

Grade 4

Teacher Manual



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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.

Language Arts

Reading

This week, begin reading *Stuart Little* by E. B. White. You should aim to finish the book in three weeks.

Assignments

Before your child begins learning new grammar material, it is important to review previously learned material. This is an important habit to develop and follow regularly. Spend a few minutes each day helping your child recall the work of the previous day. This will help solidify the knowledge and prepare your student for the work ahead.

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."

Using the sample sentences above, here is an example of what your child's work will look like:

The fish swims.

The bird flies.

The lion roars.

The owl hoots.

If your child has trouble differentiating between nouns and verbs, you can help by asking "Who or what is the sentence about?" (that's the noun), and "What is happening in the sentence?" (that's the verb).

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

When writing a faulty paragraph for your child to correct, use simple sentences at first. Don't try to "trick" your child in the first lesson. You want to build up a sense of success at first and then slowly introduce more challenging work.

Here is how the example above would be corrected:

**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.**

In this course, you will sometimes be asked to create original exercises. If you are not comfortable with this responsibility, or do not have the time, feel free to find a book of grammar exercises your child can work from directly.

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.

Some children are very poor spellers who spell most words incorrectly. Others seem to have an almost instinctual ability to spell. Spelling ability is partially related to the learning style of the student and to genetic predisposition, but it also has to do with general reading strength and practice.

Start each week by creating a new list. The list can include words from the reading, a selection from the word lists in the coursebook appendix, and words your child recently misspelled in written work. Review meanings of words, as well as the proper spelling and tricks for remembering the spelling. Some children can easily learn 10 to 12 words per week. Some can handle only five. Trial and error will help you discover what is right for your child.

Encourage your student to practice the spelling words in a different way each week. This will help keep things interesting. When you give the spelling quiz at the end of the week, read each word aloud and vary the order from the list with which your child practiced all week. If your child misspells any words on the spelling quiz, help them make the necessary corrections, and then add those words to next week's list to give your child more time to learn them.

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.

It is important that your child's journal writing experience is largely free of judgment or constraints. This will allow your child to experience the freedom and flow of writing. The most important way you can support your child's journal writing is to encourage them to write on a regular basis (three times a week is recommended) and to be enthusiastic (not judgmental) about what your child has written if they want to share it with you.

Have your child write on both the front and back of the journal pages. Not only does this conserve paper, but it also gives the notebook the appearance of a "real" book being written, which is very fulfilling for a child. Writing in the journal with colored pencils makes a much more beautiful book, and of course, illustrations are always a lovely addition.

Try to avoid using lined paper. Many parents are dismayed by the crooked lines when a child is using unlined paper. However, those crooked lines are very important. When a child sees that their writing is crooked, the child is forced to draw forth from within the necessary strength and balance to keep the lines straight. Sooner or later the lines will become straight, and the child will have grown inwardly. However, if they are always kept within bounds by straight lines, children never have the opportunity to develop inner strength and balance to correct such crookedness.

The subject material for journal writing can simply be the content of life's daily activities. The purpose is to help the child's writing flow more freely and to help bring more awareness to the regular life events. When recalling events of the previous days, let your child struggle with memory a bit before you do the remembering for them.

When reviewing your student's journal, make a note of any areas with which your child has trouble so you can work on those later. Rather than correcting the journal, take time

to focus on problem areas at a separate time so your child doesn't feel you are criticizing their journal writing.

If your child is struggling with penmanship, or has trouble writing in cursive, you are encouraged to refer back to the third grade course. Take the time to do regular form drawing practice, as outlined there. Form drawing leads easily into cursive writing, especially if done often so the child becomes accustomed to the "flowing" motion of the lines. We encourage you to have your child do all sizes of form drawing, both large and small, as well as many different kinds of patterns. Handwork activities (such as whittling, knitting, crocheting, clay sculpting, and beeswax modeling) can also improve writing by strengthening muscles and developing coordination. It is worth taking the time to engage in these handwork activities frequently with your child; you will soon notice an increase in your child's dexterity in writing, and they will have some lovely craft items to show for it!

