Unit 5 Informational Writing About Science

Content Area: **English Language Arts**
Course(s): **English Language Arts**
Time Period: **Generic Time Period**
Length: **8 Weeks**
Status: **Published**

Unit Overview

This unit is designed to have students build on their enthusiasm about the world around them. Students will not only think like scientists, but also write like scientists. They will be taught the language scientists use, to engage in close observations, problem solving, experimentation, and the same kind of research that scientists in the real world would engage in to teach others about their newly acquired expertise. Students will draft both handwritten pieces as well as pieces using appropriate technology.

Standards

LA.L.2.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.L.2.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
LA.L.2.2.A	Capitalize holidays, product names, and geographic names.
LA.L.2.2.E	Consult print and digital resources, including beginning dictionaries, as needed to check and correct spellings.
LA.L.2.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
LA.L.2.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.
LA.L.2.4.A	Use sentence-level context as a clue to the meaning of a word or phrase.
LA.L.2.4.E	Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.
LA.L.2.5	Demonstrate understanding of figurative language, word relationships and nuances in word meanings.
LA.W.2.2	Write informative/explanatory texts in which they introduce a topic, use evidence-based facts and definitions to develop points, and provide a conclusion.
LA.W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed through self-reflection, revising and editing.
LA.W.2.6	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
LA.W.2.7	Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
LA.W.2.8	Recall information from experiences or gather information from provided sources to answer a question.
LA.RF.2.4.A	Read grade-level text with purpose and understanding.

LA.RF.2.4.B	Read grade-level text orally with accuracy, appropriate rate, and expression.
LA.RF.2.4.C	Use context to confirm or self-correct word recognition and understanding, rereading as necessary.
LA.RI.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
LA.RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
LA.RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
LA.RI.2.5	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
LA.RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
LA.RI.2.7	Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
LA.RI.2.8	Describe and identify the logical connections of how reasons support specific points the author makes in a text.
LA.RI.2.9	Compare and contrast the most important points presented by two texts on the same topic.
LA.RI.2.10	Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.
LA.RL.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
LA.RL.2.7	Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
LA.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
LA.SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
LA.SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
LA.SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
LA.SL.2.2	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
LA.SL.2.3	Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
LA.SL.2.6	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Essential Questions

What are ways to present all that I know about a topic?

How do I become an expert in my area of study?

What kinds of writing can be included in my presentation on one topic?

Application of Knowledge: Students will know that...

- it is important in informational writing to also use mentor texts to emulate an authors ideas or approach
- they can work with partners to get ideas for information that would be helpful
- they grow knowledge by thinking like scientists
- they need strategies to revise for elaboration
- writers gather information about their topic through a variety of ways

Application of Skills: Students will be able to...

- grow knowledge by thinking like scientists, historians, mathematicians, artists, and of course writers
- participate in a common class study
- learn to observe closely, ask big questions, and follow procedures to find out about those questions

Teaching Points and Suggested Activities

The following teaching points and activities are adapted from Units of Study, If.....Then, Grade 2 (Calkins et al., 2013) and serve as a loose framework for teachers, who will add and or emphasize based on their student's needs.

****Mentor Texts, such as the ones listed in "Resources", will be shared in whole or in part throughout the unit. This share time may at times be outside of the Workshop but then referred to during Workshop. Excerpts can be reproduced for close inspection or projected with the use of a document camera.*

Teaching Points:

- scientists record as much information as they can while they are observing and studying their topics
- scientists can use specific tools to help them write and collect information
- scientists conduct experiments they want to keep detailed accurate notes
- scientists may even conduct their experiment more than once to see if they get similar results and to help them capture all the information that they need
- talking about science is a lot like talking about books
- as we observe, record and grow ideas about our topics we can also create questions that we want to pursue
- working with our partners, we need to decide whether or not an experiment is possible to test
- use our book talk charts to grow different kinds of ideas in science
- scientists revisit as they observe, record and grow ideas about their topics they can also create questions that they want to pursue
- use everything that we remember from our class experiments to support us

