

Fourth Grade Overview

First Semester

Second Semester

Language Arts

- Parts of speech
- Journal writing
- Paragraphing skills
- Revision skills
- Sentence variety
- Poetry
- Memorization and recitation

- Dialogue punctuation
- Short story writing
- Plurals and possessives
- Editing and proofreading
- Grammar rules

Social Studies

- Topography observation and model
- Permanent and migrating animals
- Native American research paper
- Model of Native American village
- State geography and landforms
- State symbol, flag, and bird
- State history

- Colonial America
- Mapping skills
- Native American leaders
- Material culture of pioneers
- Model of pioneer settlement
- California Gold Rush
- Pony Express
- Transcontinental Railroad

Science

- Geometry and patterns in nature
- Relationship between form and function
- Charting data
- Seed dispersal
- Animal species and breeds
- Nutrition
- Basic cell structure

- Nature observations
- Constellations
- Moon and gravity
- Solar system
- Planet research project
- Measuring altitude
- Longitude and latitude
- Cardinal directions and compass navigation

Math

- Carrying and borrowing
- Division with remainders
- Multistep word problems
- Weights and measures
- Two-digit multiplication
- Roman numerals

- Adding and subtracting fractions
- Money math
- Rounding and estimating
- Long division
- Mixed numbers and improper fractions
- Equivalent fractions
- Common denominator

Art

Students learn the seven laws of drawing perspective. Each law is explored in depth and students gain ample practice in using the various techniques including tonal drawing, foreshortening, overlapping, and shading.

Music

Students continue learning to play an instrument. Oak Meadow's *Recorder Duets* is offered to students interested in taking their recorder playing further. Opportunities and suggestions are provided for holding recitals and other performances.

Grade 4

Coursebook



Oak Meadow

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Introduction

For the Student

Welcome to fourth grade! This is an exciting year because, perhaps for the first time, you will be in charge of your own learning. This book is written to you, the student, and it will guide you through an entire year of learning in language arts, social studies, and science. In addition, you will be working with a separate math book. Of course, you will have a parent, tutor, or teacher to help you. Make sure to ask for help whenever you need it.

Here are some tips to help your learning experience go more smoothly:

1. Before you begin, look over this book to become familiar with how it is set up. Look at a few lessons, and see what is in the appendix (that's the section at the back of the book).
2. When you start a new lesson, always read through all the assignments first before you begin so that you can plan your time well.
3. Some lessons have a great deal of reading before the assignments. You don't have to do everything in one day. You might want to break the reading up into two days, or do the reading one day and the assignments on another one or two days.
4. Use the assignment checklist to mark when you complete an assignment and to see what still needs to be done.

There is one other book you will need this year: a dictionary. Sometimes while you are reading you might come across an unfamiliar word. You can ask a parent what it means or, better yet, look it up in the dictionary. If you want to keep reading and look it up later, just circle the word so you can find it easily. Sometimes you can get a pretty good idea of what a word means by the way it is used in a sentence.

Keep a dictionary near you whenever you read so you can look up words quickly. Getting into the habit of looking up words you don't know or aren't sure of the exact meaning will help you expand your vocabulary, become a more independent reader, and be able to take advantage of more sophisticated material. (If you don't know what *sophisticated* means, look it up!)

Below you will see a list of course materials, and notes on how the course is set up. You can go over this material with your parent. (There's also a section below for your parent/teacher to read.)

You have a busy year ahead of you and many new, fascinating things to explore. Approach each lesson with a curious, questioning mind and you will have a wonderful year of discovery!

Course Materials

This coursebook contains all the lesson plans for a full year of fourth grade language arts, social studies, and science. In addition to this coursebook, the following materials are recommended to be used in conjunction with this course:

- *The Search for Delicious*
- *Rachel's Journal: The Story of a Pioneer Girl*
- *The Lion, the Witch and the Wardrobe*
- *The Vanderbeekers of 141st Street*
- *The Trumpet of the Swan*
- *Stuart Little*
- *James Herriot's Treasury for Children*
- *Native Legends*
- *My Side of the Mountain*
- *The Turtle of Oman*
- *Oak Meadow's Recorder Duets*
- *Jeweler's loupes (2)*
- *Oak Meadow Math 4*
- three blank, unlined notebooks for use as main lesson books

We recommend using a main lesson book to keep all your work for each subject in one place. See below for details on how to use a main lesson book.

How the Course Is Set Up

Each subject in this coursebook is divided into 36 lessons. Each lesson will usually take one week to complete. You will also see the following sections:

Assignment Summary: You'll find a checklist of assignments at the beginning of each lesson. This lets you check off assignments as you complete them and see at a glance what still needs to be done.

Materials List: We've included a materials list for each lesson, divided by project or activity. There is a complete list of materials in the appendix, as well, if you'd like to stock up in advance.

Learning Assessment: At the end of each lesson, we've included a learning assessment form for the parent/teacher to keep track of student progress and stay attuned to the key competencies that are being developed. Some parents may want to create their own rubrics or bypass formal assessment entirely for the time being. The learning assessment forms can provide an easy way to document your development for reporting purposes.

For Enrolled Students: This section is for families who are enrolled in Oak Meadow School and sending their work to an Oak Meadow teacher. It provides information and reminders about how and when to submit work.

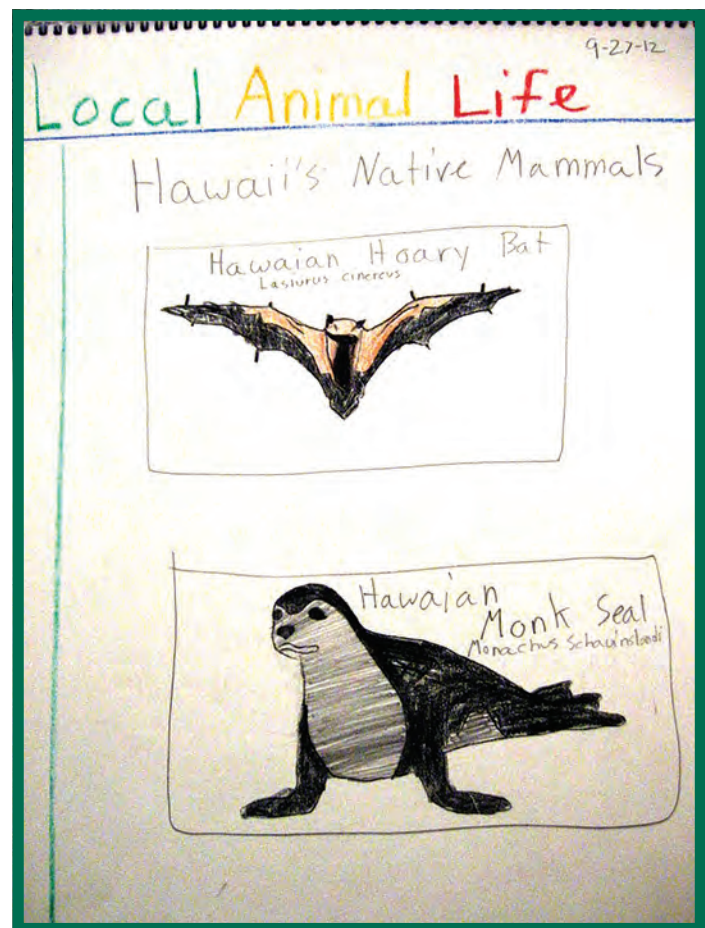
Appendix: The appendix of this coursebook includes a comprehensive materials list, spelling resources, crafts, poems, and other material needed throughout the year. Familiarize yourself with what the appendix contains so you can easily refer to it as necessary.

How to Use the Main Lesson Book

The main lesson book serves as a way to collect all of your work in one place. You can use one book for language arts, one for social studies, and one for science. (You may also want one for math work if you are using Oak Meadow math.)

Most of your assignments will be written in the main lesson book, where there is space for drawings, essays, short stories, etc. You are encouraged to do your best work in the main lesson book, creating beautiful, colorful drawings, and carefully formed letters and numbers. Take the time to decorate the borders of the pages, add detail to drawings, and to take up the whole page.

You can also glue into the main lesson book photos of larger projects, leaves and seeds collected for science studies, and anything else you would like to include in your book. A main lesson book takes on a unique personality during the course of the year, and becomes an important record of your educational journey.



For the Parent

If you are new to homeschooling, welcome to a wonderful adventure! If you are an experienced homeschooler, you may find this year to bring a marked change in the way you and your child work together. The fourth grader is ready for more independence, and this coursebook is written directly to the student. Of course, your presence and support are essential for a successful year of independent learning.

Throughout the year, we urge you to stay responsive to your child and make adjustments along the way based on their interests and needs. Your sincere interest in both your child and in the subject material will help nurture the spark of learning. Beyond the lesson plans and the activities, it is who you are and what you bring to the learning relationship that makes it successful and rewarding. The Oak Meadow curriculum is not solely focused on filling children with facts, but in helping them become more intelligent human beings, able to respond thoughtfully, imaginatively, and effectively to the world in which they live.

Creating a Daily Structure and Rhythm

Some children enjoy a consistent schedule for “school” each day, and for those children it is important to maintain regular study times. For instance, you might do some work in each subject every day, or you might do language arts and math each day, and science and social studies two or three days a week. Art and music may be done several days a week, perhaps in the afternoons. Every student and every family is different, so you should develop a schedule that works best for you,

For some families, however, a set schedule of classes is not necessarily the most effective way to approach home learning. The best approach is often to integrate projects and assignments into the natural flow of daily activities. In this way, the child gradually develops the attitude that expanding one’s knowledge and capabilities is part of the process of life, and indeed is what life is all about.

Regardless of whether or not you establish a regular school schedule, creating a consistent daily rhythm is highly recommended. Living and learning are synonymous, and homeschooling should feel like a natural extension of family life. Taking the time and effort to establish your daily rhythm will make a difference in the long run. Homeschooling lets you tailor the educational activities to your child’s need for quiet reflection, free time, social interactions, creative outlets, and focused study time.

Children naturally need opportunities to move from active, outward (“expanded”) states, such as during vigorous or social play, to more inward, focused (“contracted”) states, such as reading or writing. When a child is either expanded or contracted for too long a period of time, they become restless and irritable. With that in mind, you might create a daily rhythm that looks something like this:

Morning main lesson: 60–90 minutes of focused learning

Snack and physical break (outdoor time is ideal)

Morning study hour: 45–60 minutes for review, activities, or finishing main lesson work

Lunch

Quiet reading time: 45–60 minutes for silent reading or read-alouds

Afternoon activity period: 60–90 minutes for projects, art, music, etc.

Free time

Of course, your day might look quite different from this but it gives you an idea of a starting point. You can expect to need about 3–4 hours per day for schoolwork, some of which your child will be able to do independently and some of which they will need you to be fully involved.

After a few weeks working together, you and your student can rethink your schedule and make any adjustments to help it be more productive and enjoyable.

Assessment Measures in Home Learning

Assessments in home learning are usually done through informal observation, the creation of a portfolio of student work, and cumulative activities that are designed to evaluate your student's learning. You can use the learning assessment form to record daily or weekly notes in order to document student progress and the learning process. Things that would be important to note are what aspects are challenging or difficult, what aspects your student has a natural affinity toward, what questions the student asks, what new ideas spring up during the course of the week, and what new discoveries or progress were made. These notes will help you to keep track of your student's progress and know where and when extra help is needed.

The learning assessment included at the end of each lesson can be used to guide your student's skill development, but the process of learning and working with the material in an exploratory way is equally important. Ultimately, it's not the end result but rather the pathway that develops capacities with your child.

Educators use both formative and summative assessments to gauge student learning and track it over time, and this course is designed for you to do the same. *Formative assessment* happens each week, “forming” as you watch your student work. Each week you will notice where your student struggles, where more time is needed to grasp a concept or practice using a new skill, which aspects of the work are particularly enjoyable or easy. These observations will help inform your next steps. Using on-going formative assessments, your teaching can adapt to your child's needs as the year unfolds. *Summative assessment* provides a summary of the student's learning at a particular point, usually at the end of a cumulative project (such as a research paper, grammar review, or cumulative spelling test) or at the end of the year. Summative assessments are often in the form of a test, but in Oak Meadow curriculum, we use a variety of assessment measures.

