

## Unit Two - Looking Closely: Observing, Labeling, and Listing Like Scientists

*October/November*

### Welcome to the Unit

This popular unit serves three important purposes. First, it is designed to help children develop the foundational skills that will put them in good stead as they move from emergent toward conventional reading and writing. Prior to this unit, children might have been reading and writing “as best they can,” even if that meant that they drew, told, and improvised exciting stories without really using many letters. This unit channels them to transfer and apply their knowledge of letters and sounds to labeling items and listing observations. You might say the unit positions children to focus on their reading and writing, pressing the pause button on the fast-paced plots of their narrative writing to write labels and sentences instead. Children, then, are able to take the time necessary to stretch out each word, listening not only to the first sound, but to every sound after that. The unit also channels children toward writing list books, pattern books, and books with simple sentences that will likely revolve around high-frequency words.

Then, too, this unit is designed to teach children that writing is not only a tool for storytelling; it is also a tool for learning about science. Writing is a means through which children can study and come to know (and eventually teach) about the wonderful world of science, recalling information from experiences to answer questions. This unit positions them to begin to work toward these goals as they notice ways they can write about the world around them.

Of course, a third reason the unit exists is because writing matters and because science matters. Providing children with opportunities to learn about rich, engaging content matters. It would be difficult to overemphasize how important it is for children to understand, writing as a tool for learning in the content areas. Many children are enthralled by any chance they get to study bugs, trees and plants, water and rocks.

This unit provides opportunities to see that learning about one thing leads to learning about lots of other things. Writing about a shared research topic, such as trees, provides a supportive scaffold for young kindergarten writers early in the year (CCSS W.K.7). Young children, of course, are dying to know how acorns turn into oak trees, where animals go in the winter, and why leaves fall from trees. It is a very good thing, then, when children are not only reading words, but, as educator and philosopher Paulo Freire has described it,

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“reading the world.” It is crucial that schools give children opportunities to learn about the world and to expand their background knowledge. It is equally important for children to use writing as a tool, just as it is used in the real world by millions of people, for organizing, holding on to, and making sense of whatever content they want to learn.

## Assessment, Tests, Standards

If you opted to assess for all three of the Common Core State Standard strands (narrative, information, and opinion writing) before entering this unit, then you already have a baseline. If not, then now is the time to do an initial assessment of what your children can do, as information writers. The explanation for how to conduct this assessment can be found in *Assessment Ladders*, a part of the series *Units of Study in Opinion, Information, and Narrative Writing, Grade K* by Lucy Calkins and Project Staff (Heinemann 2013). Remember that this is meant as an initial assessment, so you won't be conferring or teaching into the writing your children do on this day, just observing and encouraging them to do the best they can. Plan to use one writing workshop to do this, though it may take less time than that. You may stop when most or all of your children have run out of stamina, noting how many minutes your class was able to sustain writing and making notes on individual children.

Once children are done, collect all of the pieces to see what was produced, and use the information on the writing rubric for grade K (also available in *Assessment Ladders* and aligned directly to the CCSS) to determine a writing level for each child. This will help you decide what to teach in terms of structure, development, and language conventions.

This assessment will also help you determine the kinds of paper (how many pages in the booklets and how many lines of writing) to start kids on, as well as what to teach your whole class versus what to teach small groups or individuals in this unit, so that you can differentiate for the range of needs in your class. You might consider doing a summative assessment exactly like this one at the end of the unit, so that you can compare what students were able to do before the unit with what they can produce after the unit.

Your goals in this unit will include setting children up to address Common Core State Standards for writing and speaking and listening, as well as a few reading standards. Just as you expect entering kindergartners to “compose informative/explanatory texts” (CCSS W.K.2), by the year's end, they should be able to compose information texts in which they “name what they are writing about and supply some information about the topic” (W.K.2). This unit will set them up to work toward these goals and will provide many opportunities for repeated practice. If you follow the scope and sequence put forth in these calendars (based on the new Units of Study series), then children will have repeated opportunities to revisit and strengthen their informational writing skills across the year, as well. It is

possible; even likely, that by the end of this unit some of your children may be producing work that is approaching—or even at—the end-of-the-year benchmark for kindergarten.

Writing to learn about the scientific world, of course, is an important part of the Common Core State Standards. The standards state that kindergarten children will be able to “recall information from experiences or various sources to answer a question” (W.K.8). In this unit, children will learn specific ways to observe and take note of the physical world.

