

Unit Meeting 4

Preparing to Teach Unit Five: Probability & Data Analysis

Recommended Timing

1 hour to 1.5 hours in late January (Can be combined with Meeting 4, Preparing to Teach February Number Corner, if you have at least 2 hours to meet)

Materials You'll Need for the Meeting

Each teacher will need to bring:

- Teachers Guide Volume Three
- Getting Started
- State Supplement (You would have received one in your Bridges kit if this applied to you.)
- pen
- notebook
- sticky notes

The group will need:

- this guide, 1 copy for each teacher
- Successes & Challenges (Sheet U4.1), 1 copy for each teacher
- Instruction & Assessment of Key Unit Five Learning Objectives (Sheet U4.2), 1 copy for each teacher
- Sharing Responsibilities for Unit Five (Sheet U4.3), 1 copy for each teacher
- Challenges & Solutions (Handout 1), 1 copy for each teacher

Part I: Reviewing Roles & Agenda (3 minutes)

Confirm or assign roles of facilitator, record keeper, and timekeeper. Begin the meeting by reviewing the agenda on the next page and noting the time and purpose of each section. By now, you know how the meetings go, so you can decide if you need to alter the suggested time frames to best meet your needs. If you have more than an hour, take a moment now to identify those parts of the meeting where you'd like to spend more time or start working on the necessary advance preparation.

Part	Time	Purpose
I Reviewing Roles & Agenda	3 minutes	Clarify group members' roles and review what will happen in today's meeting.
II Recording Your Successes & Challenges	5 minutes	Reflect silently and privately on implementing Bridges so far; use your sheet during this meeting to record potential solutions to your challenges.
III Looking at the Unit Five Planner	3 minutes	Develop a big picture of the unit.
IV Exploring Unit Five	5 minutes	Locate resources in the Teachers Guide that will be helpful as you plan for and teach the unit.
V Reading the Unit Five Introduction	10 minutes	Deepen your understanding of the big mathematical ideas in the unit, as well as the flow of the instruction and assessment.
VI Completing the Instruction & Assessment of Key Unit Five Learning Objectives Chart	17 minutes	Identify when the most important learning objectives in the unit will be taught and assessed.
VII Sharing Advance Preparation Responsibilities	7 minutes	Share responsibilities for preparing to teach the unit among group members and determine the place, date, and time for your next meeting.
VIII Sharing Successes, Challenges & Solutions	10 minutes	Listen to, support, and share ideas with colleagues, with an emphasis on generating solutions to challenges.

Part II: Recording Your Successes & Challenges (5 minutes)

Each group member should take a few moments to reflect on the experience of working with the Bridges program at this point in the year. Then, take about four minutes to fill out a Successes & Challenges sheet (Sheet U4.1). You might think about your development as a teacher of Bridges and the growth and progress you have made thus far. Please note that you will have an opportunity to share from this sheet at the end of the meeting—do not begin to discuss this sheet now. During the meeting, you can record potential solutions to challenges as they come up.

Part III: Looking at the Unit Five Planner (3 Minutes)

Note: If you received a state supplement in your Bridges kit, it is very important to use the planner and activities included with that supplement.

Turn to page 543 in the Teachers Guide. Mark this page with a labeled sticky note. Spend a minute or two looking over the Unit Five Planner and then discuss how you can use the information this planner provides to plan your instruction for the

unit. Noting when the assessments occur, when there are home connections, when you will collect work samples, and when you will do work places will help structure your discussion and support your instruction.

Part IV: Exploring Unit Five (5 minutes)

Use the chart below to locate and skim several important sections of the Teachers Guide that will be helpful as you plan for and teach Unit Five. *We recommend bookmarking each page with a sticky note so it is easy to find the information again.* You'll be able to find what you're looking for even more quickly if you label each sticky note.

Grade 4 Unit Five Helpful Resources		
Page Numbers	Resource	Description
535–538	What's Going to Happen in This Unit?	Provides a detailed summary of the unit and includes when students do assessments, problems & investigations, and work places. Describes what students actually do and what models they use.
538–541	What's the Big Idea?	Explains the main purpose of the unit and the rationale behind how the big ideas are taught. Describes what students should understand about division by the end of the unit
544 & 545	Materials You'll Need for Unit Three	Provides a comprehensive list of everything you will need to gather and do to prepare for Unit Five, including manipulatives and materials, overheads, blacklines, assessments, books, and more.
541	Skills Across the Grade Levels	Shows not only the skills and concepts addressed in Unit Five, but also shows where these skills are addressed in Grade 3 and other places in Grade 4. Also shows whether skills should be introduced, developed, mastered, or extended to higher levels.
542	Assessment	Describes the formal assessments provided in Unit Five.
597	Note about Common Mis-conceptions	A note that helps clarify the difference between how odds are expressed and what the probability of a situation is. Students often confuse the two and they need to know how to express probability accurately.
Getting Started		
58 & 59	Questions to Help Draw out Thinking	Two sections in the chapter on The Teacher in the Bridges Classroom are especially helpful for meaningful discussions—note the paragraph on Drawing out mathematical thinking with genuine questions and the list of questions on the following section.
87–91	What about Work Places?	These pages provide helpful information regarding preparing for Work Places, managing the paperwork, knowing the teacher's role, and handling student behavior during Work Places.