- writing like a scientist, we want to think about: asking a question, including background research, constructing a hypothesis, testing your hypothesis by doing an experiment, analyzing your data and drawing a conclusion and communicate your results
- writers can revise our writing with partners to add more specific information, additional steps, or to take away unnecessary parts
- when we are revising, we want to make sure that our steps match and sometimes we need to take away parts that don't match or are not clear
- writers plan information/experiment books by rereading notes and thinking about the big things that they learned and the experiments that they conducted
- working with partners can help us remember and decide on the information that is most important to include in our writing
- use mentor text to help make writing look and sound like other science books in the world
- writers can choose or design our paper choice to match a mentor text
- writers use everything that we know to revise and say more in their writing
- writers can include an introduction and conclusion to their writing
- writers glance back at mentor texts to get ideas
- writers keep their readers in mind and make sure that their writing is as easy to read as possible
- teach about ways to make writing as visually attractive as possible for our readers. Some things we can include in our books are photographs, changing the size of text, designing an eye-catching cover, writing an intriguing blurb for the back, and creating an author's page that includes other books they have written
- scientists and writers celebrate published work

Activities to Support Teaching Points

- create anchor charts
- study pages from exemplar writer's notebooks
- provide and present mentor texts as models
- provide checklists to assess on-going writing goals
- use writer's notebook for daily writing
- creating mental movies and acting out a story in order to make writing come alive
- use figurative language and sparkle words to improve descriptions of character and setting
- use dialogue to make character's come to life
- set mini-writing goals as you move through the writing process
- tap, sketch, or jot across the pages as a way of planning stories
- explore a variety of leads and endings
- write long and strong to build stamina
- teach children to read like writers using mentor texts
- teach paragraphing to separate groups of ideas and sentences to separate ideas
- celebrate the conclusion of a writing unit
- use technology to research information about a specific topic
- make an on-going class book as a model of the writing process

Assessments

Assessment in this unit takes three forms: diagnostic, formative, and summative. Assessment rubrics are available in Lucy Calkins' Reading and Writing Project resource kits, but teachers may also develop their own

rubrics in order to include more specific elements of knowledge and skills listed in this unit summary.

Student self-assessment and peer assessment should take place whenever possible--again, in all three forms: diagnostic, formative, and summative. Removing the traditional emphasis on teacher assessment enables students to take more initiative and become self-directed.

On-going teacher assessment will take place in the context of a conference. Conferences, both small group and one-to-one conferring, are used to reinforce expectations, provide advice and/or assistance, and ultimately, to support growth.

Diagnostic Assessments

If there is a student new to the class the original On-Demand Assessment can be administered:

Prompt: E.g. "Think of a topic that you have studied about or that you know a lot. Tomorrow, you will have 45 minutes to write an informational text that teaches others interesting and important information and ideas about the topic. If you want to find and use information from a book, you may bring it with you tomorrow. You will need to plan, draft, revise and edit in one sitting. Write in a way that shows all that you know about informational writing." - Taken from *Writing Pathways: Performance Assessments and Learning Progressions, K-2*)

Formative Assessments (Informal)

Daily observation of students' participation during the active engagement segment of each mini-lesson.

Students' conversation with partners during Turn and Talk segment of mini-lessons.

Comments, corrections, and records from peer conferences between students.

Observation of daily writing progress in writing notebooks and/or folders.

Formative Assessments (Formal)

Teacher-student conferences

Summative Assessment

Summative writing will take the form of both handwritten pieces and pieces generated using appropriate technology.

Published Writings

Completed unit writing projects

On-Demand Performance Assessment Prompt (Same prompt as the diagnostic on-demand)

Activities to Differentiate Instruction

The design of Writer's Workshop allows for individualized instruction and independent growth for every child. At the heart of differentiation in Writer's Workshop is data and the analysis of data. Through the usage of monitoring student progress during independent writing, analysis of student writing using the learning progressions and writing checklists, teachers should be able to delineate which students are in need of additional supports, in what areas those supports should be targeted at, and which students are ready to be pushed further in their writing work.

Some methods to use to support struggling writers as well as advanced writers:

- Encourage student choice in topics to ensure that they are writing on topics that are meaningful for them
- Provide support as needed through conferencing
- Provide support as needed through strategy groups
- Provide modified and/or alternate grade level checklists and rubrics to scaffold or stretch learning
- Scaffold or stretch learning through the use of various strategies
- Provide appropriate writing partners
- Utilize charts to provide a visual reminder for students throughout the mini-lesson.
    - Add drawings and visuals to charts
    - Provide individualized copies of teaching charts
    - Depending on the concept, the chart may be most effective to visually break the concept into parts and touch each part during a demonstration
- For students needing more support at the end of the mini-lesson, keep them at the rug for an extra minute after dispersing the rest of the class and clarify the main topic of the mini-lesson or work one-on-one with them to start their writing
- Set writing goals for students and follow-up with the writing goals after an appropriate amount of time.
- Create group and one-on-one conferring calendars to ensure that students are being met with on a regular basis and working toward individualized goals
- As the unit progresses, the teacher, in coordination with the students, will develop a word wall that will highlight vocabulary specific to the topic chosen
- Assign roles to partners (Partner 1/Partner 2) to help scaffold which student should speak first and avoid one partner dominating the conversation and the other partner becoming a passive listener
    - For ELL students, creating a triad instead of partnership may be beneficial
- Demonstrate for students how to use writing checklists to set goals for their writing and also self-assess