Of course, like many of the early primary writing units, there is an ulterior motive—to teach important reading skills. As your children compose information texts of their own, they are in fact doing much of the work they need to do to meet the Common Core State Standards for Reading Informational Texts. Specifically, throughout this unit they will learn to “ask and answer questions about key details in a text” (RI.K.1) and when talking with partners and discussing their books with each other, children will also learn to “identify the main topic and retell key details of a text” (RI.K.2). They will be studying this from the inside-out by creating books that stay on a topic and telling information across the pages (parallel to the work they do as readers, naming the topic and telling the information across pages). Lastly, as readers, your children will learn to “describe the connection between two individuals, events, ideas, or pieces of information in a text” (RI.K.3), particularly in the latter half of the unit, when children learn to compare and contrast, make connections, and grow ideas that can be included in their writing.

## Overview

**Essential Question:** How can I write lots of books about the things that I study?

- **Bend I: (Living Like Writers, Living Like Scientists)**, students will “read the world,” collect natural items and create booklets of representational drawings with labels and, possibly, sentences, to capture the details with precision, while referencing nonfiction books when appropriate.

*How can I observe and study real things (like leaves) and draw and write lots of details to teach others?*

- **Bend II: (Making Books Just Like the Ones We Read: Studying Mentor Texts and Making Reading/Writing Connections)**, students will begin to study the work of mentor authors. They will spend several days, or perhaps a week, learning from these authors’ ways to create books that mirror patterned information books and, in some cases, create booklets with complex sentences.

*How can I study and learn from other books so I notice what other writers do and can try some of those things in my own writing?*

- **Bend III: (Writing More: Adding Details and Information and Writing Phrases or Sentences)**, students will learn ways to revise. You will teach them that revision helps them elaborate and extend their thinking. Your class will take three or four days to revise several of their most prized pieces of work, moving between recording careful observations and including their own thinking.

*How can I get better at writing with details? If I revise, can I put more information in my books so my readers learn more?*

- **Bend IV: (Becoming Researchers: Scientists, Make Connections, Predict, Have Ideas, and Compare and Contrast)**, each student will study one science topic, chosen from several possibilities, and will create books about the chosen topic. Children will spend the week making observations, labeling their diagrams, writing captions, and creating information books that demonstrate what they have noticed and learned. Some children might study pumpkins or apples, while others are studying coconuts and palm fronds. This bend culminates the strategies that students have already learned. Children will end the unit by publishing books they have written on the shared class science topic or on their own independent topics.

*How can I write lots of books on topics I chose by myself? Can I write these books using all I have learned about writing like a scientist?*

## Getting Ready

### *Gather Texts and Materials for Students*

In this unit, you will invite children to observe, collect, and study bits of their world. You will need to decide, first, what shared class topic your students will study together during the first portion of the unit. Many classrooms choose to study trees and decide to adopt a tree of their very own outside their school building, to observe and study not just for this month, but across the year. This allows children to see firsthand how trees respond to changes in the seasons. You will likely want to bring in a few boxes of large zip-top baggies to school so that children can collect “science artifacts” (leaves, twigs, acorns, pine cones, and more) to bring into your classroom while they are on writerly walks. You may want to gather trays or some other container in which to store the items your children collect. We suggest you find books to read and reread on the topic you are studying. For example, we recommend National Geographic’s picture book series on seasons and trees (*A Tree for All Seasons*; *Seed, Sprout, Pumpkin Pie*; and *Apples for Everyone* by Jill Esbaum). *Leaf Jumpers* by Carole Gerber is a beautiful, simple and poetic text that teaches about leaves and how they change colors.

To help youngsters assume new roles, and capture subtle details, you could supply them with blank researchers’ notepads and colored pencils. Then again, you might just decide to give each student a clipboard. You may also decide to send these clipboards home so children continue to live “writerly, scientific lives” outside as well as inside the classroom.

Your students’ writing materials will need to change and grow as their writing abilities increase. For the start of the unit, plan to provide booklets that contain at least a few lines at the bottoms of each page, signaling that children should by now be writing sentences, as well as labels.

As you teach your children to value and grow their learning by paying close attention to the world, you may want to read aloud books that celebrate this aspect of the writerly life. Try Byrd Baylor’s *I’m in Charge of Celebrations* (1995) or *The Other Way to Listen* (1997). Joanne Ryder’s books also illustrate the wide awakesness you’re trying to teach, as do Valerie Worth’s poems, especially those in her work *All the Small Poems and Fourteen More* (1996).

In the second bend in the unit, the mentor text bend, you will highlight the way that little leveled books tend to go so that children can model their own little books after the books they read: gather up a few favorites, particularly a few leveled books on the topic of choice.

You'll be highlighting some of the simple things these authors do that your kids could also do: writing lots of pages on one topic, putting a sentence or so on each page, using repetitive language, and so forth.

### ***Plan Excursions***

Throughout this unit you will take your class on excursions. On many of these, during which you will encourage children to collect objects to bring back to the classroom. These objects can become part of the collection of items under study. If these excursions take you off of campus (as some surely will, assuming you are studying plants or trees), then you will need to secure parents'/guardians' permission and you'll need volunteers to join you. Plan accordingly, well in advance of these trips.

