

Day 14 Preparing for a Science Conference (Part 2)			
Literacy Strategy: culminating activity part 2: thinking and writing like a scientist to prepare and deliver an informational text.		Science Concept: scientists organize their data in a way that is easily understood by others, making it easier to discuss and share.	
Reading TEKS: 3.9(D) (iii) 3.12(B) 3.13(E & H)	CCSS: W.3.2, SL.3.1, SL.3.1.A	NGSS: 3-LS4-1, 3-LS2-1	Science TEKS: 3(b)(2)(C), 3(b)(2)(D), 2(b)(2)(F)
Materials for Culminating Activity: see lesson below.			
Content Vocabulary: Claim —a statement that says something is true based on observations or an opinion. Evidence —data collected from an investigation that can be used to support explanations and answers. Data —facts or information collected during an investigation (e.g., images, measurements, or words). Reasoning —thinking about and explaining <i>how</i> the evidence supports a claim.			
Science and Literacy Connection: at the end of an investigation, scientists share new knowledge with others in many ways, including scientific presentations, published papers, and the media.			

Culminating Activity

OVERVIEW

Yesterday, children should have begun work on their books to present at the “science conference,” and they will continue working today. By the end of today the groups should be ready to present. Presentations will take place tomorrow.

SUMMARY OF WORK THUS FAR

Throughout the unit, learners have worked in inquiry circles to investigate various plant groups. They have also conducted science investigations on various groups of plants. By this point, teams have already completed their inquiry charts and practiced writing synthesis statements and evidence-based claims. They also have useful information in their science notebooks and Plant Observations charts.

Now, the inquiry teams will prepare for a “science conference” where they will present an informational book to share what they have learned about two big ideas: (1) the relationship between plants and their environments, and (2) how change in environments lead to change in plant life on Earth. This will serve as the culminating activity for the unit.

BACKGROUND INFORMATION ON REPORTING LIKE A SCIENTIST

Scientists often present their expertise in the topic they’ve been studying by writing books for other scientists. There are several things that the scientific community expects; these are things to note and talk about with children as they prepare for the culminating activity, including the use of academic vocabulary, writing informational texts, and presenting findings at a science conference.

Using academic vocabulary: When scientists write informational texts, they use academic vocabulary, which is more formal than everyday speech. Although valuable, the language we use in everyday interactions and communications is not specific enough to accurately explain scientific concepts. When reading, writing, and talking to other scientists, scientists expect each other to read, write, and speak using academic vocabulary specific to their group. Children are going to practice using academic vocabulary in their informational books.

Informational texts: Informational texts play a major role in sharing information. Scientists consult texts written by other scientists as part of their own investigations, and they expect scientific books to include claims that have been proven true and evidence that supports those claims. Scientific books are not stories with a beginning, middle, and end. Instead, these types of texts are typically organized in five ways: chronological, simple description, compare/contrast, cause/effect, or problem/solution. Scientists write books that sequence events in order (chronological), describe a scientific topic in detail (simple description), compare and contrast multiple scientific topics, explain the causes and effects of natural phenomena, and present solutions to scientific problems. Children are going to select one of the five that will serve as the structure for their informational books.

Science conferences: It is important for scientists to report their findings in science so that new information can be shared across the scientific community. In these meetings, scientists summarize their findings in an oral presentation. These conferences are usually organized by professional organizations (state and national). You might be familiar with the National Science Teachers Association (NSTA), Science Teachers Association of Texas (STAT), National Council of Teachers of English (NCTE), or International Literacy Association (ILA). Scientists are part of professional organizations like the American Geophysical Union (AGU), and they attend science conferences like the International Ocean Science Meeting. Scientists come to these conferences ready (and excited) to share their findings with their colleagues (other scientists) to build and test theories and to learn from other. Learners are going to present their informational books on the last day of this unit, simulating a science conference. Ideally, they would each read their books in their entirety, but if time doesn't allow, each team will read their favorite page (or two) and share why it is their favorite.

GUIDING QUESTIONS FOR THE CULMINATING PROJECT

Here are some guiding questions you might want to pose for the teams to respond to:

- What claim (or claims) have we made based on our observations and investigations?
- What evidence do we have to support the claim(s)?
- How will we present our evidence?
- How does our investigation of one group of plants represent changes in plant life on Earth over time?

MATERIALS NEEDED

- science notebooks with all documents, notes, etc.
- material for to make book, including traditional materials (e.g., paper and writing/drawing materials) or access to a digital platform that supports the writing of a book
- access to inquiry charts
- access to bags of representative plant images and fact sheets

SETUP

- Designate a central location where children can access all of the materials needed for their culminating project.
- If using technology, ensure that each team has access to information as needed.

DIRECTIONS FOR CHILDREN WORKING ON THE CULMINATING PROJECT

During the time allotted, children should be working on their books. Ideally, children should work on a draft of their book, but if time doesn't allow them to do so before they present their final version, they will be presenting their draft as a book.

During this work time, remind children to do the following:

- A. Organize their book using the data they collected during their inquiry circles and science investigations. They should be synthesizing the information to address two ideas:
 - the relationship between their plant and its environment; and
 - how change in environments leads to change in plant life on Earth.
- B. Structure their book using one of the five ways informational texts are organized:
 - sequential/chronological
 - simple description
 - compare and contrast
 - cause and effect
 - problem and solution
- C. Include graphic features of informational texts in their books (e.g., table of contents, index, glossary, headings, bold words, sidebars, pictures and captions, and labeled diagrams).
- D. Include (in their book) a biography, telling their readers information about themselves. Each group member will create a biography page about themselves, and these pages will be added at the back of their book. Information they might want to address in their bibliographies include the following:
 - Who are you as a scientist?
 - What was your role in your group?
 - Which group members did you work with?
 - How did you work as part of a team?
 - What do you think about science?
 - What part of the scientific process did you enjoy most?

Role of the teacher: The teacher moves around, supporting the teams, offering guidance as needed, and asking questions about their work.

Expanded Standards

Reading TEKS: 3.9 Multiple genres: listening, speaking, reading, writing, and thinking using multiple texts—genres. The learner recognizes and analyzes genre-specific characteristics, structures, and purposes within and across increasingly complex traditional, contemporary, classical, and diverse texts. The learner is expected to (D) recognize characteristics and structures of informational text, including (iii) recognize organizational patterns such as cause and effect and problem and solution.

3.12 Genres. The learner uses genre characteristics and craft to compose multiple texts that are meaningful. The learner is expected to (B) compose informational texts, including brief compositions that convey information about a topic, using a clear central idea and genre characteristics and craft.

3.13 Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The learner engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The learner is expected to: (E) demonstrate understanding of information gathered; (H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

CCSS: W.3.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly. SL.3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. SL.3.1.A Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

NGSS: 3-LS4-1 Analyze and interpret data to make sense of phenomena using logical reasoning; 3-LS2-1 Construct an argument with evidence, data, and/or a model.

Science TEKS: 3(b)(2) Scientific investigation and reasoning. The learner uses scientific practices during laboratory and outdoor investigations. The learner is expected to (C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data; (D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations; and (F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.