It is important to remember that children seem to develop very rapidly at times and seem to make no progress at other times. Human growth and development reflects a spiral process. Each time you come back to a particular idea or topic, you come back to a similar point, but it's in a bigger circle than

before, with a more far-reaching and encompassing sense of understanding. Remembering this can help you to observe the natural progress of your child and not try to force learning or growth to happen. We wouldn't try to make a child grow faster—we respect and trust that each child will grow at their own pace. Likewise, learning happens at its own pace. Learning is a natural process for most children and takes a lot of patience, courage, and trust in the adults around them to give them the time to unfold their potential.

Assessing your child's progress will become a natural part of your work each week. As the months pass, you will begin to understand how far your child has come. Keeping anecdotal notes throughout the year will provide you with a comprehensive picture of your child's development.

Information for Students Enrolled in Oak Meadow School

As an enrolled student, you will benefit from regular feedback and support from your Oak Meadow teacher. Your Oak Meadow teacher is also available to help with questions you may have about assignments or about your child's progress. Communication is essential to developing a great relationship with your teacher during the school year.

If you are enrolled in Oak Meadow School, you'll find a reminder at the end of each lesson that instructs you how to document your student's progress and when to submit your work to your Oak Meadow teacher. Continue working on your next lessons while you are waiting for your teacher to send feedback on your student's work. After you have submitted the first 18 lessons, you will receive a first-semester evaluation and grade. At the end of 36 lessons, you will receive a final evaluation and grade.

Submitting Work to Your Oak Meadow Teacher

You are welcome to submit your student's work using email, Google docs, or postal mail. You will find detailed instructions on how to submit your work in the Parent Handbook.

Here are a few tips:

- Please make sure to carefully label each submission. Teachers receive many submissions each week and we want to make sure your child's work is accounted for.
- If you send work through the postal mail, be sure to include a self-addressed, stamped envelope so your teacher can return the work to you. Receiving the return package from your teacher is an exciting part of the distance learning relationship for many children, and we want to make sure the materials make it back to you in a timely manner. Because regular postal mail is not tracked, it's important to keep copies of everything you send.
- If you choose to send work digitally, Microsoft Word documents, a shared Google doc, and Adobe Acrobat PDFs are the easiest formats for our teachers to work with. When in doubt, please check in with your teacher to determine the best format for receiving work.

- It is a good idea to keep track of when lessons are submitted and returned. With so many important pieces of work going back and forth in the mail, mistakes do occur, and a good record-keeping system helps clear things up. You can use a weekly planner for this purpose.

When both the family and the teacher keep to a regular schedule for submitting and returning lessons, everyone benefits, especially the student. Timely feedback, encouragement, and guidance from a teacher are key elements for all learners, and this is especially important in distance learning.

One of the most common questions parents have at the beginning of the year is how much work to send to the teacher, and what should be included in each submission. Your teacher will want to see evidence of the assignments completed in each lesson. You can use the learning assessment at the end of each lesson to help you determine the skills that your teacher is particularly interested in seeing demonstrated. You will want to include work that you feel gives the best picture of your child's progress, and shows areas or skills that they are working on or that you may have questions about. In addition, you are encouraged to include anything that you think your teacher will particularly enjoy or benefit from seeing. If you have made notes on the learning assessment forms at the end of each lesson, you may want to include those as well. If you have any questions about what to send or not send, your teacher is happy to advise you.

Ready to Begin

We believe that childhood is a valuable period, and nothing is gained by hurrying through it. We suggest that you relax and enjoy these lessons with your child, using them as a springboard to further explorations and an opportunity to spend many enjoyable hours together.



Grade

4

Lesson 1

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Begin reading *Stuart Little*.
- ☐ Identify nouns and verbs.
- ☐ Correct errors in punctuation and capitalization.
- ☐ Memorize spelling words and take a quiz.
- ☐ Begin writing in a journal.

SOCIAL STUDIES

- ☐ Imagine and draw a very old tree.
- ☐ Make a list of 10 things your tree has seen.
- ☐ Begin making a landscape model.
- ☐ Activity: Local Topography Project: Choosing a Site

SCIENCE

- ☐ Draw observations of different fruits and vegetables.
- ☐ Write a description of the form and quality of the fruit.
- ☐ Draw a cross section of the fruit.

ART

- ☐ Become familiar with the seven laws of perspective.
- ☐ Draw no-outline circles.

MUSIC

- ☐ Choose a duet to begin learning.

MATERIALS

☐ Language Arts: Journal

journal or notebook (a small one is easy to carry around)

☐ Social Studies: Topography Project

notebook or sketch pad and pencil
containers for collecting samples
masking tape (to identify samples)

☐ Science: Geometry in Nature

several different kinds of fruit or vegetables

☐ Art: Sketches

sketchbook
graphite and colored pencils

Language Arts

Each week in language arts, you will be asked to do a little reading, some writing, and usually some grammar. These activities will help you become a better reader and writer, and you will get a closer look at how the English language works.

This year, you are going to continue learning about the structure of the English language. Here are the four parts of speech you should already know:

- nouns (name words)
- verbs (doing words)
- adjectives (picture words)
- adverbs (how words)

You also know that a sentence always starts with a capital letter and ends with a punctuation mark, and that every sentence must have a noun and a verb. Sentences do not have to have adjectives or adverbs, but these words make sentences more interesting and informative. We'll begin the year with a review of these rules and parts of speech.

Reading

Throughout the year, you will be asked to read several chapter books. You will read a few chapters each week and at the end of each book, you will be asked to complete a project about the book. This will give you an opportunity to think about the whole book and some of its themes. Please do some of the reading silently, and some of it aloud with a parent. It might be tempting to read the whole book to yourself, but it is important that you do some reading aloud because this will allow the adult to see how your reading is going and to ask you questions about the book.

If you find that the books that we've selected are too difficult for you, feel free to choose books that are at your reading level. Make sure you discuss this decision with a parent and that you get some help choosing an appropriate replacement book. If you end up reading books that are different from the ones we've selected, work with a parent to change the assignments so that they fit the books you've chosen.

This week, begin reading *Stuart Little* by E. B. White. Read a little bit every day. Make sure you alternate between reading silently to yourself and reading aloud with a parent. Keep track of words and ideas you don't understand. Ask a parent to explain things that are confusing to you. You should aim to finish the book in three weeks. You will be asked to write about it in lesson 3.

Assignments

1. To begin reviewing nouns and verbs, write in your main lesson book 10 to 12 short sentences about various animals and what they do. Here are some examples:

The fish swims.

The bird flies.

The lion roars.

The owl hoots.

Make sure that each sentence has just one noun and one verb, and that each sentence starts with a capital letter and ends with a punctuation mark. Keep the sentences simple! Once you are done, go through and circle the nouns in blue and the verbs in red. Note: The word *the* is not a noun; it's a "helping word."

2. The next day, recall the sentences you wrote and see how many sentences you can remember without looking at your main lesson book. After recalling as many of the sentences as possible, open your main lesson book and read the sentences aloud.

Next, review the four things that every sentence must have:

- capital letter at the beginning
- noun
- verb
- punctuation mark at the end

Ask your parent to write in your main lesson book a short paragraph of simple sentences with *no* punctuation or capitalization. Using a colored pencil, you will correct the paragraph, dividing it into complete sentences by adding punctuation and capitalization. Here is an example of the kind of paragraph your parent might write:

the dog ran away the girl cried sadly the boy ran after the dog the orange cat mewed the old man slept the moon rose slowly

3. Ask a parent to help you create a list of five to ten spelling words, either from the list in the appendix or from your written work or reading. Practice the words from Monday through Wednesday. Use the creative suggestions in the appendix for your spelling practice. On Thursday, test yourself to see how well you are remembering your spelling words. If you make some mistakes, review those words before the quiz on Friday. Words you have not mastered by the end of Friday can be added to next week's list.

You may want to keep lists of your spelling words in your main lesson book, or in a separate spelling notebook.

4. Begin keeping a journal. Your journal can be a binder, notebook, sketchbook, or any other kind of book that works for you. Get into the habit of writing in your journal at least three times a week (perhaps every other day). You can write about anything you like! You might write about what you experienced the day before, or about something that happened to you years ago. You can invent stories and write letters. Make sure you date each journal entry.

Writing in a journal (or *journaling*) lets you write informally, away from the constraints of an assignment. Journaling has its own kind of freedom, and writing in it regularly will improve both your ability and your confidence as a writer. We will provide some suggestions for writing topics because we know that sometimes it's difficult to come up with ideas, but we encourage you to come up with ideas of your own.

Use your journal to practice your cursive writing. Start paying attention to your handwriting. Make sure letters following *o*'s and *v*'s come off the top of the *o* and *v*, that lowercase *m*'s have three humps and *n*'s have two. The lowercase *q* should be distinguished from a *g*, just as the lowercase *u* and *v* need to be clearly different from each other.

The goal is to learn how to write beautifully *and* quickly. In order to find the right balance, you will sometimes have to focus on the form of the writing and at other times you will have to focus on speed. If it takes all morning to write two sentences, you are going too slowly. However, if you finish your page in one minute, with writing that no one can read, then you are defeating the purpose of learning to write fluidly. If you find writing in cursive very challenging, alternate the days you use it. With regular practice, you will find that cursive writing gets easier and easier.

Social Studies

This year in social studies, you will learn about the area in which you live. You will start by studying the landscape around you, and as time goes on, you will gradually expand your study to include your state and its history. The material you will study will vary depending on where you live. Students who live in cities will gather different information than students who live in rural areas. Students who live in the Eastern United States will learn a different history than those who live in the West. In learning about

the area in which you live, you will study what it's like today, and also what it was like many years ago.



The Story of a Very Old Tree

In order to help you keep track of all the changes that have occurred in your home area, we would like you to begin thinking like a very old tree that has lived in your area for hundreds of years. This can be a real tree or an imaginary tree. Why a tree? Because trees can live for a long time and some of the really old ones have lived through the periods in history that you will study this year.

Have you ever seen what a tree looks like when it has been cut? Inside the trunk of a tree are many rings nestled inside one another. Each ring represents a year of the tree's life. A 30-year-old tree will have 30 rings. The ring on the outside is the newest ring and the ones in the middle are the oldest. As the tree gets bigger and older, more rings will be added to the outside.

The photo above shows the trunk of a tree that has been cut in half. Can you guess how old this tree is? Which rings are the oldest rings? Which rings are the newest?

If you guessed that the tree is 16 years old, you guessed correctly. Each of the rings shows a year of the tree's life. New rings form just under the bark, so the oldest rings are the ones in the center.

Now, imagine a very old tree. Choose a species of tree that is common in your area. Possible examples include maple, oak, aspen, juniper, birch, apple, pine, and spruce. Picture your tree in your mind, and imagine what it would look like if it were really, really old. Some old trees grow wide and some grow tall. Some get very rough and gnarled bark, others get very heavy limbs. From now on, we will call this tree "your" tree. If you have a real tree in your area that you'd like to use for your tree, that's fine, or you can just imagine your tree.

Assignments

1. Take some time to imagine your tree in great detail. Remember, your tree is very old. How tall is it? Do the branches start low to the ground or does the trunk rise up straight and tall before the first branches begin? When you have a strong image of your tree, draw a picture of it in your social studies main lesson book. Try to make your drawing as detailed as possible.

When you have completed your drawing, take a few minutes to appreciate it. Imagine that this tree has been growing for hundreds of years and that it has witnessed all of the events that have happened near your home since it was a tiny little sapling growing out of the ground.

2. On the next page of your main lesson book, make a list of about ten things that your tree has seen in its lifetime. See how far back you can go. Start with events that have happened in your lifetime and work backward. It's all right if you can't come up with a lot of events. Title this page "Events My Tree Has Seen" and leave the rest of the page blank.