### ***Choose When and How Children Will Publish***

At the beginning of the final bend, you will need to decide whether your students will be publishing books that they have written on the shared class science topic or whether they publish the books on their independent science topics. You might then decide to celebrate the work of this unit by placing children's books on display in the library, the science lab, or the science bulletin board. Additionally, since one of the main purposes of content area writing is to teach others, you may decide to invite another class, one that has not been studying the topic that your class has been writing about, to come for the celebration. This visiting class will provide your children with an audience of readers who are there to learn new information. Perhaps your children can present one or two of their books to a partner from this other classroom.

## **Bend I: Living Like Writers, Living Like Scientists**

### ***Convey expectations from the start: volume, stamina, and transference***

From the start of this unit, we suggest you encourage children to write in three- to five-page booklets. There is good reason for this; booklets of this length provide built-in encouragement to keep going, to write more than just one page or two. You'll also want to be sure that the pages in the booklets contain plenty of room for big observational drawings with labels (for students to write label books), as well as at least a few lines at the bottom of each page, to signal to children that they should by now be writing sentences, as well as labels. It's hard to emphasize the extent to which materials themselves convey expectations. They should always march a few steps ahead of children, like clothes to grow into.

Because most beginning writers write with big letters, they will need lots of space if they are going to write words to accompany their drawings. Some teachers even opt to use

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legal-size paper for this unit so that kids have plenty of space to draw life-sized diagrams of leaves (or whatever the kids are studying), and so the children also have room to write a few lines at the bottom of each page. Just as the presence of lines at the bottom of each page conveys an important message to your students about the expected volume of a particular piece, supplying students with tons of books conveys the expectation that they will write not one booklet, but a whole lot of booklets. One book a week would be far, far too little writing. Kids this age can write even more than one book a day! The more books your children write, the more opportunities they have to write words.

Certainly you will want to encourage your kids to start another book as soon as they finish the first. Ask expectation-laden questions: “How many books have you written so far today?” “How many books do you think you’ll write today?” “How many books do you have in your folder so far?” Be sure to celebrate the high volume and stamina that this unit is sure to generate. What could be more engaging for children than working with leaves and twigs, acorns and pine cones?

This unit offers an opportunity for children to apply and transfer all that they learned from any previous units they have participated in. If a few children become stuck or aren’t sure how to organize their writing across pages, invite them to problem solve along with you, saying, “Hmm, I see you’re having trouble getting started. What do you think you could do first?” This is a higher level of teaching and thinking, the kind of strategic thinking emphasized in levels 3 and 4 of Norman Webb’s Depth of Knowledge model. So, for instance, you might choose to begin Day One with something like this: “Today I want to teach you that writers are like scientists: they notice stuff that most ordinary people just walk right past and they write to teach others what they notice. Instead of just passing right by the everyday things, writers stop and jot down their thoughts and observations, using words and pictures to capture every detail.”

“Today I want to teach you that writers are like scientists: they notice stuff that most ordinary people just walk right past and they write to teach others what they notice. Instead of just passing right by the everyday things, writers stop and jot down their thoughts and observations, using words and pictures to capture every detail.”

***Rely on partnerships and conferences to support independence and problem solving***

Along the same lines, partnerships are great tools for propping up individual kids to address and solve their writing challenges. Tell them that during independent writing time, when they really aren’t sure what to do or to write, they can whisper to their writing partner for quick help, and then go right back to their own work. This sort of peer communication gives students valuable opportunities to try out the difficult task of identifying and naming writing challenges and gives them chances to brainstorm ways to solve those challenges. As these routines are built into your writing workshop, students should begin working with greater independence, allowing you to hold more conferences and pull additional small groups.

You'll also benefit from providing children with some structured partner time each day. Children's enthusiasm over the science artifacts will naturally incite partner talk. While not dampening their zeal, you'll want to gently guide their talk by encouraging them to use scientific vocabulary (veins, stems, leaves, bark) instead of vague language (thing, stuff, it). Some teachers find it helpful to allow for five minutes or so of partner talk after a minilesson and before switching to independent writing time. You can direct your partner time by saying, "Take a few minutes to meet with your partner to talk about what you're going to write today," allowing children to be excited (and possibly noisy) while they are gathering ideas from what their partners say, before turning their attention to writing a transition into quiet work. All of this supports the work kindergartners must do to meet Speaking and Listening Standard K.1: "Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers." You may decide to teach partners some specific things they can say and do together. For example, "Writers often talk to others about what we are planning to write, before we even get our pencils ready. Before we start to write a new book, we can ask our partner, 'What are you going to write today?' and listen carefully to all that our partner says. We might even get more ideas for what to teach just from listening to what our partner plans to do!"