Supports for ELL students:

- Provide consistent teaching structures
- Use consistent teaching language
- Offer plentiful opportunities for reading practice
- Provide access to a broad variety of texts
- Use assessment to provide extra support
- Support students in the preproduction and early production stages of learning English
- Use visual examples in your teaching
- Modify our mini-lessons to be as concise as possible
- Provide extra ?active engagement? time in mini-lessons for extra practice
- Provide readers with topic-based text sets
- Provide opportunities for listening and learning the social language of the reading workshop
- Provide opportunities to read in both their home language and in English
- Plan instruction with the ELL teacher
- Extend the language ELLs are producing through questioning
- Provide explicit instruction in tenses, pronoun references, and connectives
- Support students in building vocabulary using their own reading as the context
- As the unit progresses, the teacher, in coordination with the students, will develop a word wall that will highlight vocabulary specific to the topic chosen

In order to support this differentiation work, teachers may want to consult the following materials:

- Units of Study books at lower or higher levels for teaching strategies that are appropriate to the support needed.
- *The Writing Strategies* Book by Jennifer Serravallo
- If. . . Then. .. Curriculum book for alternate units or teaching points to support the individual reading levels.

- *A Guide to the Writing* Workshop (Primary Grades) chapter 14 for more in-depth information on differentiation

Integrated/Cross-Disciplinary Instruction

Reading Workshop

- apply language and ideas from read alouds and independent reading
- apply spelling strategies
- identify areas of spelling needs
- apply grammar skills
- identify areas in need of addressing (spelling, grammar, mechanics)
- expand written vocabulary from read alouds and independent reading
- model sentence and paragraph structure after mentor texts

Science, Engineering, and Math

- write journal entries related to scientific observation in animal unit
- write research lab book of animal/habitat for Safari Park
- use a notebook to log activities
- write narratives that include a math problem being solved
- write math problems tied to personal experiences

Study Skills

- use graphic organizers to plan writing
- use checklists and rubrics to monitor progress
- use Venn diagrams and t-charts to gather, compare, and contrast events
- use highlighters, note cards, post-its, and other tools during revision and editing process

The Arts

- turn narratives from Social Studies/Health into posters
- add illustrations to further convey meaning

Houghton Mifflin Social Studies Neighborhoods

- *w*rite personal narratives about life in Green Brook
- write narratives involving following rules
- write journal entries about in and around the US
- write narratives about being good citizens

Macmillan/McGraw-Hill Health and Wellness

- use a notebook to log experiences
- write information concerning family relationships
- write information posters dealing with getting along with others
- write letters to friends and family about topics you care about
- write journal entries about health goals and practices
- write information posters involving consequences to poor health and safety practices

Suggested Mentor Texts and Other Resources

Resources

Crafting True Stories by Lucy Calkins and Marjorie Martinelli

Launching the Writing Workshop, Grades K-2; Lucy Calkins and Marjorie Martinelli

A Guide to the Common Core Writing Workshop, Intermediate Grades; Lucy Calkins

Writing Pathways, Grades K-5, Performance Assessments and Learning Progressions; Lucy Calkins

If...Then... Curriculum, Grade 2 (Assessment-Based Instruction) by Lucy Calkins, Julia Mooney and Colleagues From the TCRWP

Resources for Teaching Writing (DVD) Units of Study in Opinion, Information, and Narrative Writing; Lucy Calkins

The Art of Teaching Writing; Lucy Calkins

The Writing Thief; Ruth Culham

Creating Classrooms for Authors; Jerome C Harste, Kathy G Short with Carolyn Burke

Guiding Readers and Writers, Grades K-2 ; Irene C Fountas and Gay Su Pinnell

Smarter Charts; Marjorie Martinelli

Launching the Writing Workshop; Denise Leograndis

Mentor Texts: (Classroom Texts from the district approved science curriculum)

Plant Cycle

Life Along the Food Chain

Animal Life Cycles

Life Cycle of a Butterfly

Life Cycle of a Frog

Soil Basics

Balance and Motion

21st Century Skills

CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP11.1	Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.