As the year progresses, you will be adding many things to this list. Your knowledge of your area and its history will increase and you will have a much better sense of the events that your tree has witnessed. Every few weeks we will ask you to add new things to this list. In the meantime, feel free to give your tree a special name, and think about it from time to time as you learn about the area around you.

3. This week you will begin making a miniature landscape model based on the topography of your local area. Topography is the shape and features of the land. The first step is to choose a site for your landscape model. You might have to make several excursions to find a suitable place. See the activity section below for instructions on how to get started. Read through them with a parent and make sure you understand all of the different steps before you get started.

In your main lesson book, keep track of the work you accomplish on each excursion, including the following:

- **Sketches:** Sketches of the site don't have to be elaborate but they should contain specific observations of the area. Label items in the sketches for future reference.
- **Written observations:** Write notes of your observations of the area (you don't have to write in complete sentences). Include specific details. Record smells and sounds as well as sights and textures.
- **Short summary of the day's work:** Write down any discoveries you made and describe how the day went. Think about what was easy and what was more difficult. Explain any problems you encountered and ideas for how you could avoid them in the future.

Activity

Local Topography Project: Choosing a Site

Choosing a Site: Before you start building your landscape, you must familiarize yourself with the land around you. Spend this week walking around outside looking for a good site to use as the basis for your model landscape. If you live in an urban or suburban area, you might have to go to a park or natural spot outside of your city. Look for an area that is habitable (not too steep or swampy, for instance), and that has some access to water (a spring, creek, river, etc.).

Making Observations: If possible, climb to a high place where you can look out over the land. Then go to a low spot and see what the land looks like from below. Bring a notebook or sketch pad, and make several sketches from different vantage points, but most of all try to remember how the ground looked, and where the grass, trees, and bushes were located. Try to picture your area as it was before any buildings or roads were built. Look at the shape of the land, the type of soil, the trees, bushes, grass, gullies, washes, and natural marks left on the land by the forces of nature. Observe rocks and other natural formations, including their colors and patterns, and any other interesting details. While picturing it as an undeveloped yet habitable landscape, observe the relationship between the land-forms and soil, water resources, and the natural vegetation.

Collecting Samples: As you observe the area you will use as your model, begin collecting samples of rocks, sand, and soil. You might want to bring some containers along to help you organize your samples. You can use masking tape to label your containers. Be sure that as you gather materials, you do not harm or disturb the environment. Take only the samples you really need.

Science

This year in science you are going to focus on developing your observation skills. Making careful observations simply means to see things as they are, with freshness, curiosity, and a sense of wonder. You will begin by taking a very close look at the natural world.

Geometry and Patterns in Nature

At any minute of the day we can observe the fantastic patterns and geometry in nature. Keeping your mind open when you make observations is important because it allows you to see things from different viewpoints and to see beneath the surface of what seems obvious. Too often we are like the old story of the three blind men describing an elephant:

Once three blind men were brought before an elephant and told to describe it. The hands of the first one were placed on the ears of the elephant, the hands of the second were placed on the leg, and the tail was placed in the hands of the third.

The first blind man said, after feeling very carefully, “An elephant is like a great leaf. It is large, flat, coarse, and floppy.”

The second man objected vigorously. “No, an elephant is nothing like that,” he cried. “Obviously, an elephant is like the trunk of a tree—strong, solid, thick, and firm.”

“No, no!” shouted the third blind man. “You two are being ridiculous! An elephant is long and thin. Anyone can tell that it is much like a length of rope.”



Sometimes we are just like the blind men in this story. We fail to see the entire picture because we do not have the objectivity or independence to see other points of view.

Using just one viewpoint is quite limiting. For example, if someone asked you what an elephant looked like, and you were shown a picture of one from only one point of view, the picture would not be complete:

Is this really an accurate picture? Is it complete? Really, one should have another viewpoint in order to see a little more of what an elephant is.

Now the viewer has at least a somewhat more complete picture!

In this first lesson, you will be using a piece of fruit to do a detailed observation and drawing. In doing so, you will discover that there are many



structures in nature that reveal beautiful geometric forms. The entire “geometry in nature” study is full of opportunities for creative expression through drawings. Don’t worry if you feel like you aren’t a very good artist—throughout the year, you will be learning techniques that artists use that will help your drawings to be more realistic and expressive.

You can find many excellent resources for projects related to geometry. Here are a few to look for in your local library (or ask your librarian for books like these):

Frank Lloyd Wright for Kids by Kathleen Thorne-Thomsen

Quick and Easy Origami by Toshie Takahama

Fun with Pattern by Fifi Weinert

Shape Me a Rhyme: Nature’s Forms in Poetry by Jane Yolen

Echoes for the Eye: Poems to Celebrate Patterns in Nature by Barbara Juster Esbensen

Growing Patterns: Fibonacci Numbers in Nature by Sarah C. Campbell

You can also experiment with geometric forms on your own. If you like to sew, quilting provides lots of opportunities to create beautiful geometric designs. If you like to tie knots, you can learn how to make a macramé friendship bracelet (you can find directions in the library or online). See if you can find a way to explore geometry on your own!

Assignments

1. Your first observation will be of several different kinds of fruit. Choose two or three fruits (or vegetables) to explore on one day, and two or three others to do on another day. Remember, many so-called “vegetables” are really fruits because they contain seeds on the inside: tomatoes, cucumbers, squash, pumpkins, etc. Explore some of them too!

You will examine each piece thoroughly and try to experience it with all the senses. After a period of examination, carefully draw the fruit in the science main lesson book. You will make two drawings of each piece of fruit, using two different viewpoints.

These drawings should not just be casual sketches. Make each drawing carefully, using colored pencils to portray what you see as clearly as possible.

All of these drawings should not be made in one day. Take time with your drawings. Make them different sizes, from small to large. Expand tiny things into large pictures, and shrink large items into tiny pictures. Consider doing huge paintings of things that are actually very small. Let yourself experience all these wonders of nature in a new way. Enjoy yourself, and allow yourself to become truly involved in the discovery of the hidden world of geometry all around you.

2. After drawing each piece of fruit, you will write a written description in the science main lesson book. First describe its form and then describe its quality. The *form* is the fruit’s outward appearance—what everyone can see. Words that describe its shape, size, and color are good

for describing form. The fruit's *quality* is how you experience it personally. Words that express opinions are good for describing quality. The words *delicious* and *beautiful* express quality.

When you are satisfied with your descriptions, read aloud your description of the form (shape) to a friend or family member who does not know what fruit is being described (make sure you don't say the name of the fruit in your description!). Have that person try to draw it from the description. If the person cannot guess what the item is from the description of its form, read the description of the qualities of the fruit. This can be a good test of communication skills.

3. After you have drawn the whole piece of fruit from two points of view and have written a description of both its outer form and its quality, you are ready for the next step. Ask a parent to help you cut the fruit in a cross section as in the following examples:



(Note: When cutting fruit with hard pits in the center, such as peaches or plums, it's easier if you score around the pit and then separate the two halves, leaving the pit in one side.)

Now draw the fruit from the top, showing the pattern of the cross section. (This will be your third perspective of that fruit.) See how your picture changes and your knowledge increases? What new qualities are you aware of when you cut the fruit? Does the cut fruit reveal some unexpected pattern? You will probably notice that the fruit's scent is released when you cut it, which may give a new dimension to your knowledge.

When you finish observing and drawing the cross sections of the fruit, use it to make a fruit salad!

Art

As you begin the year in art, here are some tips to keep in mind:

- It is very important that you practice your new art skills regularly (at least three or four times per week). Frequent practice is necessary if you want to make real progress as an artist.

This does not mean that you have to spend a lot of time drawing every day, or that you have to complete a drawing every time you sit down to your sketchbook. The goal is to experience the world as an artist a little bit every day.

- It is important to draw from nature and not from pictures.

In this age of high-quality photographs and computer art, it is very easy to compare your work with these high-tech images. You may desire to draw from photographs or slick drawings to achieve a “professional” look. However, nature is not glossy like this. It is always changing. By observing nature, we can recognize patterns and rhythms, and as we observe these rhythms we can see a connection to ourselves. This is one way we can begin to experience the world as an artist.

If you have an art museum or gallery in your area, make some time at different points in the year to visit. Go with a friend and discuss what you see. Bring your sketchbook and copy some of the paintings and drawings you find there. Periodically throughout the year, we will ask you to find examples of art in books and magazines, but seeing original art in person is the best way to understand how artists work and what techniques they use.

Before you get started on your first art assignment, please look over the following information. You will spend a lot of time getting to know the seven laws of drawing perspective, so take a moment to familiarize yourself with them now.

The Seven Laws of Drawing Perspective

Using *perspective* in drawing means creating three-dimensional objects and scenes on a flat surface. Most adults learned perspective by choosing a point on the horizon and drawing straight lines that eventually meet at that point, such as in this example of railroad tracks or trees receding in a straight line into the distance:

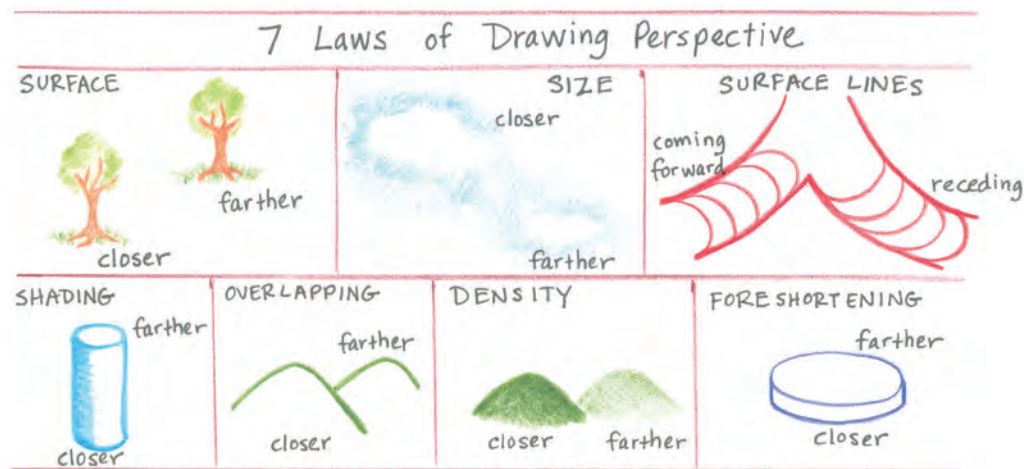


Although this example shows perspective, it more clearly shows how to line items up. What if we have a rock in the picture? In order to show the rock in relation to the trees we would have to make more lines converging on the vanishing point. As you can see, this would shortly become very complicated as we drew new lines for every object we wanted to draw in the picture.

There is an easier way! If we break down perspective into seven laws, we can draw anything in a three-dimensional fashion. These laws are as follows:

1. **Surface:** An item drawn near the bottom of the page looks closer than an item drawn near the top of the page.
2. **Size:** Objects drawn larger look closer than smaller ones.

3. **Surface Lines:** Lines that curve to “wrap around” an item give it the appearance of moving away or coming closer.
4. **Shading:** Adding shading to an object creates the appearance of volume and depth.
5. **Overlapping:** An object that overlaps another object looks like the closer of the two objects. An object that has another object overlapping it appears to be farther away.
6. **Density:** An object drawn darker and with more detail appears closer. An object drawn lighter looks more distant.
7. **Foreshortening:** The effect of turning a circle into an oval gives the appearance of depth in a drawing. This can be clearly seen by placing a coin near the edge of a table. If you crouch down until your eyes are nearly level with the tabletop, the coin appears to be oval.



Using Tone in “No-Outline” Drawings

The term *tone* refers to small changes in darkness and color in a drawing. Through the careful use of color, it is possible to create a “living” form. We will be using tone throughout the year.