"Today I want to teach you that writers often talk to someone about what they are planning to write. Before you write ask your partner, 'What are you going to write today?' Sometimes *you* get ideas from what your partner says."

It is predictable that a few of your children will jump from topic to topic, writing something different on each page of their booklet, or that some of your children will put all of their energy into their pictures, neglecting to attempt writing letters or words. Teach your writers to stay focused on one particular subject as they write—to supply information through words. Use your conferring notes as data-in-hand to keep track of the students who are not yet doing this, and meet with them in small groups to coach them into staying longer with one topic and adding labels to everything, spelling as best they can. As you confer with individual writers, try to figure out a theory for each of your children: "What kind of writer is this? What does he or she tend to do often (not just one time)? Is there a pattern in this child's behavior as a writer that I could teach into?" Build theories about your children to help you effectively confer with each one so that you teach strategies that will help them progress to the next steps.

### ***Have students research the world through books, experience, and observation***

In a few of your minilessons you will teach children that information is all around them; as they study, they'll find themselves wanting to know more, and they can readily find new information in all sorts of places. One of those places is the pages of books. Perhaps you'll teach a minilesson in which the class "participates in shared research" (CCS W.K.7), reading from the pages of a big book and then incorporating a piece of information into a shared writing project. Before long, your children will no doubt convince you to allow them to keep book baggies or book bins brimming with books, alongside their writing materials. By

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explicitly teaching students how to draw on a combination of experiences, observations, books and other sources, this unit is designed to address the Common Core State Standards' expectation that kindergartners learn to "gather information from experiences or from provided sources to answer a question" (W.K.8).

Of course, adding books to the mix adds a world of instruction. "If you want to know the scientific word for the little lines on a leaf—and of course, you'll always want the scientific word—then this book can tell you!" The words will sometimes be long and hard to read, but your children will be able to figure out many of these using pictures and the vocabulary resources you will have provided during shared reading and read-aloud. You could teach yet more lessons about using academic vocabulary, encouraging children to not just copy the words they find in books, blindly, letter by letter, but to try saying each word slowly, perhaps clapping out the syllables so they can articulate it clearly.

As we encourage children to use various resources you may say to them something like, we might stop to think, "Wait, do I know another word to describe this?" or "Is there a word in the room that can help describe or name what it is that I am talking about?" Then we can find those words and add them to our books.

"Today I want to teach you that writers think very carefully about the words they use. One way they do this is by thinking, 'Wait, do I know another word I can use here?'"

Throughout this unit, make a point of praising children's inclinations to observe closely. Encourage kids to pick up bits and pieces, to put these on trays, to examine them closely, and to draw them with an eye for detail. Stop children as they work, holding up one drawing or another, and talk about the smart ways in which one child used shape and color or another used size to make an item look real. Make photocopies of some of their work in progress to hang around the room or display on a shelf or tape to a chart. Congratulate children publicly for spending extended periods of time on one single drawing, adding more and more detail to it. Ooh and ahh when a child fills an entire page with a drawing of a little acorn. That child has made a small item very big, and scientists (and writers) do the same thing.

### ***Teach children to draw representationally—seeing and hearing more means writing more***

Whether you have given your students colored pencils or markers, the unit will begin with a renewed commitment to making representational drawings, this time with writers working especially hard to capture details with precision, just as scientists do. Teaching children to draw representationally is significant work; doing so steers them to conjure up a mental picture of a topic and then to capture that image, that idea, with fidelity onto the page. The effort to put life onto the page, with detail, is fundamental to the writing process. Encourage children who are tracing to notice and draw the details on their own so that their writing is a place to practice observation and representational drawing, with an emphasis on observing, thinking, and carefully reconstructing. When instructing your class to do this it may sound something like, "When we are writing like scientists, we need to try

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to capture what we see, exactly how we find it. So if there is a hole in the leaf we are writing about, we don't just make a dot, we draw a hole. We need to look closely as we draw and write about the things we see, including exact details as we see them.”

Of course, this is writing time, so any drawing that children do will be a prelude to writing—and that writing needs to thread through most of every day's workshop. This means that as the year unfolds you should see children writing for increasing lengths of time, producing more and more text. As always, you'll need to use your understanding of what your children can do to guide each child toward the writing that he or she should be achieving.