Social Studies

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.

Your child might appreciate your help in envisioning this tree. You might want to discuss ideas about the tree before your child begins to draw to help your child create a strong mental image of a very old tree.

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.

You can help jog your child's memories about past events if they seem stuck with this assignment. Do not worry about teaching your child about local history—this assignment

is just meant to allow your child to begin considering historical events in a personally relevant way.

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.

The local topography project is a long-term project that extends over three weeks. In the first week you and your child will visit the site to make observations and to collect samples. During the second and third weeks your child will make a scale model of the site incorporating observations made during your visits. This may be the first time your child has had to record information to be used later. Help your student think through the kinds of observations that will be most useful for building a model. Together, you may want to come up with some questions ahead of time that your child can answer while making observations at the site. For example: How much of the site is covered by trees? Is there any water on the site? Are there any objects made by humans on the site?

This first lesson is a great opportunity for your child to get comfortable using the main lesson book. Encourage your child to write in it as much as possible and to think of it as a place to keep track of observations. Remember that you can paste things into the main lesson book later if it is easier to take a smaller notebook with you on your expeditions.

Your child's ongoing log of the project will contain different types of entries. Encourage your child to record information in a way that keeps it organized and makes sense to them. At the very least, each day's log entry should contain:

- Sketches
- Written observations
- A short summary of each day's work

You may want to consider using a field guide of local trees and plants to help you complete the list of species found in your area. If you do not have a field guide at home, you can usually find one in the reference section of your local library.

This lesson contains many detailed instructions. This is a good opportunity for you and your child to learn a bit about how to manage a long-term project with multiple steps. Does your child find the instructions overwhelming? Do they follow each one in sequence or choose to skip ahead? Does your child have an easy or difficult time keeping track of the materials? As you work on the project, gently engage your child to be aware of how to organize the work.

Thinking about how the day went is a good opportunity for your child to think about their learning style. Reflection of this sort may not come easily at first, so you may want to ask your child questions that will encourage deeper thinking. For example: What is the easiest part of this project so far? What is the most difficult? What problems did you encounter today? How did you solve them? What parts of this project are you most excited about?

Science

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.

Students will practice drawing from varying perspectives. Drawings should be carefully done and in full color.

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.

During this first observation activity, your child may have a difficult time coming up with words to describe what is being observed. At this age, children tend to be quite literal in their thinking and they rely heavily on visual cues when describing objects. Encourage your child to close their eyes and use the other senses.

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!

Students can be encouraged to discuss what they see either before or after they draw.



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.

Language Arts

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.

When you create sentences for grammar activities, try to keep them simple. If your student asks to learn about other parts of speech, feel free to expand on this activity, as long as the student has mastered the ability to identify nouns and verbs.

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?

Journal writing is a great time for your child to enjoy writing without the added pressure of spelling and other “rules” for writing. Although it is always important to try to use proper writing conventions, you might want to remind your student that the primary focus of journal writing is on recording ideas rather than on making sure everything is correct.

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.

Refer back to the list of creative spelling practice ideas in the appendix of the coursebook as you go through the lessons. Try different ideas until you find your favorites.

Social Studies

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.

Take some time to reflect on how the project is progressing. These types of projects are great for fostering a genuine sense of accomplishment in students. However, the parent often ends up doing a large share of the work. Identify areas where you could hand over more responsibility to your child.

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.

The sketches should highlight geometric shapes and patterns in a magnified view of natural objects.

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?

The student should answer each of the questions above. The final questions may be the most challenging for the student to answer. For instance, a student might respond that horizontal ridges in tree bark may serve to guide rainwater to the roots of the tree, or to give insects places to hide, or to allow animals to more easily climb the tree. They are not expected to know all the answers right now, but rather to begin thinking about the relationship of form to function.

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?

