|  |
| --- |
| **Grade 1****Unit Overview*****Science Information Books***  |
| **Focus Teaching Points** | * Recording information as we observe and study science topics
* Using specific tools to write and collect information: rulers, graph paper, and hand lenses
* Drawing detailed illustrations with labels
* Writing step-by-step directions with specificity (including using senses)
* Thinking about the essential question in an experiment to focus observations, recordings, and conclusions
* Writing to teach others – using what is known from writing informational books and class experiments when writing independent informational books about science
* Revising with partners for clarity to make experiments replicable
* Teaching others what we’ve learned throughout the unit by publishing informational/experiment books
* Using mentor texts as models for how informational writing should look and sound (e.g. deciding how to structure writing, organize individual pages, and notice which details to include)
* Drawing on lessons learned all year to revise and elaborate (e.g. making comparisons, giving examples, including definitions, and writing introductions and conclusions)
* Working with partners to revise
* Writing introductions and conclusions by highlighting important points
* Editing and “fancying up” for readers
* Celebrating
 |
| **Key CCSS Standards** | ***Writing Standards******(W)**** *2, 5, 6, 7, 8*

***Language Standards (L)**** *1, 2, 4, 5, 6*

***Speaking and Listening Standards (SL)**** *1, 3, 4, 5, 6*
 |
| **Bends in the Road** | * Scientists write to learn about the world, experiment to answer lingering questions, and use what they know about information writing to teach others
* Scientists collaborate with partners and record their experiments, raising the level of their non-narrative writing
* Scientists put all their learning together and publish information books
 |
| **Recommended Professional Resource(s) to Guide Instruction** | “Science Information Books” from *If . . .Then . . .Curriculum: Assessment-Based Instruction, Grade 1* by Lucy Calkins and the TCRWP staff (2013) |
| **Recommended Anchor/Mentor Texts** | * Books that serve as a references on the topic you choose (see Alison Riordan’s unit resources for suggestions)
* Books with diagrams and illustrations for students to study the content as well as the type of scientific writing they will do during this unit
 |
| **Tips for the Unit** | * This unit can correlate with your content area teaching and is aligned to the reading unit of study, “Readers Can Read About Science Topics to Become Experts.” Although this particular instructional resource focuses on matter as the topic about which students study, the teaching points in the unit can be adapted to any topic. While it is helpful to integrate this writing unit and the accompanying reading unit with a science unit from your curriculum in which students are engaged in investigations, it is not mandatory. These are reading and writing units, so the content is up to you. This is a wonderful opportunity to live like scientists, and students will write lab reports and teach others about their topics and how to conduct experiments, so the content is really integral to the engagement of this unit. See pages 41 and 42 for a brief overview of the unit.
* On the [literacy coach website](http://ppsgrade1.weebly.com/teaching-resources10.html), we have included a possible trajectory of minilessons from a planning session with grade 1 teachers at West Elementary, April 2015. Feel free to use/adapt/browse these materials as you see fit for your own teaching. This unit will align best with the correlating reading unit if you start the unit in reading about a week or so before starting this writing unit. See the tab on the literacy coach website under the reading workshop page, [Readers Can Read About Science Topics to Become Experts](http://ppsgrade1.weebly.com/teaching-resources1.html), for a possible trajectory of lessons that align to this writing unit.
* The [Ideas for Science Experiments](http://ppsgrade1.weebly.com/teaching-resources1.html) document on the reading workshop page referenced above was written in consultation with Alison Riordan and correlates with the new science standards. Alison has also created some science unit-specific investigation ideas that can be found on her curriculum page.
* This unit is a precursor to the grade 2 unit, *Lab Reports and Science Books*. This gives first-grade students an opportunity to engage in the scientific process and use writing along the way to hold onto their thinking, reflect, test new ideas, and teach others what they have learned. All of this will be further developed in second grade, so this is an important foundation to that work.
* In **Bend I**, writing and science workshops blend together! Students will learn about the class topic, participate in shared inquiry through class experiments, then design further experiments based on lingering questions. See pages 46 – 48 for more specific information.
* In **Bend II**, partners or small groups will work together to develop experiments with materials you set out, write more developed observations, track data and generate multiple hypotheses. The work of standards 7 and 8 is emphasized in this part of the unit. You will also teach students to write procedural texts that convey information clearly and with detail. See pages 48 – 51 for more specific information about this bend.
* In **Bend III,** students will write information chapter books to teach others all that they have learned about their science topic. They will apply all that they learned earlier in the year to a content-specific topic about which they have just learned. See pages 51 – 53 for more specific information.
 |
| **Materials and Resources** | * You will need to decide where your students will do all of their scientific writing (observations of experiments, lab reports, teaching books)
	+ The unit suggests (and we agree!) that students keep observation booklets, where students record their observations, sketches, questions, and thoughts.
		- In addition to these booklets, you may also want some papers available, such as Venn diagrams, before-and-after diagrams, how-to diagrams, etc.
	+ In addition to observation booklets, students should have access to all the usual materials for writing information books, which they can also use for lab reports:
		- Paper with lines for writing and space for illustrations
		- Plain paper for covers and specially designed pages
		- Stapler, flaps, and other tools for writing and revising
 |
| **Assessment** | * Since this unit culminates in an information book about a topic (in this case, about a specific science topic), we suggest you use the same [pre-assessment](http://ppsgrade1.weebly.com/assessment3.html) that you used for the earlier information unit. This will give you an opportunity to see what your students have carried forward from your earlier teaching, providing an assessment for growth and information to guide your teaching.
 |
| **Celebration** | * Provide students with an opportunity to teach their learning to someone new. You may decide to hold a science fair, in which students set up their experiments, lab reports and findings, tell visitors about their work, and perhaps conduct live experiments with oral presentations. This is a wonderful opportunity to incorporate the teaching of [speaking skills](http://www.ppsliteracycoachconnect.com/teaching-speaking-and-listening-including-pvlegs.html) using PVLEGS and to teach students to balance presentation talk with audience questions and demonstrations. See page 53 for more information.
 |