You may gather some small groups to remind children to make many labels. Teach them to say words slowly, stretching them out, hearing the first sound, recording the letter that matches that sound, then rereading what they have written, continuing on through the word so they hear and then record the second phoneme. As you do this, you will be helping those children draw on what they know about letters and sounds. Some children may still rely on letter names for their sense of the sound the letter makes. (This works as a starting strategy because usually the name of a letter contains the sound associated with that letter.) Some children will already be hearing and recording beginning and ending consonant sounds, if not all the phonemes in a word, and you'll want to teach strategy lessons to these groups of children to draw on their growing knowledge of letter-sound correspondence, known words, and visual information when they write. This is important work to teach across all units, because the Common Core State Standards expect kindergarten writers to “write a letter or letters for most consonant and short-vowel sounds (phonemes)” by the end of the year (L.K.2.c). You may say something like, “As you write, you might stop to reread what you have recorded. You could put your finger under what you have written, as you read the word. Sometimes as you reread a word, you realize, ‘Oops. I forgot to put one of the sounds onto the paper,’ and then you can add more letters.”

Nudge groups of children who are hearing and attempting to record most of the consonant sounds in a word to write a sentence under each picture, but be careful not to overstep. This unit is not meant to be a “fill-in-the-blank” unit where the teacher provides all the patterns, and the children supply the missing words. The big idea in this unit is that children will invent their own sentences and patterns, giving them an insider's understanding about language that will support them in reading as well as in speaking and listening.

During read-aloud time, you may want to stop as you read and intentionally model sentences that begin with prompts that are helpful for writing about science. For example, you can plan ahead that you'll stop periodically as you read aloud and use sentences that begin, “I notice . . .” or “I wonder . . .” or “I think . . .” This accomplishes two goals. You'll be demonstrating talk that is accountable to what the book actually says (as opposed to allowing your train of thought to carry you away from the text), and you'll also be modeling

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academic language that is incredibly helpful throughout the school day. During read-aloud, when you stop to give children opportunities to talk about books, you can coach them to use these prompts in their conversations. Later, if children are stuck during writing workshop, you could refer them to the growing list of accountable talk prompts you have displayed on a chart in your room. Surely by now your children are familiar with the prompts, “I notice . . .,” “I wonder . . .,” or “I think . . .”

**Bend II: Making Books Just Like the Ones We Read: Studying Mentor Texts and making Reading-Writing Connections**

*Teach students to notice the structure and craft of mentor texts and incorporate them into their own writing*

Throughout your day, and through the weeks, you’ll want to read aloud texts that support the content of this unit: books about trees, plants, seasons; poems, big books, charts, and texts that you and your children have created together. It is likely that one child will make the discovery (which you’ll then share with the class) that the books you’ve been studying together can not only be sources for answers and information, but they can also become mentor texts. You might say, “You know those science books at your tables? The books we’ve studied together? Marco just realized that we can write books just like these about our own topics! About leaves or trees or our walks outside!”

“Today I want to teach you that writers use the books they read to get ideas for their writing. One way they do this is by noticing something in a book they’ve read and then trying that exact same thing in their own book.”

Before long, students will notice features shared by these books written by grown-up scientists; they’ll point out that these books all have covers with titles that relate to their main idea, that all the books have at least one sentence and often more on a page, and they will resolve to do likewise. You can help students discover that some of their just-right science books are written in a patterned way and some contain a twist at the end. Naturally, youngsters will want to write in similar ways. You’ll see children writing list books with one phrase or label per page: “The leaf. The stick. The bark.” You should expect other children to write simple sentences or patterns like “This leaf is yellow. This leaf is red. This leaf is green.” Again, the materials you provide will make all the difference. It is likely that with some coaching, many of your children will easily grasp the Common Core Craft and Structure expectation that kindergartners will “identify the front cover, back cover, and title page of a book” (RI.K.5) and will even gesture toward the first-grade standard to “know and use various text features” (RI.1.5).

One-to-one conferences will support this work. For example, you and a child could compare a leveled book from the child’s own reading workshop book baggie with the one he is writing—maybe even simply counting the number of pages in each. If his own book is

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shorter than the mentor text, then the child could aim to write more by stapling on some extra pages to his book. This work, of course, can become the centerpiece for a minilesson or a mid-workshop or share session as you invite other students to engage in similar work.

Some groups of children might benefit from learning to write different kinds of sentences (complex sentences, with a variety of language structures and punctuation). You might teach your whole class to notice that sometimes the books we read ask questions. Suggest that some of them might try writing a book of questions or a book of questions and answers. This work sets children up to meet the standard of understanding and using question words (L.K.1d). Playing around with syntax will also give kids plenty of practice with a new kind of sentence, more options for kinds of books to write, and a new way to think about the science they are studying: scientists ask questions at least as often as they record facts. You can add both to the list of options they have thus far collected (that list now includes all of the structures you've taught so far in this unit: label books, list books, books with sentences, and now questions and answers). But beware of simply assigning kids to write question and answer books: Doing this will lower the level of thinking kids are doing. Instead, help children to understand the purposes behind *why* they might use this structure, perhaps with a teaching point like: "Scientists not only record exactly what we see right in front of us, and what we already know, but scientists can also push themselves to ask, 'Why? Why do leaves fall to the ground?' Then they take their best guess. As we write our books we can ask questions that start with 'Why does...' or 'What for...' We can write our observations *and* thoughts *and* questions in our science books. Then we can stretch our thinking even further by making a guess or a prediction about the answer by saying, 'Maybe...' or 'Probably...' or 'Could it be?' We can use what we know about science to develop a good hypothesis (or guess) about the answer to our questions to include as well." (Keep in mind Webb's Depth of Knowledge, which places greater emphasis on students' ability to transfer and apply what they have learned on their own, rather than simply completing assignments and following the teacher's directions.)