It may help your student to discuss answers to these questions with you before writing them down. Try to encourage your student to deepen their observations rather than just offering your own ideas.



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.

Language Arts

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.

Final projects provide a good opportunity to assess how well your child is incorporating the grammar material you have covered over the last few weeks. Look to see that

your child is writing in complete sentences and that the first letter of each sentence is capitalized.

- a. Write a book report (see lesson 3 for instructions).

The format for a basic book report is provided in lesson 3. If your child chose to do a book report for *Stuart Little*, encourage a different assignment choice this time. When assessing a basic book report, check to see that your child has included enough details to evoke the spirit of the book. It is tempting for students at this age to make vague statements. Encourage your child to use character names and place names as well as specific scenes and details from the book.

- 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).

This question provides your child with an opportunity to form an opinion and to back it up. There is no right answer to this question. If you find inadequate reasons provided to support their opinion, help your student think through the argument and discuss how to make it more convincing.

- 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.

Look to see that your child is incorporating elements from the main story into this new epilogue. In the book's epilogue, author Natalie Babbitt has Gaylen marrying a character who appears earlier in the book. If the future created for Gaylen is too fantastical, steer your student toward some of the book's more familiar elements. Point out how the details of Gaylen's future are told through the use of a conversation between the Prime Minister and a minstrel. Can your child use a similar literary device?

- 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.

This question allows your child a lot of creative freedom. Encourage your student to gather data from eight or ten people (or more!), and then present the data in an imaginative way.

- 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.

This option allows your child to work in a group and to employ a whole host of different skills. Make sure that the student takes the time to write out a script before focusing on the other aspects of the performance, such as costumes or set. Encourage your student

to introduce the play with a short narrative to put the scene into context so that the audience understands a little of the background before the action begins.

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?

Periodically throughout the year we will ask your child to reflect on how their learning is going. Self-reflection is an important part of the learning process, but it is not easy for

fourth graders. You may find that you have to help your child come up with some ideas before they sit down to write. Encourage your child to be as specific as possible.

Social Studies

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.

Look to see that your student's beeswax models include specific details based on research.

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.

If your child has a difficult time coming up with natural events that the tree has witnessed, make it clear that these events can be imagined. Your child does not have to be certain that they actually occurred. Encourage your student to make educated guesses about what natural events take place on a regular basis in the area.

Science

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.

An important part of scientific inquiry is the ability to follow procedures carefully. Check that your student sets up the experiment accurately.

When making predictions, the student should base them on what they already know as well as what they observed while setting up the experiment. Encourage specific language and correct terminology. For instance, if your student writes, “I think all the seeds will grow,” you might suggest using specific details, such as, “I think the largest seeds (the peanuts) will grow the most” or “I think the smallest seeds (the alfalfa seeds) will take the longest to germinate and will show the least amount of growth.”

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.



Lesson 7

ASSIGNMENT SUMMARY

LANGUAGE ARTS

- ☐ Read several tales from *Native Legends*.
- ☐ Learn new spelling words and take a spelling quiz.
- ☐ Write several journal entries.
- ☐ Correct errors in capitalization and punctuation.
- ☐ Revise paragraphs to fix errors.
- ☐ Practice writing three-sentence paragraphs.

SOCIAL STUDIES

- ☐ Reflect on the term *native*.
- ☐ Begin researching a Native American group.
- ☐ Create a traditional Native American craft.

SCIENCE

- ☐ Create a chart and track seed growth.
- ☐ Compare growth within each experiment group.
- ☐ Compare growth between different experiment groups.
- ☐ Compare previous prediction to actual results.

ART

- ☐ Draw pictures using the surface and size law of perspective.
- ☐ Find examples of the size law of perspective.

MUSIC

- ☐ Add new songs to your repertoire.

Language Arts

Reading

Read several tales from *Native Legends*. These stories should be completed by the end of lesson 9.