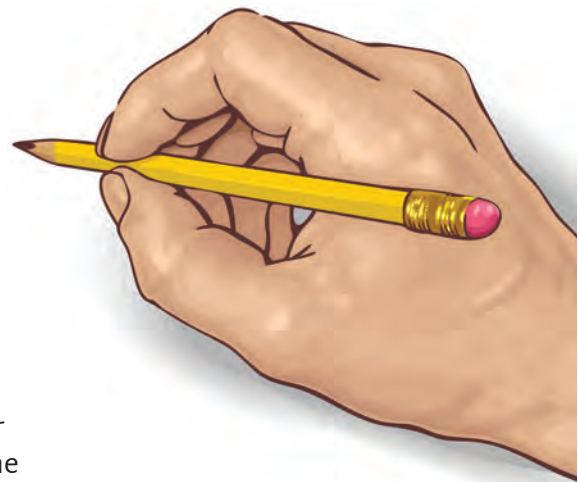
In the following exercises you will learn how to draw without outside “contour” lines. (A contour line is the outline of an object.) You will draw objects and create forms that look three-dimensional with tone alone. This will give you a finished product that seems to be more alive. Using tone in this way will enable you to give dimension to any form, and it will help you develop mastery over your colored pencil or crayon as you practice different ways of using the tool. This in turn will bring about an increase in your confidence level. We will refer to this type of drawing as “no-outline drawing” throughout this coursebook.

Holding Your Pencil or Crayon

There is a certain way that most people learn to hold their pencils for writing. Drawing requires a much looser grip to give us more freedom of movement. Begin by holding your pencil as you would for writing, and then lift your wrist off the table. This lets you move your arm and not just your fingers.

Sometimes an artist will straighten the thumb and fingers a bit so the pencil is laying flatter against them. This lets the point of the pencil move across the paper at an angle, which produces a softer line.

Once your pencil is in position, try a few strokes. Move your hand in a circular pattern, using your whole arm as a unit. Naturally there will be detail work where you want more control over your lines, and it is fine to switch to your handwriting position for these moments. For starting out, however, and getting the general shapes on your paper, freedom of movement from the whole arm is wonderful. It can take some getting used to, so be patient with yourself as you experiment.



Assignment

Create a no-outline circle. Using a colored pencil or crayon, create a circle without first drawing an outside contour line. This is most easily done by making repeated light strokes, never heavy or dark, on a



diagonal. The form should be darker toward the center and lighter at the edges through repeated pencil or crayon strokes. Try working from the center out or the edges in, whichever seems most natural. The edges should appear to merge with the paper. As you draw each stroke, think of the motion as breathing, in and out; in this way the creative process becomes connected to the natural pattern of nature.

You may want to make several of these tonal circles, in different sizes and colors, to give you more practice. Try using colored pencils, graphite ("regular") pencils, and crayons and see how each one gives you a different line and different possibilities in your art.

Music

The focus in music this year will be on playing duets. Duets are a fun and challenging way to expand your musical skills and share a love of music with someone else. If you have worked with the Oak Meadow curriculum in first through third grade, you may have been playing the recorder. If you have already learned the songs in Oak Meadow's *Advanced Recorder*, this year you will be using Oak Meadow's *Recorder Duets*. This book has 13 duets in it, which you can learn throughout the year. You are also encouraged to find additional duets to play. This week, choose a duet to begin learning with a partner.

If you have been playing another instrument, you may be ready to play duets on that instrument, if your parent or a friend can play with you.

If you do not yet play a musical instrument, or are not ready to play duets, simply work each week at your own pace, building musical skills through regular practice. (If you want to learn the recorder, Oak Meadow's Recording Playing Series offers *Beginning Recorder*, *Intermediate Recorder*, and *Advanced Recorder*.)

FOR ENROLLED STUDENTS

You will be sending a sample of work from this lesson to your Oak Meadow teacher at the end of lesson 4. In the meantime, feel free to contact your teacher if you have any questions about the assignments or the learning process.

Learning Assessment

These assessment rubrics are intended to help track student progress throughout the year. Please remember that these skills continue to develop over time. Parents and teachers can use this space to make notes about the learning the student demonstrates or skills that need work.

LANGUAGE ARTS	Developing	Consistent	Competent	Notes
Reads independently				
Reads aloud with confidence and expression				
Writes legibly in cursive				
Prints legibly				
Identifies nouns, verbs, adjectives, and adverbs				
Corrects errors in capitalization and punctuation				
Memorizes spelling words				

LITERATURE	Read aloud by adult	Read by child, in progress	Read by child, completed	Notes
<i>Stuart Little</i>				
Free choice book:				
Free choice book:				
Free choice book:				

SPELLING TEST	Score # correct/total #	Notes
1		

SOCIAL STUDIES	Developing	Consistent	Competent	Notes
Demonstrates knowledge of past events				
Describes local geography				

SCIENCE	Developing	Consistent	Competent	Notes
Demonstrates focused observational skills				
Describes observations in writing				
Records observations in detailed illustrations				
Shows ability to draw from varying perspectives				
Identifies geometric forms in nature				

Grade

4

Lesson 2

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Continue reading *Stuart Little*.
- ☐ Play a game making up sentences with nouns and verbs.
- ☐ Write several sentences identifying nouns and verbs.
- ☐ Practice 5–10 spelling words, and take a spelling quiz.
- ☐ Compose journal entries in cursive.

SOCIAL STUDIES

- ☐ Begin building landscape model.
- ☐ Identify and collect different types of soil.
- ☐ Begin layering and sculpting the soil.
- ☐ Activity: Building Your Landscape Model

SCIENCE

- ☐ Observe and sketch natural items under magnification.
- ☐ Describe observations of patterns and shapes in nature.

- ☐ Identify similarities between historical artifacts and patterns in nature.

ART

- ☐ Use tonal technique to create simple geometric shapes.

MUSIC

- ☐ Continue working on a duet.
- ☐ Work on maintaining a consistent tempo.

MATERIALS

- ☐ **Language Arts: Nouns and Verbs**

colored index cards or construction paper

- ☐ **Social Studies: Landscape Model**

wooden box, plastic tub, or other large, shallow container (optional)

paraffin or candle wax (optional)

soil

natural materials

- ☐ **Science: Nature Observations**

jeweler's loupes (2) or magnifying glass

Language Arts

Sentence Building with Nouns and Verbs

You will need to think of an experience you've had recently to help you complete this activity. Perhaps you went to the park and you saw other children running around, or maybe you visited a museum or went for a walk in the woods. Try to remember what you did during this experience and list the nouns and verbs that come to mind. Put the nouns and their corresponding verbs in two separate columns. For example:

Nouns	Verbs
children	play
dogs	bark
moms	talk
boys	swing
girls	run
ball	rolls

Once you have done this, you can assign new actions to the nouns. For instance, instead of *children play*, you might write *children sing*. You'll also assign new nouns to the verbs (for example, instead of *dogs bark*, you might change it to *coyotes bark*). You can use the same nouns and verbs you used before, but reassign them to make new pairs. You can also add a few new nouns and verbs. For example:

Nouns	Verbs
children	sing
dogs	play
coyotes	bark
moms	laugh
boys	eat
girls	jump
waves	roll
balls	bounce

Write down each word from your lists of nouns and verbs on a strip of colored paper: nouns are blue and verbs are red. An easy way to do this is to use colored index cards or construction paper (you can cut them into strips).

After your cards are ready, mix them all up. Choose one blue card and one red card, and create a sentence using them. It is fine if you end up with some nonsense sentences. Your purpose is simply to get

a strong sense of what nouns and verbs “feel” like so that you will easily recognize when a sentence has both.

Note: Keep these cards handy, as they will be used again later.

Reading

Continue reading *Stuart Little*. Remember to alternate between reading some of it silently and some of it out loud with a parent.

Assignments

1. Use your noun and verb cards to create a variety of sentences. Play this sentence-building game several times this week. Add new nouns and verbs to your collection throughout the week.

Two days this week, write down several of the sentences you created. Circle or shade the nouns in blue and the verbs in red. Be sure that each sentence begins with a capital letter and ends with a punctuation mark.

2. Write in your journal every other day (or more often, if you’d like!). Date each journal entry so you know when you wrote it.

If you are having a difficult time coming up with something to write about, here are two ideas:

- Write about one of your favorite places to visit.
 - What would be the best thing about being tiny like Stuart Little?
3. Ask a parent to help you choose five to ten spelling words to learn this week. Remember to add the words you missed on last week’s quiz so you have a little more time to memorize them. Learn both the spelling and the meaning of each word. Try a different practice technique from the one you used last week. On Thursday, take a practice test to see which words you still need to work on. On Friday, take a spelling quiz.

Social Studies

Now that you have chosen a site to use as the idea for your landscape model, you are ready to begin building. You will have two weeks in which to complete this project.

Read the activity section carefully for detailed instructions on building your landscape model. Follow the steps shown on the following pages for making your landscape.

Assignments

1. Begin building your landscape by constructing a box or preparing the area where it will be built.
2. Collect different types of soil for your landscape: topsoil, stones and pebbles, and subsoil.
3. Begin layering and sculpting the soil into the shapes you want.

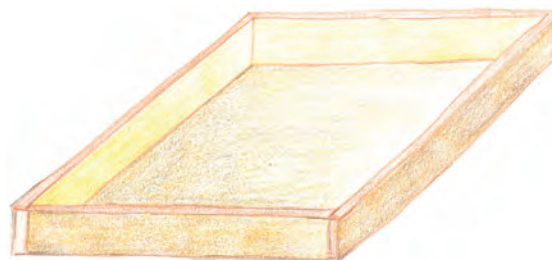
Activity

Building Your Landscape Model

Many things can be used to contain your miniature landscape model. It can be built in a large box, wood frame, tabletop, washtub, child's swimming pool, or directly on the ground in your yard. If you build your landscape directly on the ground, you will have to be able to shelter it from rain and running water so it does not get destroyed in a storm.

If you want to be able to move your model, a sturdy wooden box is desirable. It should be at least 30" × 30" so that you will not have to crowd all the things you want to include in the model. Line the box with plastic to keep dampness from seeping. (You can also use a plastic tub like those used for cat litter; if you do, you don't need to line it with plastic.)

If you choose to make a box, you will need material for the bottom of the box. You can use any sturdy wood, at least $\frac{1}{2}$ to $\frac{3}{4}$ of an inch thick. This could be plywood, scrap wood, old pickets from a fence, etc. Build a frame for the box using $\frac{1}{2}$ to $\frac{3}{4}$ inch wood about 30 inches in length (to make a square box 30" × 30") and at least 4 inches high. This will keep the soil in place as you layer and sculpt it.



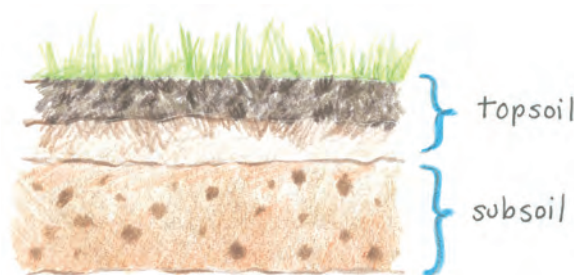
The Layers of Your Landscape

After you build your box or prepare your landscape site, you will collect soil to use. When you were scouting around different landscape sites last week, you might have noticed different types of dirt in different places. In reality, soil is layered, and every layer has its own character. As you build up your model, you will be layering it to match the earth's layers.

When you begin to collect soil, the first thing you will see is the topsoil. When you scrape that away, you will find the subsoil.

Topsoil: Usually crumbly with organic matter mixed in (grass, roots, dead leaves, etc.). The topmost layer contains living organisms, both plants and animals. The topsoil will be used for the surface of the landscape.

Subsoil: Usually hard sand, rocks, or clay. The subsoil will be used for building up the landscape, and creating the different shapes of the land. The harder subsoil will make a strong foundation, as it will not crumble easily.