"Today I want to teach you that scientists not only record exactly what they see right in front of them but they also ask, 'Why?' Then they take their best guess."

By now, you've done quite a bit of work around the acquisition and use of topic-related scientific vocabulary during read-alouds, shared reading, and science time. If your scientists are studying trees, their writing should include terms like stem, veins, bark, and twigs. If they're studying weather, then you would encourage students to use vocabulary they've learned such as temperature or precipitation. According to the Common Core Language Standards, by the end of the year in kindergarten students should demonstrate the ability to learn the meanings of new words and apply these in their own writing (L.K.4a). Consider adding scientific terms to a science word wall or chart during read-aloud, shared reading, and science instruction. Add the words one or two at a time as they come up in your reading and shared experiences. Write the words in large letters on sentence strips or index cards, as you would for your usual word wall words. Be sure to include a

photo, drawing, or other representational picture next to the vocabulary words so that all kids can access them.

***Guide students to reread their own writing, making sure that it is readable to every reader, themselves included***

As this unit evolves, be sure that more and more children progress from hearing the initial sounds in words to hearing and recording all the phonemes. Identify the children whose spellings indicate that they do not yet fully grasp that each sound needs to lead to at least one mark, one letter, and give those children a great deal of repeated scaffolding. If they practice making labels every day, with you providing the support for stretching words out and hearing more constituent sounds, they will soon graduate to writing sentences underneath their pictures. Your goal is that they write so that they can reread their writing, using one-to-one matching, and so that you can read their writing too, or at least long stretches of it. You may want to suggest that when children progress to sentences, they first simply write, "I see the . . ." If this seems like dull writing, reassure yourself that it is not dull to children. These students are on the brink of learning to read conventionally, and one of the most important things they can learn is the concept of one-to-one matching. Even when a child writes a text as mundane as "I see the green leaf. I see the red leaf," and then reads that text back, pointing at each word as she reads it, that child is making gigantic strides.

"Today I want to teach you that writers add lots of details. One way they do this is by adding another page and zooming in on the details."

It will be important for you to encourage children to leave spaces between their words (and through this, to develop more of an understanding of the difference between words and letters). If children squish their letters together without leaving spaces between words, teach them to reread, making slashes where they might want spaces. Another way to accomplish the same result is to listen to what the child wants to say, and then repeat each word, encouraging the child to draw a line under the spot where each word will go. The writer can then touch each blank, saying aloud what he or she will write, and then record a word in each blank.

### **Bend III: Writing More: Adding Details and Information and Writing Phrases or Sentences**

***Teach students to elaborate by looking closely at what it is they are writing about and adding details about what they have noticed***

Teaching children elaboration is a big part of both inspiring and propping children up to write books just like the ones they read. As part of this, you will both help students write more information about their topics (CCSS W.K.2) and also support them in strengthening their writing by adding new information and writing with details (W.K.5). You might begin

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Unit Two - Looking Closely: Observing, Labeling, and Listing Like Scientists

by teaching children that writers revise to include even more information. As writers learn more and more about their topic, they go back to their old books and add in the new information. Often a writer will decide to do a whole new drawing, and perhaps this whole new drawing might be one that zooms in on one part of an object, allowing both the writer and the viewer to notice more. Scientists, of course, sometimes revise to add more detail using magnifying lenses. If you have any on hand, they will certainly fire up your children's enthusiasm, especially if you saved them just for this part of the unit. Even if you don't have magnifying lenses, you can make "zoom lenses" from three-by-five index cards that have a one-inch hole cut out of the center to encourage children to focus on the smaller details of a larger object. You may decide to say the following to your class; as writers and scientists, we need to look again and again, adding to our pictures and our words.

After we draw and write about a leaf, we look again at the leaf, really closely, maybe with a magnifying glass. We try to find any details we may have missed. As writers we can always add more details to our pictures and to our words. You may even decide to start a new page, zooming in on the details!

"Today I want to teach you that when scientists write, they record what they see *and* what they think. They say, 'Hmm... I wonder....'"

