

Facilitator's Guidelines for 6th Meeting

Unless otherwise noted, all materials are on the website in the Guidelines for Science-Writing Group Meetings section.

Preparing for the Meeting



Read:

- Chapter 6 in Writing in Science in Action
- these facilitator's guidelines and the materials that follow



Refer to Facilitator's Notes: General Tips for Leading Productive Meetings as needed.



Copy materials for participants as needed:

- Participants' Guiding Questions for 6th Meeting
- Scientific Conclusions section of the Student Notebook Entries: Pre-kindergarten Through Fifth Grade section on the website
- Background Information for the Animals Video Episode on the website



Test the technology and the DVD to be sure that everything will work during the meeting.

Meeting Focus: Basic and complex conclusions; modeling and scaffolding that provide differentiated instruction

Meeting Overview



Participants will reflect on how they have been teaching students how to provide evidence for claims, and write basic or complex conclusions. They also will consider how the strategies they have been using this year have affected their students' scientific thinking and understanding of science concepts.



After reading and discussing students' scientific conclusions and notes about them, teachers will reflect on their own teaching and their students' learning of conclusion writing.



Then participants will watch a video episode and discuss how the teacher uses modeling and scaffolding with her class of English language learners, and how the practices she uses can help differentiate instruction for all students.



Participants will discuss strategies they want to implement in their instruction and plan notebook entries that move beyond writing frames to more meaningful scaffolding that helps students deepen their scientific thinking and conceptual understanding as they use the frame to guide their writing.

1. Reflecting on Practice (about 20 minutes)

Section Overview: Participants will reflect on how they have helped their students learn how to provide evidence for claims and/or write basic or complex conclusions. They also will consider some specific instructional changes they have made since the beginning of the year or that they would like to start in the coming weeks.

☐ Discuss the guiding questions.

☐ *During the discussion of the third question, note that by this point in the implementation of this science-writing approach, some teachers report that their students are not quite where they want them to be in terms of their writing. Making one or more of the instructional changes on the list will significantly help students improve their expository writing abilities while also developing their content understanding and scientific thinking.*

1. Reflecting on Practice

Guiding Questions	Notes
1. How have you been helping students learn how to provide evidence for their claims and/or write basic or complex conclusions? 2. Looking back on this year, how have the strategies that you have been using affected your students' expository writing skills? 3. How have the strategies affected your students' understanding of science concepts and their development of scientific thinking? 4. Which of the following adjustments have you already been making, or would you like to make, in your instruction? ☐ Using the word bank and Useful Words and Phrases in Scientific Writing chart (see Figure 1–2 in Chapter 1) more often ☐ Doing more modeling of scientific thinking and language ☐ Having more discussion after the science investigation and before the writing session ☐ Having students turn and talk with each other so that everyone has a chance to use scientific language orally ☐ Providing less or more scaffolding as needed	

2. Critiquing Notebook Entries (about 30 minutes)

Section Overview: Teachers will read and discuss notebook samples of students' conclusions, then reflect on their instruction with their own students.

-  Read and discuss the notebook entries and notes from the Scientific Conclusions section of Student Notebook Entries: Pre-kindergarten Through Fifth Grade in grade-level groups, if possible. Participants should read entries above and below their grade level if there is enough time. Remember to focus on what each entry shows about the student's conceptual understanding, scientific thinking, and scientific skills. Also, discuss the strengths of the entry first.
-  Then discuss the guiding question.

2. Critiquing Notebook Entries

Guiding Question	Notes
1. As you read the entries and notes, what reflections do you have about your own instruction, especially in terms of writing scientific conclusions?	

3. Viewing and Discussing the Animals Episode (about 40 minutes)

Section Overview: Participants will watch a video episode in which a teacher models how to plan and conduct a fair test (controlled investigation), then will write a simple conclusion using quantitative data from the tests.

- ☐ Read the guiding questions.
- ☐ Before showing the video episode, share that only one of the twenty students in the classroom is a native English speaker.
- ☐ Discuss the questions after watching the episode.
- ☐ After the discussion, go over the Background Information for the Animals Video Episode.

3. Viewing and Discussing the Animals Video Episode

Guiding Questions	Notes
1. What types of scaffolding does this teacher use in the science and writing sessions? ☐ Visual (e.g., word banks and word cards, labeled scientific illustrations) ☐ Oral (e.g., modeling specific phrases and sentence starters) ☐ Written (e.g., providing writing frames) 2. How does the teacher embed language instruction naturally within the science and science-writing instruction? 3. What was surprising for you to see in this video episode in terms of your own teaching and your students' learning of science and science writing?	

4. Planning Differentiated Instruction (about 20 minutes)

Section Overview: Participants will plan further instruction, incorporating specific strategies for differentiating their lessons.

☐ Teachers discuss the guiding questions.

☐ As they are discussing and planning, participants might want to refer to the “Strategies for Your Classroom” section in Chapter 7 for tips on differentiated instruction for English language learners. Chapter 12 includes specific strategies for teaching emergent writers.

4. Planning Differentiated Instruction

Guiding Questions	Notes
1. What strategies shown in the video episode do you already use in your own instruction to meet the needs of students with different needs: ☐ English language learners ☐ students with special needs ☐ students who meet state academic standards ☐ students who exceed state academic standards 2. What additional strategies would you like to implement to address the specific needs of your students?	

5. Considering Next Steps (about 10 minutes)

Section Overview: In discussing their instruction for the coming weeks, teachers will consider how to plan meaningful notebook entries.

 Discuss the guiding questions.

 When discussing the second question, note that in using sentence starters and writing frames to guide students in their writing, it can be easy to lose sight of the importance of the content of their writing and thinking. When planning notebook entries, teachers need to ask themselves if by writing a particular entry, students are going to enhance their understanding of a particular science concept or concepts and their ability to think like scientists. If the process is not going to accomplish these goals, then teachers need to plan a different notebook entry for the science investigation.

 The "Planning Meaningful Notebook Entries" section in Chapter 10 provides examples of effective entries.

5. Considering Next Steps

Guiding Questions	Notes
1. In the lessons you will be teaching in your science units in the next few weeks, which strategies do you think will be most useful and effective with your students? 2. When planning notebook entries, think about this fundamental question: How will writing this entry help students deepen their understanding of <i>science concepts</i> and/or their <i>scientific thinking</i>?	

6. Preparing for the Next Meeting

1. In the weeks before the next meeting:
 - ☐ Read Chapter 7.
 - ☐ Begin implementing additional strategies for differentiating instruction for your students.
 - ☐ Continue making entries in your own science notebook as you plan instruction and during investigations, if needed.
2. Confirm the date and time of the next meeting: _____.
3. Remember to bring the following to the next meeting:
 - ☐ Writing in Science in Action
 - ☐ Teacher's guide for your science unit, or whatever instructional materials you use with your current science unit
 - ☐ Your own science notebook