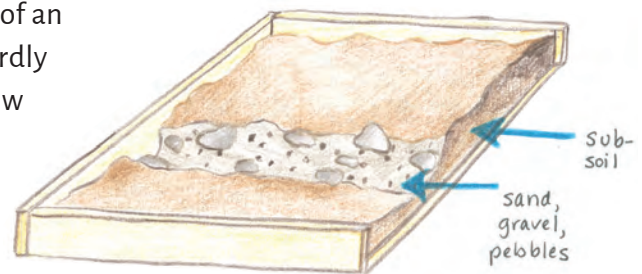
Collecting Soil

Much of the soil can come from your own yard, or you can collect it from vacant lots or fields. If possible, dampen the soil before you collect it. Soil should not be muddy, but slightly damp, so it sticks together a bit.

Scrape off the topsoil and try to keep it intact. If there are a lot of large, dry weeds or other growth, trim with grass shears, but leave the stubble in the soil so it will lend more reality to your model. Try to remove the topsoil in chunks to keep it looking realistic; even tiny, living plants or insects can remain. A twig caught in the grass can become a fallen tree in your model. Remove whole leaves, however, as they will be out of scale.

While the topsoil is the “icing on the cake,” adding stones and pebbles will give your landscape character. Collect stones and pebbles with a purpose, keeping in mind the part they are to play in the model. A small pebble could become a boulder in your model, so you’ll need to experiment to discover how to put everything together so that it looks realistic.

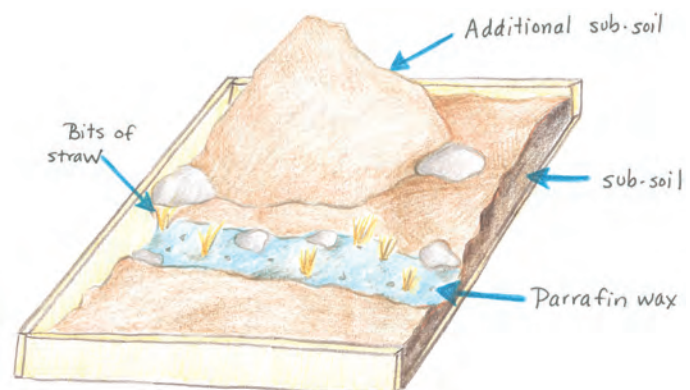
Remember, you are carefully building a scale model of an authentic landscape, not just throwing dirt haphazardly into a box. Therefore, you should have a plan to follow based on the sketches you made from observations. As the model develops, you may need to adjust your original plan. Also, depending on how firm your subsoil is, rocks, cardboard, or other sturdy material can be used underneath to support your landforms. The important thing is that on the surface it should look authentic.



When you collect soil for your model, use separate containers for rocks, topsoil, sand, clays, and other natural materials. Also, you will want to collect dried plants, twigs, and other such items to use for the vegetation of your landscape. Your stones should be of many sizes and types in order to be representative of different sizes of rocks in nature, including pebbles, gravel, rocks, and boulders.

Building Landforms

Start your model by putting down a layer of subsoil. If you want a rise or small hill, make one part slightly higher. If there is to be a creek, river, or lake in your miniature landscape, leave a hollow spot for it. Line this area with sand, silt, gravel, and/or pebbles so it looks like the bed of a real body of water. To make water, pour melted paraffin, candle wax, or bits of old crayons into the bed that you made.



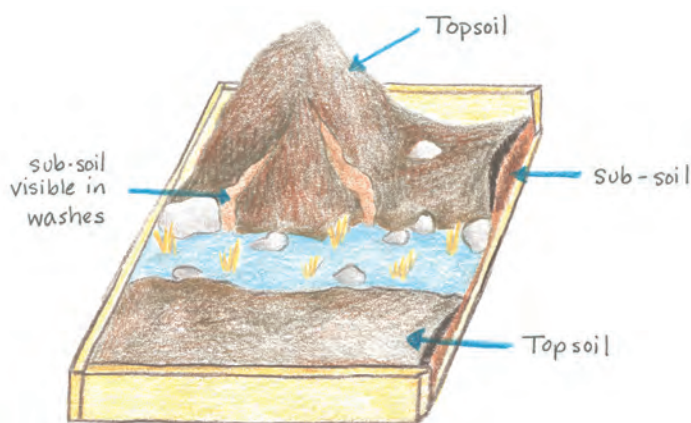
How to melt wax safely: Fill a one-pound metal coffee can two-thirds full of pieces of paraffin wax. Boil water in a pan and then turn the burner to a low setting. Put on oven mitts and carefully set the can of wax into the pan to melt, keeping an eye on it until it is entirely melted. You might want to mix blue-green food coloring with the wax to give it a more realistic water appearance, or use blue and green candle scraps or crayon shavings.

If you want reeds or plants in your “water,” you can stick dry grass, straw, or twigs into the wax before it hardens. You can also make ripples, rapids, or waterfalls by shaping the wax before it hardens.

Here is how your landscape might look with wax “water” in place, reeds, additional rocks, and a hill built up of additional subsoil.

At this point, your model is ready for a covering of topsoil and placement of trees and shrubbery. Before putting down topsoil, all subsoil that will be covered should be scratched with a fork so the surface is rough. Next, spray the subsoil with a mist sprayer filled with water. Lay down the topsoil, pressing it firmly with the flat of your hand so it fuses with the subsoil.

In making this model, you should become aware of the effects of running water on the landscape. When applying the topsoil, leave it off in the places where it would normally have been eroded away. Do you remember seeing any evidence of erosion when you were looking at landscape sites? Natural drainage patterns should be sculpted into the landscape, as you see in the illustration above.

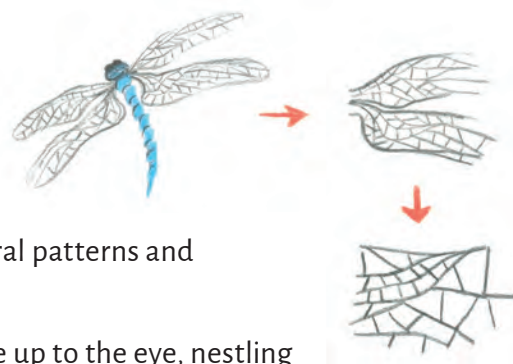


Science

Shapes Found in Nature

The next observation exercises can be done during nature walks, in a vacant lot, or in a garden. You will be using jeweler's loupes to do close-up observations to discover natural patterns and geometry.

To use the jeweler's loupes, place the wide end of the first one up to the eye, nestling it up against the upper cheekbones and side of the nose, completely covering the eye. It's best to close the other eye. One loupe gives you five times (5x) magnification. Stacking the second one in the first provides 10x magnification. (If your loupe needs cleaning, use a soft cloth rather than using tissue, as the wood pulp in the tissue can scratch the lens. You may use a small amount of rubbing alcohol, if necessary.)



Assignments

1. Using jeweler's loupes (or a magnifying glass), closely examine a variety of items in nature. For instance, you might look at a spider's web, flower petals, seedpods, moss, tree bark, etc. See if you can discover natural patterns of geometric shapes. In your science main lesson book, make some sketches of what you see.
2. In your main lesson book, write the answers to the following questions about your nature observations:
 - What did you examine under magnification?
 - What different shapes did you find?
 - When viewed under magnification, how do these items look different from their usual appearance with the naked eye?
 - What are some of the most common shapes?
 - What function does the shape appear to serve in the overall structure? Why do you think these shapes appear?
3. On another day, look at a variety of objects from around your house. If possible, look at traditional crafts of native peoples from all continents. Traditional crafts are often made of natural materials such as mud, straw, cane, shell, gourd, wood, and stone. Pay attention to the patterns you see in these objects. Interestingly, there are often similarities between patterns made by people who never had any contact with one another.

In your main lesson book, answer the following questions about the manmade objects you observed:

- Are the crafts or artifacts imitating something in nature?
- Does the pattern or quality of the material used require the craftsperson to make a certain shape?
- What shapes or items are used to decorate the objects?
- How do these shapes or items relate to the surrounding environment and to the overall object itself?

Art

This week, you will experiment with creating other geometric forms. To do this, start with your no-outline circle and pull the edges out. Try to make it so that you can't see the edges of the original circle. Can you transform a circle into a triangle? Into a square? How about into a circle again? Keep in mind that each shape should stand alone without the edges of the previous shape being visible. Again, experiment with different art media (graphite pencil, colored pencil, and crayon).

This exercise will help you become more successful in creating the shapes that you desire. How often have you become frustrated because you can't draw the image that you want? With the elimination of the outline, and through the gradual layering of color and tone, the edges of the drawing can easily be changed before your very eyes. You may not be able to create the exact image that's in your head, but you may get closer to it.

Assignment

Practice drawing the geometric shapes you find in nature this week. Begin by making tonal circles and changing the shapes into ovals, droplets, and leaf shapes.

Music

Assignment

Continue working on the new duet you learned. You can use familiar tunes and old favorites to warm up each session before you begin working on new material. When playing a duet, it is essential for both players to keep the same tempo. Work with your partner to maintain a steady beat as you play.

FOR ENROLLED STUDENTS

Feel free to contact your teacher if you have any questions about the assignments or the learning process. You will be sending a sample of work from this lesson to your Oak Meadow teacher at the end of lesson 4.

Learning Assessment

These assessment rubrics are intended to help track student progress throughout the year. Please remember that these skills continue to develop over time. Parents and teachers can use this space to make notes about the learning the student demonstrates or skills that need work.

LANGUAGE ARTS	Developing	Consistent	Competent	Notes
Reads independently				
Reads aloud with confidence and expression				
Writes legibly in cursive				
Prints legibly				
Identifies nouns, verbs, adjectives, and adverbs				
Corrects errors in capitalization and punctuation				
Memorizes spelling words				

LITERATURE	Read aloud by adult	Read by child, in progress	Read by child, completed	Notes
<i>Stuart Little</i>				
Free choice book:				
Free choice book:				
Free choice book:				

SPELLING TEST	Score # correct/total #	Notes
2		

SOCIAL STUDIES	Developing	Consistent	Competent	Notes
Demonstrates knowledge of past events				
Describes local geography				
Demonstrates knowledge of different types of soil				
Identifies evidence of erosion				

SCIENCE	Developing	Consistent	Competent	Notes
Demonstrates focused observational skills				
Describes observations in writing				
Records observations in detailed illustrations				
Shows ability to draw from varying perspectives				
Identifies geometric forms in nature				
Identifies similarities between historical artifacts and patterns in nature				



Grade

4

Lesson 6

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Finish reading *The Search for Delicious*.
- ☐ Complete a project related to *The Search for Delicious*.
- ☐ Alphabetize and memorize spelling words, and take a spelling quiz.
- ☐ Practice using different types of ending punctuation.
- ☐ Write several journal entries.

SOCIAL STUDIES

- ☐ Create figurines of local animals.
- ☐ Draw an old tree surrounded by local plants and animals.
- ☐ Add to the list of “Events My Tree Has Seen.”

SCIENCE

- ☐ Examine a peanut and draw the seed.
- ☐ Set up a seed sprouting experiment.
- ☐ Predict experiment results.

ART

- ☐ Complete a long-range drawing using the surface law of perspective.

MUSIC

- ☐ Perform a small recital of music learned so far.

MATERIALS

☐ Social Studies: Local Animal Species

clay or beeswax

☐ Science: Seed Sprouting Experiment

raw, whole peanuts, shelled

lentils

brown rice

alfalfa seeds

dried beans of any kind

raw, whole sunflower seeds, hulled

whole wheat (wheat berries)

popcorn

polished white rice

two small dishes

cotton or facial tissue

1-quart glass jar (or four small jars)

soil to fill jar(s) three-quarters full

Language Arts

Question Marks and Exclamation Points

You should already be familiar with question marks and exclamation points, but it is a good idea to make sure you know when to use them. All questions must end in a question mark. An exclamation point is used when you want to express surprise, excitement, shock, or any strong emotion. It can also be used when you want to draw someone's attention to the sentence. You see this use of the exclamation point frequently in advertisements: Sale today!

Look over your last few journal entries and see if you used any question marks or exclamation points. Are there places where you used a period but an exclamation point would have been more expressive? Are you remembering to put question marks at the end of questions?

Reading

Finish reading *The Search for Delicious*.