If earlier you decided to teach groups of children to write list books, these may have read, for example, "I see the leaf. I see the acorn. I see the pine cone." Now you will want to teach them to elaborate—to think and write more. There are lots of ways to help children elaborate, the most essential being nudging them to talk about and write whatever they notice or think or wonder about an object. You can also teach elaboration by putting a spin on what scientists do. For example, you might teach children that scientists usually write what they see first, but then they look again, this time for more details: "I see the leaf. It has little holes in it." Of course, it is also important to teach children (if they are ready) to alternate between recording what they see and recording what they think; for example, "I see the leaf. Why is it red?" Children might also observe and write off of photographs in the same manner. This should nudge kids even further toward meeting the CCSS for writing informational texts.

***Guide students to use a variety of spelling strategies as they write***

When children are encouraged to write whatever is on their minds, they tend to become inventive spellers, tackling words fearlessly. This means that you will want to encourage any children who are writing with just one or two sounds to slow down and listen for more sounds. If you notice other children starting to record some vowel sounds, plan to spend a little time during word study teaching about how to use short vowels to spell. You may convene other groups to work on using known words to spell unknown words. All of this will be possible because children will be using their high-frequency words and patterns to write with greater fluency. Since many of their sentences will flow quickly, writers will have more stamina to spell the tricky words using increasingly complex spelling strategies. The CCSS Foundational Skills suggest that kindergartners should understand directionality and that words are separated by spaces in print.

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For students who have lots of experience with print, writing from left to right and top to bottom will come naturally. Some students might need more prompting for directionality as they write. After a student writes a word you might say, “Where will you write the next word?” to get kids used to writing left to right and top to bottom as they write sentences.

***As students learn new strategies and crafting techniques, encourage them to return to old books and make revisions***

Remember, as this unit progresses, children will be churning out a lot of little books. They will write approximately three a week, each with three to five pages. This means that when you teach children something new, you can encourage them to revise previously written books, adding whatever you’ve most recently taught to those earlier projects. If a child draws and labels for the first week and a half of this unit, and then you teach her to write sentences, she might go back and reread her existing collection, this time adding a sentence to elaborate on every page of her earlier books. If you teach another child that in addition to recording observations, he could also record his thoughts, and suggest that one way to revise is to ask questions, that child could reread all his books, changing “I see the leaf,” to “What do I see? I see the leaf,” or “I see the leaf. I wonder why it is green.” You might also have students self-assess the work they are doing using the Information Writing Checklist

#### **Bend IV: Becoming Researchers: Scientists, Make Connections, Predict, Have Ideas, and Compare and Contrast**

***Decide whether students should publish from among the writing they have collected thus far or move on to independent science writing projects***

So far, the emphasis in this unit has been on making observations, collecting information and details, and recording those details on the page through drawing and writing labels and sentences—and for many classrooms with beginning writers this can and should be the emphasis for the remainder of the unit. If this is the case for your group of students, an option would be to wrap up the unit with children choosing a collection of their work so far and spending the last few days of the unit preparing to publish those pieces.

This write-up, however, presents another option, one that provides the opportunity for children to transfer and apply all that they know about information writing to science topics of their own choice. Rather than wrapping up now, you may decide to end the unit by allowing each of your children to study a science topic of his or her own and to become an expert on that topic to teach others.

Unit Two - Looking Closely: Observing, Labeling, and Listing Like Scientists

***Guide students to choose independent science topics to study, from resources you have made available to them. Remind children that they can apply all they have learned about writing about science through the shared class topic to their own independent topics***

By this point, you have read aloud quite a few books about plants, trees, or whichever science topic you have chosen for the unit. Now is the time to set up baskets of resources related to apples, pumpkins, snow, weather, the seasons, and any other science-related topics with which children should be familiar.

Then, allow your kids to choose, from these topics, one to study. You may have a group of children studying apples, with real apples to examine, as well as books and photos to browse. Another group might be studying pumpkins, with a pumpkin to dissect with your help, along with seeds and some books about pumpkins. You'll probably want to get around to each group of children to teach into not only the writing they are doing, but also the vocabulary and information to go with their selected topics. You might read aloud to the group or do some shared reading or writing or simply have a conversation with the group.

"Why do you think some apples turn red? What do you think is inside a gourd? How do pumpkins grow? And what does all this have to do with trees and the seasons? What is the same and what is different based on what we know from studying leaves?" Though a small group of children will be studying the same topic, they will continue to select their own ideas for each book they write. A child studying apples might write her first book about apple seeds, the next about foods made with apples, and a third about apple trees. Another child in that group, sitting at the same table, using the same materials, will likely write three completely different books, perhaps one book of questions about apples, another on how to make apple cider, and yet another on different kinds of apples.