If you worked with the Oak Meadow curriculum in third grade, then you and your child have already spent some time studying Native Americans and the experience of the early American settlers. If you are new to Oak Meadow this year, and your child does not yet know how this country was settled, you may want to take a day or two to explore this period of history together. Your child does not need to memorize dates and facts, but should have a basic understanding of how the cultural and physical environments changed with the arrival of European explorers and settlers.

Assignments

1. Create a spelling list. Include words from your reading as well as words you have misspelled. Use at least three different methods to practice the words. Write them in alphabetical order in the main lesson book.
2. Write in your journal. A possible topic includes writing about a dream that you had recently. See how many details you can remember. Can you turn it into a story?

You will want to review your student's journal occasionally to look for grammar and writing challenges that need attention. Remember to address them in the context of language arts lessons, not as a critique of the journal itself.

3. Read the following paragraph:

do you know where my dog sandy is i've been looking for her for an hour i wish i could find her gosh i'm getting frustrated i've called to her a bunch of times but she hasn't come back i'm starting to worry about sandy

You'll notice that it has no capitalization or punctuation. This makes it hard to read. With a red pencil, make corrections to the paragraph, adding the correct ending punctuation and capital letters.

When correcting faulty paragraphs, there is usually more than one way to do it. Here is one example:

Do you know where my dog Sandy is? I've been looking for her for an hour. I wish I could find her! Gosh, I'm getting frustrated! I've called to her a bunch of times but she hasn't come back. I'm starting to worry about Sandy.

4. Here are two paragraphs that are full of many different things to fix: capitalization, punctuation, and spelling. Go through and make corrections and then copy them out correctly in your main lesson book. (If these are too difficult, ask your parent to write some with fewer mistakes, or try these again in a few weeks.)

- Paragraph #1: I went on a walk to look for different kinds of shapes i went with aunt mary we went to middletown Park I found squares and triangles I found rectangles and circles when i went home mr Johnson was there I should him what I had collected tomorrow I am going to cut fruits opin and see what they look like enside

Paragraph #1 corrections: I went on a walk to look for different kinds of shapes. I went with Aunt Mary. We went to Middletown Park. I found squares and triangles. I found rectangles and circles. When I went home, Mr. Johnson was there. I showed him what I had collected. Tomorrow I am going to cut fruits open and see what they look like inside.

- Paragraph #2: where is johnny have you seen him I am so upset with him I could scream he took my ball and lost it have you seen my ball anywhere peter gave me that ball in june and I love it I hope it turns up I feel terrible about it geting lost

Paragraph #2 corrections: Where is Johnny? Have you seen him? I am so upset with him I could scream! He took my ball and lost it! Have you seen my ball anywhere? Peter gave me that ball in June and I love it. I hope it turns up. I feel terrible about it getting lost.

In this lesson—and future ones—you will be asked to write some paragraphs that contain grammatical and punctuation errors. Your child should edit these paragraphs and write them out correctly in the main lesson book. Make sure you assess how many mistakes your child can handle at once. The samples provided in the coursebook may be too difficult or too easy. Feel free to add spelling mistakes if you think your child would like more of a challenge.

You can expect that your child will not catch all of the mistakes that you include. If your child consistently overlooks certain types of mistakes, make a note and set aside some time to review the concept before too much time has passed.

5. Here are some exercises you can complete to help you practice three-sentence paragraphs.
- Choose three topics you know something about. See if you can write a three-sentence paragraph on each one.
 - Have a parent choose three topics. See if you can write a three-sentence paragraph on each one.
 - Look through the books you're using to research Native Americans. See if you can identify the topics of individual paragraphs by reading just the topic sentences.

As you are writing your paragraphs and doing research this week, be on the lookout for proper nouns.

If your child is having difficulty writing three sentence paragraphs, try modeling one of your own. Have your child give you a topic to write about, and talk through your process of writing the three sentences on the topic: one topic sentence, one detail sentence, one concluding sentence. Then, read your finished product out loud. Encourage your child to try using the same process to write their own paragraph.