Assignments

1. When you finish reading *The Search for Delicious*, complete **one** of the following activities. Aim to do your best work. Make sure you write neatly and follow the instructions carefully.
 - a. Write a book report (see lesson 3 for instructions).
 - b. Answer the following question: Do you think it's possible for everyone to agree on one definition of "delicious"? Why or why not? Plan to write about one page (two or three short paragraphs).
 - c. Imagine a different future for Gaylen than the one described in the epilogue. Write a new epilogue for the book that contains a description of the life you have created for Gaylen. Make sure it ties into the main story somehow.
 - d. Conduct your own search for delicious by polling your friends and family. Describe the experience in log entries—as though you're a scientist gathering data—or as an adventure story with you as the main character. Feel free to invent details to make the tale more exciting.
 - e. Choose a scene from the book and act it out. Gather a group of friends to help you. Write out a script and create costumes. Perform the scene for an audience.
2. Create a spelling list and practice the words this week. You should learn the meaning of each word and alphabetize the entire list in your main lesson book. Take a spelling quiz at the end of the week.
3. Write out a few sentences that can end with a period. Then ask yourself whether the same sentence could also end with a question mark or an exclamation point. Some sentences work really well:

The pizza is all gone.

The pizza is all gone?

The pizza is all gone!

Others sound a little funny as a question or an exclamation:

The pizza has cheese on it.

The pizza has cheese on it?

The pizza has cheese on it!

Try acting out the sentences for someone else, making it clear by your tone of voice and facial expression which type of sentence it is (a statement that ends in a period, a question, or an exclamation). Together, determine whether you think the sentences work well all three ways, or whether there is one punctuation mark that works best. Write the sentences out in your main lesson book.

4. Write in your journal several days this week. For two of your journal entries, reflect on your learning so far this year by answering the following questions. Do half of the questions one day, and the other half on another day.
 - How is the reading going for you so far? Are you reading independently or with a parent? If you are reading with a parent, are you making time to practice reading on your own?
 - How do you like the books assigned so far? Which one did you like better? Why?
 - Do you feel that you have a solid understanding of the four parts of speech you've covered so far? Which ones do you still need to practice?
 - Which subjects (language arts, social studies, science, math, art, or music) have you enjoyed most? Why? Which subjects have you enjoyed the least? Why?
 - Are you satisfied with your penmanship? If not, how do you think you could improve it?
 - How is the spelling going? What have been some of your hardest words?

Social Studies

Now that you have learned about the native wildlife in your area, it is time to add these creatures to your landscape model.

Since you have learned so much about the geography, plants, and animal life in your area, this is a great time to invite some of your friends or family members over for an outdoor tour. You can act as a tour guide. You might begin the tour by showing your landscape model, and then take your group outside to see the area up close and in person. As you lead the tour, describe the different natural features and plant and animal species. Here are some things you could do to make the experience more fun and interactive:

- Make a field guide with a simple map, pictures and explanations that your visitors carry with them on the tour.
- Make up a questionnaire or checklist for visitors to fill out as they listen to you speak and observe the sights.
- Create signs and plaques to place in different locations (to be removed later) that explain some of the important features.
- Devise a quiz to test your visitors on their new knowledge.

Assignments

1. Using clay or beeswax, make models of the local animals. Paint them (if necessary) and put them in appropriate places in your model landscape. If any of your animals are house or nest builders, you might also like to make models of their homes and put them in your landscape as well.
2. Make a new drawing of your tree in your main lesson book. This drawing should contain the tree's surrounding habitat, including the plant and animal species you have been researching these last few weeks. Include as many details as you can. You might want to label the different plants and animals in your drawing.
3. Go back to your list of "Events My Tree Has Seen" from the very first lesson. Take some time to think about some of the natural events your tree has seen over the years, based on the local plants and animals. Has your tree seen robin eggs hatch? Has your tree seen a young maple tree grow into a mature one? Has your tree seen rabbits burrowing into the ground? Add five to ten new items to this list based on the information you have learned about your area in the last few weeks.

Science

Science is the art of observation. Through careful observation, science is also the art of uncovering hidden mysteries and laws. Often, things are hidden or mysterious only because we haven't yet tried to discover or understand them. Imagine that a rare and beautiful flower only grows at the top of a high and rocky mountain peak. That flower will remain unknown to all but those who make the effort to explore and climb that mountain to the top. Scientists are explorers, investigators, and discoverers.

In the coming weeks, we will explore, investigate, and discover seeds: seed forms, seed transportation, and seed growth. Once again, in our observations, we are more interested in *how* seeds are than in *why* seeds are. Observing *how* will give us ample clues to the *why*.

Investigation of Seeds

Seeds are the beginning of every enterprise, the beginning of every decision, the beginning of any study or creative act. What is more inspiring than a towering oak sprung from an acorn and growing

century after century? When we see an acorn, we know that an oak tree is within. When we see an infant struggle with its first steps, we wonder what paths it will walk in life. When a young person struggles with the ABCs, we can imagine what books they will read and what poems they will write.

We have all seen seeds sprout. Maybe you have planted seeds. Most seeds are planted because we want the end result: the taste of a delicious fruit or vegetable, or the sight of a beautiful flower. It takes a lot of patience to wait for the seed to do its hard work and produce the reward we've been waiting for. The seed is the reason that the flower blooms. It is for the seed that the fruit becomes ripe. All of nature lives and multiplies.

In autumn, the trees begin to drop their leaves, the garden has given its last summer fruit, the meadows and prairies are brown and dry, and the spring and summer wildflowers are just skeletons and empty husks. At this time, people all over the world give thanks in many solemn, colorful, and joyful harvest festivals and celebrations. As the season's plants die, they leave behind the means for the future in their seeds. The seeds also signal the future of the people, animals, and insects, who depend on the seeds for food. Corn, pumpkins, beans, and nuts grace many happy and grateful harvest feasts. Apples, pears, grapes, and melons give their sweet and juicy seed-houses for us to eat and enjoy.

Consider a peanut. Each peanut is a seed that holds the plan for the future of the peanut. Nothing can be built without a plan. Nature makes sure that the plan is preserved in the seed. What do you think is the plan of a peanut?

Without plans, the world would be very bizarre and unpredictable. What if you planted corn seeds and got squash plants? Imagine if you planted tomatoes and got cucumbers! Why is it that if you plant two seeds of melon you get two plants of the same size, shape, and quality that bear identical fruit? Nature is very economical. It saves the key to the future in each seed. Even a tiny tomato seed will make a great vine with dozens and dozens of tomatoes for people to eat. That is its plan. A squirrel might bury a single pine nut and forget about it; if the conditions are right, it will eventually grow into a giant tree lasting hundreds of years, producing tons of pine nuts for other squirrels to eat.

Assignments

1. This week, you will set up several seed sprouting experiments. For these investigations, gather the following materials (you only need a few kernels of each type of plant):
 - raw, whole peanuts, shelled
 - lentils
 - brown rice
 - alfalfa seeds
 - dried beans of any kind
 - raw, whole sunflower seeds, hulled
 - whole wheat (wheat berries)

- popcorn
- polished white rice
- two small dishes
- cotton or facial tissue
- 1-quart glass jar (or four small jars)
- soil to fill jar(s) three-quarters full

Note: If you cannot find all of the seeds listed, it is fine to substitute with seeds that you have available. (A substitution for the polished rice would have to be another seed that has been degerminated.)

2. First take a raw whole peanut, remove the skin, and then gently break the nut in half along its natural division in the middle. Examine it both with your naked eye and with 5x and 10x magnification. Draw what you observe in your science main lesson book. As with your geometry in nature drawings, make this a work of art. Draw it much larger than life-size so you can easily show the details.

What was hidden inside the peanut? That which was hidden is the future of the peanut waiting to be released. When the conditions are right, it will grow.

Now closely examine the other seeds you've collected: lentils, brown rice, alfalfa seeds, beans, sunflower seeds, wheat berries, and popcorn. Can you find where its future plant is hidden? That point of life is often called the *germ* of the seed. When it awakens and begins to sprout, we say that the seed is *germinating*.

No matter how small the seed, each one contains its built-in plan for the future. The plant that will grow from the seed also contains the plans for creating more seeds. In addition to this future plan, each seed contains food for the future plant, along with a protective covering.

3. Place a layer of cotton or tissue in a dish. Dampen it with water. Put two peanuts, two lentils, two brown rice grains, and a few alfalfa seeds on the wet cotton or tissue, with space between them. Cover them with another layer of damp tissue and put them on a shelf or in some other out-of-the-way, but warm spot.

What do you think will happen? Remember how part of science is guessing what will happen based on your observations? Try to be as specific as you can when making predictions. How long do you think it will take for any changes to occur? What will the changes look like? How much growth will there be, if any? Make sure to write down all of your predictions in your science main lesson book.

4. In another dish, place the grains of polished white rice in a similar manner. Polished rice is rice that has had its outer protective covering (bran) and the germ removed. What do you think will happen to these grains? Write your answer in your science main lesson book and add some drawings of what your experiment looks like now that you have it all set up.

5. Finally, place damp soil in your glass jar(s). Plant two beans, two sunflower seeds, two wheat berries, and two kernels of popcorn in the jar next to the edge so you can observe them through the glass as they sprout under the soil. Plant the beans at a depth of $1\frac{1}{2}$ to 2 inches, the sunflowers and popcorn at 1 to $1\frac{1}{2}$ inches, and the wheat at $\frac{1}{2}$ to 1 inch. Keep the soil slightly damp, but not soggy.

Art

Assignment

Now that you have used tonal shading, surface law of perspective, and color to create a drawing from an insect's point of view, you might want to create a drawing from another perspective. Consider making several drawings that have near and far subjects (objects, people, or animals that are the focus of the drawing) that require you to use the surface law. Remember to use the no-outline technique to give your subjects a solid form and substance, and think about how you can use color to give your picture a feeling or mood.

Music

Assignment

As you continue to work on your music, you may want to give a small performance for your parents or the family pet. This will help you gain experience with performance skills. You can introduce each piece of music, and then play it all the way through to the end without stopping (even if you make a mistake). Speak clearly, hold yourself straight and tall, and play with confidence. Choose pieces of music that you feel very comfortable with, and play them with feeling and energy.

This is good practice for a larger recital you will give in lesson 12.

You may want to ask a parent to record your performance on video so that you can watch it later. This will help you see ways in which your performance went well and how to improve your performance skills for next time.

FOR ENROLLED STUDENTS

A sample of work from this lesson will be sent to your Oak Meadow teacher at the end of lesson 8. Continue to use a weekly planner, assignment checklist, and learning assessment form to help you organize your lessons and track your student's progress. If you recorded your child's music recital, include it with your submission.

Learning Assessment

Use these assessment rubrics to track student progress and make notes about the learning the student demonstrates or skills that need work. Please remember that these skills continue to develop over time.

LANGUAGE ARTS	Developing	Consistent	Competent	Notes
Demonstrates reading comprehension through related project				
Reads independently				
Reads aloud with confidence and expression				
Writes legibly in cursive				
Prints legibly				
Identifies nouns, verbs, adjectives, and adverbs				
Differentiates between different types of adverbs				
Correctly uses nouns, verbs, adjectives, and adverbs in writing				
Demonstrates correct use of different types of ending punctuation				
Corrects errors in capitalization and punctuation				
Alphabetizes a list of words				
Memorizes spelling words				

LITERATURE	Read aloud by adult	Read by child, in progress	Read by child, completed	Notes
<i>The Search for Delicious</i>				
Free choice book:				
Free choice book:				
Free choice book:				

SPELLING TEST	Score # correct/total #	Notes
6		

SOCIAL STUDIES	Developing	Consistent	Competent	Notes
Research skills: seeks information from multiple sources				
Research skills: extracts pertinent information from sources				
Research skills: demonstrates good note-taking skills				
Research skills: records notes using organized system				
Identifies local animal species				
Creates animal species in three-dimensional form				
Identifies local tree species				
Demonstrates knowledge of historical events in relation to the local area				

SCIENCE	Developing	Consistent	Competent	Notes
Experiment: sets up experiment according to instructions				
Experiment: follows instructions accurately				
Experiment: makes predictions based on observations and knowledge				
Identifies and draws the parts of a seed				
Identifies connection between form and function				
Demonstrates focused observational skills				
Describes observations in writing				
Records observations in detailed illustrations				
Shows ability to draw from varying perspectives				
Identifies geometric forms in nature				
Creates analogies related to natural shapes and patterns				



Grade

4

Lesson 17

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Learn new spelling words and take a spelling quiz.
- ☐ Write in your journal.
- ☐ Practice identifying subjects and predicates.