Encourage your children to use what they know from the read-alouds as well as the science materials in front of them. Teach them that writers can also answer questions and write books based on what they know (CCSS W.K.8)—not just about what's in front of them. So, for example, kids can write books that are about "picking pumpkins" or "how pumpkins grow" or "places to buy pumpkins" because all these are things that they may have studied this year or that they know from their own experiences. You might even make copies of the cover of each read-aloud book to make an easy-to-see list of all the books children have been reading about the topic. You may want to display the read-aloud books you've done in an easy-to-access part of the room, or even make a chart for each read-aloud book (as you are reading it, of course) to remind kids of the key content they've learned so that they can access that information during the writing workshop.

"Today I want to teach you that you can use information you already know in your writing. You might think, "What do I know about my topic that I can teach to other people?" and then add that information right into your book."

## Unit Two - Looking Closely: Observing, Labeling, and Listing Like Scientists

In many classrooms, the work children will do in their new topic-based studies will be the culmination of the strategies they have already learned. They will make detailed drawings, write lots of labels, and write sentences, and even patterns, using everything you have already taught—transferring it and applying it to a new topic of their own. They will have fewer whole-class shared writing experiences and teacher demonstrations to rely on, because they'll be studying a topic at their table rather than a topic the whole class is writing about at the same time.

***Push students to think and write about science in ways beyond making simple observations. Science writers make inferences and ask questions, as well as compare and contrast***

For some classrooms, particularly ones where children are beginning to write sentences, it will benefit students to be pushed to learn new ways to think about the science content they've been studying. For example, you might teach your class that yes, scientists (and writers) do record exactly what they see in front of them, right down to the last detail, but they also can push themselves to think, "Why?" and "What?" "Why do leaves change colors?" "Why are pumpkins orange?" "What is the reason seasons change?" "What makes trees grow so tall?" Then writers can stretch their thinking even further by making a prediction (or hypothesis). Prompts like "Maybe . . ." or "Probably . . ." encourage children to hypothesize about the science artifacts in front of them, using all that they've learned up to now through read-alouds, science instruction, science walks, and so on.

Another option, either for small groups of children or for your whole class, is to arrange the science materials in ways that lend themselves to compare-and-contrast work. You might place a basket of different kinds of apples at one table, different gourds at another, pine cones and nuts at another, and varieties of pumpkins at a fourth table. Then teach your children that writers often look closely at objects to notice and record what is the same and what is different. Together, you might sort a basket of mixed leaves or pine cones or a twig, talking about what makes them each the same or different as you go—perhaps even writing at the same time. You might create a chart with your kids that list some language for comparing and contrasting. "I noticed \_\_\_\_ is the same as \_\_\_\_." "They both . . ." Or "I noticed \_\_\_\_ is different from \_\_\_\_." Then children can use that language to make comparisons related to their own topics.

"Today I want to teach you that scientists look closely at objects to notice and write down what is the same and what is different about them. They might look at two things and say, "I noticed that this is the same..." or "I noticed that this is different..." or "They both..." and then record all of that information in their books."

As children become ready for more challenges, there is a host of possibilities. You can nudge them toward more precise words, braver words, or using comparisons to show what they mean: "Some apples are red like roses," or "The pumpkin is round like a basketball." You can extend what they do by encouraging them to question, perhaps even letting their curiosity lead to small experiments. For instance, the question "I wonder what is inside the apple?" will ideally be followed with possible answers. The scientist studying apples might

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conjecture that inside the apple must be seeds and that could lead to an experiment (or in this case, a dissection, led by the teacher). This might be followed by, “What happens if we plant them? Will they grow into apple trees?” Chances are that you will not get to this work within one unit, but it will likely spark continued work around a shared inquiry, preferably one that brings fascinating items into your room—and takes your children out of the room—long after the writing curriculum has shifted gears.

***Prepare for publication by rereading, thinking about audience, and fancying up***

As the unit nears its end, you may want to ramp up the rereading work that children are doing during writing workshop. Encourage them to use everything they know from reading workshop to read their own writing (to themselves and to partners during partner time each day): pointing to one word at a time, making sure that the words make sense, rereading to smooth out their voices. You can teach your students that writers reread their own writing again and again to make sure that it makes sense, sounds good, and looks right.

Writers read with pencils in hand, ready to make changes as needed. Writers also use checklists to make sure their writing reflects all they know how to do, and you can bring out the Information Writing Checklist as children revise and edit their pieces.

Near the end of the unit, each child can pick one or two of the books they have written in this bend to revise and publish. As children prepare to publish their work, make sure that they have a clear sense of who their audience will be. Will their published books be on display in the school library? Does your school have a science lab or science bulletin board? Perhaps you’ll invite another class to come and visit so that your children can present one or two of their books to a partner from another classroom. However you decide to publish, you can get the most out of this last part of the unit by reminding children that for the last few days, they’ll be getting their writing ready to share with other people, real-live people, who are going to read their books. To prepare for this, they can add more labels, more words, and more details, maybe even add color, a cover, or an “about the author” page to “fancy it up” and get ready to share.