

HOW TO USE THIS BOOK

This book contains 24 lessons and six unit reviews. Each lesson and each unit review is designed to be completed in one week. If you teach science twice weekly, you'll need to allow for about 60 to 90 minutes each day. Of course, this will depend on the student and the number of outside resources used.

Each lesson consists of a **Teaching Time** and a **Hands-On Time**. I recommend doing each on a separate day.

Teaching Time

- As each new lesson is begun, the text is read. You may read it to your students or they may read it to themselves. In the case of very young students, you might read it on your own and then discuss the information at their level. They may enjoy completing a Coloring Page while listening to you.
- After this lesson is read, students should complete a “Daily Reading Sheet.”

To make the study complete, you will need to do a little more:

- First, review recent lessons, particularly as they apply to your newest lesson.

- Second, if you make flashcards as you go (with vocabulary words, lesson facts, Scripture verses, etc.), you will want to review those.
- Third, have your students list the vocabulary words (any in bold lettering in the lesson, plus any they listed on their Daily Reading Sheet) and define them in their science notebook.
- Last, you'll want to allow time for outside reading and picture perusing and researching topics of interest. I recommend having your students complete additional Daily Reading Sheets for their supplemental reading, even if they use just a few pages from a particular book. (It's quite acceptable to pick and choose pages and chapters to read rather than an entire book!) All completed forms and written work should be kept in their science notebook.

Hands-On Time

Most children love hands-on learning, and it helps keep science exciting for your children (and you!). Although Hands-On Time can be time consuming, try to also make time for a little review as you are working. The "Checking It Out" science experiment form will often be utilized on these days and should be completed and filed in the student's science notebook.

It can be tempting to eliminate these activities to save time; however, I strongly advise otherwise. Science can be so exciting, but it can also be dull. It all depends on how it is taught. Elementary science is about discovery and taking joy in the journey. Have fun with it!

Timeline Activity

Included at the beginning of each unit are timeline entries and dates. These can be used simply to add to your students' knowledge of events. However, I believe your students (and maybe yourself) will be better served by actually completing a timeline, adding information each unit. This activity will help them see major events, inventions, and scientists associated with the subject matter of each unit. The information listed will also give you and your students ideas for additional research. Wall-sized timelines are available from www.bright-ideaspress.com. We have utilized timeline activities throughout our homeschool studies and find them to be incredibly useful.

Coloring Pages

There is one Coloring Page per unit and all of these are provided again in the appendix section for your convenience. These may be photocopied. Children of all ages will enjoy these beautiful drawings. Some will even benefit from keeping their hands busy with markers or pencils while having lessons read aloud to them.

Unit Wrap-Up and Show What You Know!

The last event for each unit is a unit review and quiz. The “wrap-up” review gives students the opportunity to write a composition summarizing each lesson with the aid of the “Write About It!” worksheet and form (found in the appendix section). This form will help them think through and organize the unit material before they begin writing—all of which will reinforce the main points they studied in the unit. They are also encouraged to create a colorful and fun folderbook for each unit. (Folderbook instructions are simple and are included in the appendix section.)

The wrap-up quiz—“Show What You Know!”—can be used as a test or merely as a unit review; it’s your choice. I’ve made the scoring fun, using thousands of points instead of one hundred. These, too, can be copied for each student and filed in his or her science notebook.

Reproducibles

There are a number of forms in Appendix A that are available for reproducing, according to your needs. The course is designed to be easily used with several children of differing ages at the same time. If you do not have a home copier, make a trip to your favorite copy shop and reproduce several Daily Reading Sheets and Checking It Out forms (along with the Coloring Page, the Write About It! worksheet and form, and the Show What You Know! quiz for each unit). The first two forms mentioned are used frequently, so plan ahead. Is copying difficult for you? Make your own similar forms on the computer or simply use notebook paper. It’s the content—not the form—that counts!

Also in Appendix A are labeled and unlabeled versions of the labeled technical art that is in the lessons. When you’re at the copy shop, reproduce as many of the unlabeled versions as you’ll need for each unit; then have your students test themselves by filling in the labels without looking in the book. When done, they can easily check their labels against the book. This provides another activity to reinforce material they have studied throughout the units.

What a Daily Lesson Could Look Like

Tuesdays

- **Memory Work**—Review flashcards and vocabulary. *5 minutes*
- **Discuss** last lesson. *5 minutes*
- **Teaching Time**—Read or have student read new lesson; ask comprehension questions as you go. *10 minutes*
- **Discuss** new information. *2–3 minutes*
- **Daily Reading Sheet**—Have student complete a Daily Reading Sheet. *10 minutes*
- **Vocabulary**—Have your student fill out (or assist him or her in filling out) a vocabulary sheet, or make flashcards, if you prefer, of the key words in the lesson. *10 minutes*
- **Books**—Outside reading time. This is where students have the opportunity to peruse other sources, perhaps from the library. *30 minutes or more, as necessary*

Thursdays

- **Memory Work**
- **Hands-On Time**—Complete a relevant experiment or activity. Student can also use part of this time for working on folderbooks and discovery (research) activities.

Remember: Younger children do not need as much detail. Give them the facts and HAVE FUN! We are trying to include enough “work” for the older kids, but enough “fun” for the younger ones. If you have only young elementary (K–3) students, then even once a week is enough for science. If they are doing memory work, though, bring out those flashcards two or three times per week. We like to go to the library and get lots of books on the subject at hand.

Instructions for Your Science Notebook

This section is addressed to your students; however, you may need to help them decide the best way to organize their science notebooks.

This year you will need to maintain a science notebook. The purpose of this notebook is to help you organize all your documents from your studies. An important part of good science is good record keeping. It is the only way to accurately track your findings.

I recommend a three-ring, loose-leaf notebook, about 1½ inches thick, with pockets on the inside of the covers. For tabs, I recommend tabs with labels. You have two options in this area:

- **Option 1**—Unit by Unit: For this method you will need six tabs labeled “Unit One,” “Unit Two,” and so on, through Unit Six. In each section you will file your Daily Reading Sheets, Checking It Out forms, Write About It! composition, and any other written work.
- **Option 2**—Type of Work: For this method you will need at least eight tabs, possibly more, and you will file your work chronologically, that is, in order by date. Your tabs should be labeled:
 - Daily Reading Sheets
 - Vocabulary
 - Checking It Out
 - Write About It!
 - Coloring Pages
 - Field Trips
 - Diagrams (You might sketch some from your readings.)
 - Photos (I highly recommend taking photos throughout the year of your Hands-On activities, field trips, and experiments.)

Your science notebook will provide an excellent record of your studies in earth science!