SOCIAL STUDIES

- ☐ Complete research about your state.
- ☐ Find a way to share your knowledge.

SCIENCE

- ☐ Read animal stories.
- ☐ Choose a project related to animals.
- ☐ Research the ways in which dogs help humans.

ART

- ☐ Draw a detailed picture using the laws of perspective.

MUSIC

- ☐ Begin planning another music recital.

Language Arts

Subject and Predicate

Earlier in the year, you reviewed some of the important parts of a complete sentence: capitalized first letters, ending punctuation, a verb and a noun. Now that you know the basics, it is time to go into more detail. For the next two weeks you are going to learn about subjects and predicates and the roles they play in making a complete sentence.

Before we get into nitty-gritty details, take a moment to complete the following exercise. Find a place to sit quietly by yourself with a piece of paper and a pencil. Look around you and notice any movement. Are flies buzzing at the window? Are specks of dust floating in the air? Write down the verbs that you see around you. If we use the examples above, you would write, “buzz” and “float.” (If there is nothing moving around you, create your own movement by tapping your foot, or wiggling your fingers, and then write “tap” and “wiggle.”)

Each of the verbs you wrote down represents half of a sentence. What is needed to make up a whole sentence? A noun, of course! Next to the verbs, write down the name of the object that is completing

the action. In the examples above, you would write “flies buzz” and “specks float.” In observing these different actions, you have located sentences in the room around you. Can you find more? Try to come up with at least five more sentences without leaving your seat.

As you know, every sentence must have two parts: a noun and a verb. If we say only the word “bees,” it brings to mind only the image of the insect. When we say, “buzz,” it has no meaning except as a sound or a movement. However, when we put the two together, we have “bees buzz,” and immediately we have an idea that makes sense.

The longest sentence in the world started from a noun-verb combination just like the ones you came up with. If we want our sentences to be beautiful and meaningful, we have to add more words to them. The words that help the most with this are adjectives and adverbs. Throughout the year you have been practicing with expanding sentences by using adjectives and adverbs, such as:

- The **cat** **cried**.
- The **yellow** **cat** **cried**.
- The **yellow** **cat** **cried** **quietly**.
- The **small** **yellow** **cat** **cried** **quietly** **alone**.

When a sentence becomes larger in this way, we can still divide it into two parts, but these parts are no longer just two single words of the noun and verb. Now we use different names to describe the parts, because they’ve grown.

The noun and all of the words that describe the noun are called the *subject*. The verb and all the words that describe the verb are called the *predicate*.

The last sentence would be divided like this:

The **small yellow** **cat** **cried** **quietly** **alone**.

[subject] [predicate]

Of course, the noun and the verb do not need to be next to each other in the sentence. The sentence could be like this and still be divided in the same way:

The **cat, small and yellow,** **quietly** **cried** **alone**.

[subject] [predicate]

The important difference between subject and predicate has to do with which words relate to the noun and which words relate to the verb. This can be hard to figure out at first, but it gets easier with practice. For now, try to remember that adjectives relate to nouns and adverbs relate to verbs.

Reading

Continue reading a book of your choice.

Assignments

1. Choose five to ten spelling words to learn this week. Practice your words using a variety of approaches.
2. Write in your journal three times this week. Here's a fun idea: write a "What if?" story. A "What if?" story allows you to invent a world that is different from the one we live in. For instance, if you asked the question, "What if I could fly?" your story would take place in a world where you could fly. Or you could ask, "What if we could speak to animals?" Or, "What if electricity had never been discovered?" See if you can come up with your own "What if?" question and then answer it in the form of a short story. You might want to keep a list of "What if?" ideas in your journal for future writing inspiration.
3. To practice identifying subjects and predicates, ask a parent to write out five to ten simple sentences. Try to divide them into subject and predicate. Start with easy ones, but ask for them to get harder as you get better at it. Circle or color lightly over the **subject** with blue colored pencils, and over the **predicate** with red pencils.

Social Studies

Assignments

1. Complete the work that was begun last week on the natural wonders and landforms of your state (refer to the previous lesson for details).
2. You are now an expert on your state and its natural history! Try to find a way to share your knowledge with others. If you created a poster, consider finding a public place to display it. Maybe you could display it at your local library or in the town hall. If you wrote about your state, maybe you could teach a sibling, friends, or relatives about some of the things you've learned. You might offer to give a talk to students in your homeschool group.

These ideas are optional but encouraged. Learning how to share information is an important part of your education.

Science

Reading

Read "Bonny's Big Day" and "The Market Square Dog" from *James Herriot's Treasury for Children*.

Assignments

1. Choose **one** of these projects to complete:
 - a. See if you can learn more about the different breeds of horses. What is considered to be the best show horse? The best breed for farm work? The best breed for working with cattle? Record your discoveries in the science main lesson book.

- b. If you have a dog, try to teach the dog a new trick. You might need to borrow a book from the library to learn how. If you do not have access to a dog, you could read about a breed of dog that interests you and do a brief report, and illustrate it.
2. Research and learn about some of the ways that dogs help humans (service dogs for disabled people, rescue dogs, police dogs, therapy dogs, etc.). Write a one page paper on your findings.

Art

Assignment

Draw a picture from “Bonny’s Big Day.” Horses, as with all other animals, are not too difficult to draw if you remember to draw in a no-outline manner. Begin with a light color of colored pencil and lightly shade in the general shape of the animal. Begin at the body with a circular shape. Work up the neck with a smaller oval for the head, and down the legs.

Once you are satisfied with the overall shape, shade it in a bit darker, adding details such as eyes and mouth. Shade the shadowed places darker yet, such as the underbelly and the insides of the legs.

Once the horse is drawn, the background can be drawn in. Include trees and plants in the foreground, and hills in the distance. Shade the hills and any distant trees or objects light and hazy. Remember to place the distant objects up higher on the paper than the horse (surface law), or make them smaller (size law), or both.



Music

Assignment

It may be time to consider another performance. This time, try increasing the size of the audience and/or the difficulty of the piece that you perform. Think carefully about the size of your audience and what will make you the most comfortable. A little performance anxiety is to be expected, but too much might interfere with your ability to perform well.

Plan to do the performance next week. In the meantime, practice the song you intend to play.

FOR ENROLLED STUDENTS

You will be sending the next batch of work to your Oak Meadow teacher at the end of lesson 20. Continue to use the weekly planner, assignment checklist, and learning assessment form to help you organize your lessons and track your student’s progress.

Learning Assessment

Use these assessment rubrics to track student progress and make notes about the learning the student demonstrates or skills that need work.

LANGUAGE ARTS	Developing	Consistent	Competent	Notes
Identifies subject and predicate in sentences				
Identifies story components (character, setting, story problem, conflict, and resolution)				
Memorizes poetry				
Demonstrates good recitation skills				
Composes original poetry				
Composes an original story (creative writing)				
Writes three- to five-sentence paragraphs				
Demonstrates good paragraphing skills				
Demonstrates reading comprehension through related project				
Reads independently				
Reads aloud with confidence and expression				
Writes legibly in print and cursive				
Identifies nouns, pronouns, verbs, adjectives, adverbs, conjunctions, and prepositions				
Correctly uses different parts of speech in writing				
Identifies and corrects errors in own writing				
Alphabetizes a list of words				
Memorizes spelling words				

LITERATURE	Read aloud by adult	Read by child, in progress	Read by child, completed	Notes
<i>James Herriot's Treasury for Children</i>				
Free choice book:				
Free choice book:				
Free choice book:				

SPELLING TEST	Score # correct/total #	Notes
17		

SOCIAL STUDIES	Developing	Consistent	Competent	Notes
Uses map scale to determine distances				
Demonstrates knowledge of natural landforms and features				
Identifies state capital and population centers				
Identifies locations on a map				
Demonstrates knowledge of state or regional symbols				
Creates a topographical relief map				
Shows familiarity with reading different types of maps				
Demonstrates knowledge of local area				

SCIENCE	Developing	Consistent	Competent	Notes
Demonstrates familiarity with a variety of animal breeds				
Applies knowledge of nutrition to personal eating habits				
Reads food labels to identify ingredients				
Demonstrates knowledge of food groups				
Demonstrates focused observational skills				
Describes observations in writing				
Records observations in detailed illustrations				

Grade

4

Lesson 23

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Learn new spelling words and take a spelling quiz.
- ☐ Complete a learning reflection.
- ☐ Practice forming possessives, plural nouns, and contractions.
- ☐ Write sentences using singular and plural possessive nouns.
- ☐ Make corrections to a faulty paragraph.

SOCIAL STUDIES

- ☐ Begin researching early settlers in your region.
- ☐ Complete a colonial craft project.

SCIENCE

- ☐ Continue reading *My Side of the Mountain*.
- ☐ Listen to and learn to distinguish different birdcalls.
- ☐ Use nature signs during a nature walk.

ART

- ☐ Draw a scene from a story using the laws of perspective.

MUSIC

- ☐ Continue practicing your musical instrument.

Language Arts

Possessive Nouns

You learned about several kinds of nouns this year: common nouns, proper nouns, pronouns, singular nouns, and plural nouns. Now we'll learn about the *possessive noun*.

A possessive noun tells who or what owns or possesses something. For example:

Marsha's dog has long, fluffy ears.

The dog's tail is also very fluffy.

Who has the dog with the long, fluffy ears? Marsha does. *Marsha's* is a possessive noun. Who or what has the fluffy tail? The dog does. *Dog's* is a possessive noun.

Possessive nouns can be singular or plural, depending on who does the possessing (one person or thing or many people/things):

Singular possessive noun: the dog's tail, the girl's hat

Plural possessive noun: all the dogs' tails, all the girls' hats

You see that when changing a possessive noun to plural, the ending *-s* gets added to the possessive noun *and* to the thing they are possessing (*dogs* and *tails*—because if there is more than one dog, there is more than one tail!). You might also notice that the placement of the apostrophe changes, from *'s* to *s'*.

The biggest confusion most people have about possessive nouns is figuring out where to put the apostrophe. Here are some general rules to follow:

- To make a singular possessive noun, add *'s*. Do this even if the word already ends in *s*. For example:

The boy's pencil got lost.

Charles's pencil got lost.

- To make a plural possessive noun, you must first check the last letter of the plural noun. If it is an *s*, just add an apostrophe. For example:

Two girls' pencils got lost.

The players' uniforms were filthy.

- If the last letter is not *s*, you must add *'s*. For example:

Three children's mothers were late in picking them up.

The men's store will be open tomorrow.

Another confusion many people have is whether something is a plural noun (and therefore doesn't get an apostrophe), or a plural possessive noun. For example:

The girls are going to the play. (*girls* is a plural noun)

The girls' bus just left. (*girls'* is a plural possessive noun, so it gets an apostrophe)

Here's the important rule: All possessives need an apostrophe.

Here's the exception to the rule: Possessive personal pronouns do not need an apostrophe. Personal pronouns refer to specific people or things. Personal pronouns include: *I, you, he, she, it, we, they*.

Possessive personal pronouns indicate ownership: *my, mine, your, yours, his, her, hers, its, our, ours, their, theirs*. They do not require an apostrophe.

Pronouns such as *one, anyone, someone, somebody, anybody*, and *nobody* are considered to be indefinite pronouns (they don't refer to a specific person) and do require apostrophes.

Examples:

This hat is mine. Where is yours?

This is somebody's bag, but it's not mine.

Did you see anyone's car outside?

