card. I recommend that you print the blank vocabulary cards out on card stock for durability.
Finally, you can finish the week by reading to the students one of the related books from the additional book list. After you finishing reading, do an additional activity with the students. If you would like to record what they have learned, there are two template pages provided for you to use in the appendix of this book on pp. 24-25.

I have also included a possible schedule for each lesson to give you an idea of how to plan out each one. These schedules spread the assigned work for out over four days. If you choose to complete the program in this manner, this lapbook will take you six weeks to complete.

**Final Thoughts**

As the author and publisher of this curriculum, I encourage you to contact me with any questions or problems that you might have concerning *Lapbooking through Rocks and Fossils* at info@elementalscience.com. I will be more than happy to answer them as soon as I am able. I hope that you will enjoy creating memories using *Lapbooking through Rocks and Fossils*!
Lapbook Overview

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

---

Overall Directions

For each mini-book have the students color the pictures. Then, write the narration sentences for the students or have them copy the information into the inside of the mini-book. Finally, glue the mini-books and poems onto the lapbook. You can use the cover template provided or allow the students to decorate the cover as they choose.
Books and Materials List

Books Scheduled

The following books are what I used while planning the reading assignments for this curriculum:

Younger Students
- Basher Science Planet Earth
- National Geographic Rocks and Minerals

Older Students
- Discover Science Rocks & Fossils

However you could certainly use the encyclopedias you already have on hand or books from the library. Simply look up the topic assigned for the day, read about it and complete the section in your lapbook.

Additional Materials Needed

The following materials will be needed to complete the lapbook:
- 2 sheets of 8½ by 11 cardstock OR 1 file folder
- Colored pencils or crayons
- Markers for decorating the cover
- Glue stick
- Scissors
- Stapler

Additional materials will vary according to the activities you choose to do.

Overview of Study

- Lesson 1: Rocks and Minerals
- Lesson 2: Types of Rocks
- Lesson 3: Weathering
- Lesson 4: More on Rocks
- Lesson 5: Fossils
- Lesson 6: Types of Fossils
Lapbooking through Rocks and Fossils

Lessons
Lesson 1: Rocks and Minerals

Science-Oriented Books

Reading Assignments

Younger Students

- “Rocks” Basher Science Planet Earth pg. 24
- “Minerals” National Geographic Rocks and Minerals pp. 8-11

Older Students

- “What is a Rock?” Discover Science Rocks and Fossils pp. 6-7
- “Rough and Smooth” Discover Science Rocks and Fossils pp. 10-11

Additional Books from the Library

- Rocks: Hard, Soft, Smooth, and Rough by Natalie M. Rosinsky and Matthew John
- If You Find a Rock by Peggy Christian and Barbara Hirsch Lember
- Let’s Go Rock Collecting by Roma Gans and Holly Keller
- National Geographic Readers: Rocks and Minerals by Kathleen Weidner Zoehfeld
- Jump into Science: Rocks and Minerals by Steve Tomecek and Kyle Poling
- Caves (Nature in Action) by Stephen P. Kramer
- Caves (Landforms) by Cassie Mayer

Notebooking

Vocabulary

Have the students cut out and glue the vocabulary pocket on pg. T-10 into their lapbook. Then, have them cut out and add the following card to their vocabulary pocket.

- Cave – An underground room with walls made of rock. (Completed card on pg. T-10, Blank card on pg. 26)
- Mineral – A natural substance found in Earth’s crust that forms rocks. (Completed card on pg. T-11, Blank card on pg. 26)

Mini-book Assembly Instructions

1. Rocks and Minerals Shutterfold Book – Have the students complete the Rocks and Minerals shutterfold book. Have them cut out the booklet and color the cover. Next, have the students tell you what they have learned about rocks and minerals and write it inside the booklet. Then, have them staple the pages together and glue it into their lapbook. (pg. T-3)

Scientific Demonstrations or Observations

Coordinating Activity

- Minerals – Have the students make rock candy. You will need food coloring, glass jars, oven mitts, saucepans, spoons, pencils, paper, binder clips, cotton string, three cups of sugar. Begin by boiling about one cup water and add about two cups of sugar. Pour the water into a glass jar and then slowly stir in remaining sugar, about a teaspoon at a time. (Note—Be careful to not rush this step.) Continue stirring until the sugar no longer dissolves and starts to collect
at the bottom of the jar. Choose a color for your crystals and add a couple drops of food coloring. Tie one end of a piece of string around the middle of a pencil and tie a paper clip to the other end. Place the pencil over the jar so that the string hangs down and the paper clip almost touches the bottom of the jar. Allow the jar to sit someplace where it will be undisturbed. Check after about 24 hours, and you’ll see colorful crystals forming on the paper clip. Let the solution sit for several weeks and you will have some rock candy to eat!

**Possible Schedule**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Read the section on Rocks (or What is a Rock)</td>
<td>☐ Read the sections on Minerals and Spines (or Rough and Smooth)</td>
<td>☐ Complete the “Minerals” activity</td>
<td>☐ Go over the vocabulary words and add the cards to the vocabulary pocket</td>
</tr>
<tr>
<td>☐ Add a sentence or two about rocks to the Rocks and Minerals Shutterfold book</td>
<td>☐ Complete the Rocks and Minerals Shutterfold book with a sentence or two about minerals and add it to the lapbook</td>
<td>☐ Choose one or more of the additional books to read</td>
<td>☐ Choose one or more of the additional books to read</td>
</tr>
</tbody>
</table>

**Notes**
Lapbooking through Rocks and Fossils

Templates
Rocks and Fossils Lapbook Cover Page Template

Rocks and Fossils

By: ________________________________
Rocks and Minerals Shutterfold Book
Vocabulary Cards

Rocks and Fossils Vocabulary

Cave
An underground room with walls made of rock.

Fold each card in half and glue together before adding the card to the vocabulary pocket.