Social Studies

This week your child will embark on a six-lesson study of Native Americans. As with the previous long-term project, you and your child will have to work together closely on each stage of the assignment. After you've read through the instructions, revisit with your child your reflections from the landscape project, and how the process went for your child and for the two of you as a team. Check in with your child and identify aspects of the project that went well, and aspects that you might try to do differently this time.

As a part of this research project, your child will take notes, write a research report, and construct a model of a Native American village. Research can be a lot of fun, but it can also become quite tedious if the information is difficult to understand. Take some time at the beginning of the project to identify books that you think your child will enjoy reading. If there is not a lot of information available on the Native American group your child selected, consider choosing a different group, even if it was located a little farther away from your local area. It can be frustrating to get halfway through a project only to discover that there isn't enough information available.

Assignments

1. Look up the word *native* in the dictionary. Write down the definition in your main lesson book. You've learned about native plants and animals. Discuss with a parent what it means for a human being to be native to a certain area. Are you native to where you live? Why or why not? Write a sentence in your main lesson book explaining your answer.
2. Begin researching the group of Native Americans that you chose for your illustrated report. Take notes on your findings and keep your notes organized by category.

Taking research notes is a skill that takes time to develop. When children first learn to take notes, they frequently copy sentences word for word from their research books onto their note cards. You will want to encourage your child to be accurate when taking notes, but copying word for word can be very time consuming, and can lead to plagiarism. If you find that your child is doing this, demonstrate how to take notes in bullet form and encourage the use of key words. Your child might find it useful to jot down the relevant page number on each note card so that they can refer back to it later if needed.

If you find that your child is having a difficult time using the note card system for taking notes, feel free to explore alternatives. For children who struggle with penmanship, note cards can be too small. For other children, note cards can be difficult to keep organized. Some children find that making bullet points on a piece of paper as they read is the easiest method. Later on, when it comes time to create an outline, your child can use scissors to cut up the piece of paper into individual bullet points, and then paste these facts onto new pieces of paper in the order in which they will be used in the report.

Some children have a difficult time stopping every few minutes to take notes. They prefer to read for a longer stretch of time, and then to stop and take many notes at once. If your child falls into this category, they might find it useful to use the questions in the coursebook as a guide. For instance, after your child has read a section on religion in one of the research books, they could answer the question, "How important was religion in their daily life?"

3. In a few weeks, you will be adding a traditional Native American settlement to your landscape model. The making of Native American crafts, clay figures, dwellings, and all the various details for the model will give you plenty of creative opportunities. To give you ideas for projects and activities related to Native American food, games, crafts, and musical instruments, we have included a section in the appendix for Native American crafts.

This week, choose at least one traditional Native American craft to complete. You can choose one from the appendix or from another source of traditional crafts.

Science

Assignments

1. Observe your seeds and record their growth in a chart. Look carefully at your seeds every day, with the naked eye and at 5x and 10x magnifications. Keep your soil moist enough so the seeds grow but don't rot. Once they begin to sprout they will need some light.

Each day, draw the seeds, showing how they are changing. Record this in your notebook in a chart similar to the one here:

Note: You may have to wait several more days if some seeds have not sprouted enough. If you see no growth at all in seeds you think should be growing, try the experiment again with new seeds.

2. Compare the growth of the peanut, lentil, brown rice, and alfalfa seeds. How are they similar? How are they different? Compare the growth of beans, sunflower seeds, wheat, and popcorn. How are they similar? How are they different? Write a short paragraph explaining the similarities and differences within each group.
3. How does the first group differ from the second group? Draw the difference.
4. Observe what has happened to the polished rice. Describe it. Compare what actually happened to what you guessed would happen on the first day. Was your guess correct? Why do you think you got this result?

Students are encouraged to make connections and to compare their predictions with the actual results. Keep in mind that sometimes the best way to make connections is by discussing ideas with someone else.