A common confusion happens between *its* and *it's*. Can you tell which is the possessive and which is not? Remember that possessives made with personal pronouns do not get an apostrophe. This means that *its* is the possessive. *It's* is a contraction of *it is*. For example:

Its tail is fluffy. (Possessive personal pronoun: the tail belongs to it)

It's time to go home. (Contraction of *it is*)

Other common errors occur between the following words:

your you're

their they're

Can you tell which are the possessive pronouns and which are the contractions? You can go back and review contractions in lesson 20 if you aren't sure.

Assignments

1. Create a new spelling list that includes singular and plural nouns. Focus on the ones that you find the most difficult to spell.
2. For the next two weeks you will use your journal writing time to complete another learning reflection. Read through the list of questions below. Take your time formulating your answers. You will answer half of the questions this week, and half next week.

Before you begin, look over your learning reflections from lesson 12. It is important that these reflections build on your previous thoughts.

Learning Reflection Questions:

- a. Make a list of the following items in your journal.
 - The title of a favorite poem that you wrote.
 - The topic of two of your favorite journal entries this year.
 - The most challenging grammar topic so far.
 - The most challenging punctuation rule so far.
 - Your favorite social studies project so far this year.
 - Your least favorite social studies project this year.

- The most difficult science project you've done this year.
 - The most enjoyable science project you've done this year.
- b. How are you doing on the reading goals that you set in lesson 12? Have you met either goal? If not, what will you need to do in order to meet them by the end of the year?
- c. Have you been surprised by anything you've learned about your state this year? What? What are some of the most important things you think other people should know about your state?
- d. What advice would you give to a new fourth grader sitting down to do their first research project? Come up with one piece of advice for each stage of the research process: research, note-taking and organizing, outlining, writing, and revising/editing.
- e. Have any of the lessons you learned about nutrition stuck with you? Do you eat any differently now than you did at the beginning of the year? Do you think about eating any differently? Explain.
- f. Make a list of your five greatest strengths as a student. For example, do you love to read? Do you proofread your work carefully? Are you a confident writer? Do you love learning about grammar? Is long division easy for you?
- g. Make a list of five things you would like to improve on as a student. For example, do you wish you could read more quickly? Do you have a difficult time staying organized? Do fractions confuse you? Is spelling hard for you? At the end of the year, you will be asked to revisit this list, so make sure you write out your thoughts clearly so that you understand them when you look back on them.
3. Practice differentiating between possessives, plural nouns, and contractions. For each sentence below, indicate which type of word is in bold:
- a. My **aunt's** arriving today.
- b. My **aunt's** car is new.
- c. She bought the car from the **neighbors**.
- d. Do you think **she's** going to visit at **their** house?
- e. **It's** not clear yet.
- f. **There's** a good reason to go.
- g. The **neighbors'** house was just painted.
- h. The car in the driveway is **theirs**.
- i. My car is having **its** tires checked this morning.
- j. Is there **anybody's** car you can borrow?
- k. **Someone's** coming to pick us up.

4. Complete the activities for practicing singular and plural possessive nouns:
 - Compose several sentences using singular possessive nouns.
 - Compose several sentences using plural possessive nouns.
5. Ask a parent to write a short paragraph that uses contractions and possessive nouns incorrectly. Go through and correct the sentences yourself.

Social Studies

Settlers in Your State

Now that you have spent a few weeks learning about different aspects of the colonial period in general, it's time to focus further on the colonial period in your state. (If you live outside the United States, you can pick any state you like for this research.) Check your local library for good research books. There will probably be a lot of books to choose from, so make sure you select a book that matches your reading level. Some of the history can be confusing, and you want to make sure you understand what you are reading.

As you conduct research about your own state, keep in mind that the information will vary according to your state and where it is located. This is because different areas were settled and became states at different times. The western states were settled many years after the eastern states. If you live in a state west of the Mississippi River, look at a map in an atlas to see the dates of statehood, or look in an encyclopedia. Study the history of states east of the Mississippi up to about 1840. Study the history of states west of the Mississippi from as early as you can.

Assignments

1. Spend the week doing research and getting a sense of what the early history in your state was like. This will build on the research you did in lessons 19 and 20 about early explorers. Look ahead to the questions you'll be answering in the next lesson and use them as a guide to help you with your reading. Make sure you take notes on each question and keep your notes well organized.
2. Complete at least one project from the colonial crafts section in the appendix.

Science

Reading

Continue reading *My Side of the Mountain*.

Assignments

1. Go outside and listen to the birds in your neighborhood for half an hour. How many different birdcalls do you hear? Can you identify any of these birdcalls? Try to learn a few of them.

2. Go to the woods with a parent and see if you can find your way around using “signs.” You can do this in woods near your house, in a state park, or in a natural area nearby (such as a meadow or river). If you live in an urban area and there are no woods nearby, you can simulate this process in your own neighborhood by creating special signs. Perhaps you can find a new area to explore in this way!

Write a few sentences in your main lesson book describing your experience. List the signs you discovered and interpreted.

Art

Assignment

Draw a picture of a scene from *My Side of the Mountain*. Include two or three different laws of perspective from the previous lessons. As before, try drawing scenes from the story emphasizing different laws of perspective.

Music

Assignment

Continue practicing your instrument at your own pace this week.

FOR ENROLLED STUDENTS

You will be sending the next batch of work to your Oak Meadow teacher at the end of the next lesson. You may want to begin gathering samples of your child’s work to send.

Learning Assessment

Use these assessment rubrics to track student progress and make notes about the learning the student demonstrates or skills that need work.

LANGUAGE ARTS	Developing	Consistent	Competent	Notes
Uses spelling rules to correctly form plural nouns				
Uses apostrophe accurately in forming singular and plural possessives				
Uses apostrophe accurately in forming contractions				
Identifies story components (character, setting, story problem, conflict, and resolution)				
Composes an original story (creative writing)				
Writes three- to five-sentence paragraphs				
Demonstrates good paragraphing skills				
Demonstrates reading comprehension through related project				
Reads independently				
Reads aloud with confidence and expression				
Writes legibly in print and cursive				
Identifies and uses different parts of speech in writing				
Identifies and corrects errors in own writing				
Alphabetizes a list of words				
Memorizes spelling words				

LITERATURE	Read aloud by adult	Read by child, in progress	Read by child, completed	Notes
<i>My Side of the Mountain</i>				
Free choice book:				
Free choice book:				
Free choice book:				

SPELLING TEST	Score # correct/total #	Notes
23		

SOCIAL STUDIES	Developing	Consistent	Competent	Notes
Demonstrates ability to consider divergent perspectives				
Demonstrates knowledge of colonial life				
Shows familiarity with early explorations in America				
Draws a map with a fair degree of accuracy				
Uses map scale to determine distances				
Identifies locations on a map				
Shows familiarity with reading different types of maps				
Demonstrates knowledge of local area				

SCIENCE	Developing	Consistent	Competent	Notes
Demonstrates knowledge of local plants				
Research report: Demonstrates good note-taking skills				
Research report: Organizes notes into outline				
Research report: Uses outline to write rough draft				
Research report: Revises and edits rough draft into final report				
Demonstrates knowledge of social behavior of animals				
Demonstrates familiarity with a variety of animal breeds				
Applies knowledge of nutrition to personal eating habits				
Reads food labels to identify ingredients				
Demonstrates knowledge of food groups				
Demonstrates focused observational skills				
Describes observations in writing				
Records observations in detailed illustrations				



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Materials

Materials in alphabetical order

Alalfa seeds

Black construction paper

Black paint

Bowl, large

Brass brads

Brown rice

Cardboard

Chalk

Circle compass

Clay or beeswax

Cloth or light canvas

Colored pencils

Compass (directional)

Construction paper

Contact paper with wood
paneling design (optional)

Containers for collecting
samples

Cotton or facial tissue

Die

Dried beans of any kind

Flashlight

Flour

Fruits and vegetables

Glass jar (1 quart, or four small
jars)

Glue

Graphite pencil

Index cards

Iron

Jeweler's loupes (2) or
magnifying glass

Journal or notebook

Lentils

Magazines and catalogs

Maps, many different types

Masking tape

Mathematical compass

Microscope (optional)

Milk carton

Nail

Natural materials

Paraffin or candle wax
(optional)

Polished white rice

Popcorn

Poster board

Protractor that has angles for a
half-circle measured out

Raw, whole peanuts, shelled

Raw, whole sunflower seeds,
hulled

Ruler

Salt

Shoebox

Sketchbook

Soil

Sponges

Stapler

Telescope (optional)

Utility knife or sharp knife

Watercolor paintbrush

Watercolor paints (red, blue,
and yellow)

Watercolor paper

Wax paper

Whole wheat (wheat berries)

Wire

Wooden box, plastic tub, or
shallow container (optional)

Materials sorted by lesson

LESSON	PROJECT	MATERIALS
1	Language Arts: Journal	journal or notebook
1	Social Studies: Topography Project	notebook or sketch pad and pencil containers for collecting samples masking tape (to identify samples)
1	Science: Geometry in Nature	several different kinds of fruit or vegetables
1	Art: Sketches	sketchbook graphite and colored pencils
2	Language Arts: Nouns and Verbs	colored index cards or construction paper
2	Social Studies: Landscape Model	wooden box, plastic tub, or other large, shallow container (optional) paraffin or candle wax (optional) soil natural materials
2	Science: Nature Observations	jeweler's loupes (2) or magnifying glass
3	Social Studies: Leaf Pressing	wax paper iron
3	Science: Nature Observations	jeweler's loupes (2) or magnifying glass
4	Science: Nature Observations	jeweler's loupes or magnifying glass microscope and/or telescope (optional)
5	Art: Surface Law of Perspective	magazines
6	Social Studies: Local Animal Species	clay or beeswax
6	Science: Seed Sprouting Experiment	raw, whole peanuts, shelled lentils brown rice alfalfa seeds dried beans of any kind raw, whole sunflower seeds, hulled whole wheat (wheat berries) popcorn polished white rice two small dishes cotton or facial tissue 1-quart glass jar (or four small jars) soil to fill jar(s) three-quarters full
7	Social Studies: Note-Taking	index cards (optional)
7	Art: Size Law of Perspective	magazines and catalogs

LESSON	PROJECT	MATERIALS
8	Art: Multimedia Project on Size Law	watercolors colored pencils sponges construction paper glue
11	Social Studies: Model Village	variety of natural materials
12	Science: Food Pyramid	poster board (optional)
13	Social Studies: Maps	variety of maps salt flour cardboard
13	Art: Still Life	fruits and vegetables large bowl
14	Language Arts: Storyboard	poster board, cardboard, or large paper
14	Science: Balanced Meal	magazines (optional)
15	Art: Surface Lines Law of Perspective	magazines and catalogs
16	Social Studies: Map Scale	state or regional map ruler (optional)
19	Language Arts: Personal Dictionary	small notebook (optional)
22	Social Studies: Covered Wagon	milk carton or shoebox sharp knife or utility knife masking tape, glue, or stapler cloth or light canvas contact paper with wood paneling design (optional) wire 5 brass brads cardboard
24	Social Studies: Tree Ring Time Line	poster board or large paper
25	Art: Watercolor Painting	watercolor paints (red, blue, and yellow) watercolor paintbrush watercolor paper
26	Art: Painting of a Planet	watercolor paints (red, blue, and yellow) watercolor paintbrush watercolor paper
28	Science: Zodiac Constellations	poster board or large paper
29	Art: Moonlight picture	black construction paper chalk

LESSON	PROJECT	MATERIALS
30	Science: Star Box	shoebox utility knife black paint several pieces of black construction paper flashlight white pencil or piece of chalk small nail
31	Social Studies: Pony Express Board Game	poster board (or large paper, cardboard, and tape or glue) 1 die several playing pieces (any small object) index cards (optional)
34	Language Arts: Grammar Poster	poster board (optional)
34	Science: Measuring Altitude and Latitude	ruler with a good straight edge protractor that has angles for a half-circle measured out circle compass
35	Science: Cardinal Directions	compass