Part V: Reading the Unit Five Introduction (10 minutes)

Take about ten minutes to read the Unit Introduction in silence (Teachers Guide Volume Three pages 535–542). As you read, consider these questions and make notes if you like:

- What are the learning objectives for your students? What do you want students to know and be able to do by the end of the unit?
- As you are teaching the unit, what assessment tools and opportunities will you use to determine whether students are meeting the learning objectives?

If you finish before the others, look through the sessions in this unit.

Part VI: Completing the Instruction & Assessment of Key Unit Five Learning Objectives Chart (17 minutes)

As a group, read the paragraph at the top of the Instruction & Assessment of Key Unit Five Learning Objectives (sheet U4.2). Work together with your colleagues to identify when each of the three learning objectives is taught. Be sure to include both Problems & Investigations (the whole group lessons) and Work Places (partner games and activities).

Then, work together to identify the assessments that will allow you to determine whether every student in your class has met the three learning objectives. Remember to consider both formative and summative assessments, and don't limit your list to formal paper-and-pencil tasks: also consider opportunities for observation and other informal assessments.

This discussion and exercise should be a collaborative effort. It is important to help and support each other as you continue to work through implementing Bridges. Note that this sheet will be turned into your administrator, if that is what you agreed upon in the initial meeting.

Part VII: Sharing Advance Preparation Responsibilities (7 minutes)

Use the Sharing Responsibilities for Unit Five chart (sheet U4.3) to assign advance preparation tasks to specific group members. For example, one person might take responsibility for running copies of all the blacklines, while someone else agrees to run copies of all the assessment blacklines. If you have reliable parent volunteers or an assistant, you could also use the chart to identify what they can do to help you.

Assign one person to photocopy and distribute finished copies of all the work products from this meeting (including any copies your principal has requested), including the Successes & Challenges sheets, which will be completed in Part VIII below. This will ensure that everyone has a record of the agreements you reached in this meeting. Also confirm the date, time, and location of the next meeting.

Part VIII: Sharing Successes, Challenges & Solutions (10 minutes)

In the Meeting 2, each teacher selected two solutions to try out in the classroom. Take a moment to share what happened when you tried the solutions discussed or discovered in the last meeting. Let your colleagues know if the solutions worked, if you would recommend them, or if you would alter them in some way in order to be more effective. Then, share your Successes & Challenges sheet with your colleagues. Start with your successes. You could frame your discussion by focusing on the growth you have made with the Bridges program. Then, share the challenges you are now or are still facing with the program. As you share the challenges you've encountered, work together to brainstorm solutions for them. The Challenges & Solutions sheet (Handout 1) may be helpful for this purpose. Stay positive, and focus on generating realistic solutions to group members' challenges during this short conversation.

Before you leave the meeting, commit to trying two more of the solutions in your classroom. This time you will have three months to try them out—you will report back in Unit Meeting 7: Preparing to Unit Eight: Wingspans: Measurement & Data Analysis. Record your initials beside the solutions you'll implement. Be prepared to report back to the group at Meeting 7 about how these solutions have worked in your classroom.

Before you end your meeting, give your Successes & Challenges sheets to the group member who has agreed to make and distribute copies of your work from this meeting.

Sheet U4.1 Successes & Challenges (Parts II and VII)

Successes

I felt like celebrating when ...
I was pleasantly surprised when ...
Other Successes

Challenges

Record your challenges in this column.	Record potential solutions (that you thought of, were shared by your colleagues, or were found on the Challenges & Solutions chart) in this column.
I felt concerned when ...	
I'd like to be more effective at ...	
Other Challenges	

Sheet U4.2 Instruction & Assessment of Key Unit Five Learning Objectives (Part VI)

This unit addresses many important skills and concepts. The three skills on the chart below are arguably the most critical. Record when each skill is taught and assessed; some examples have been filled in as a starting point. Remember that there are recurring opportunities for instruction, practice, and assessment of key skills that do not necessarily include paper-pencil assessment. Try to identify both formative and summative assessments for each skill.

Learning Objective	Instruction of Learning Objective	Assessment of Learning Objective
<p>1. Describing the probability of various events using terms such as <i>certain</i>, <i>impossible</i>, <i>likely</i>, and <i>unlikely</i></p>	<p>Key Sessions</p>	<p>Key Sessions</p>
<p>Additional instruction and practice in January and February Number Corner</p>		
<p>2. Conducting probability experiments: systematically collecting and recording data; drawing, supporting, and communicating conclusions based on data collected.</p>	<p>Key Session Session 15 The Odd/Even Dice Game</p>	<p>Key Sessions Unit Five Post-Assessment Problem 8</p>
<p>Additional instruction and practice in January – March, May and June Number Corner</p>		
<p>3. Identifying the range, median, and mode of a data set</p>	<p>Key Sessions</p>	<p>Key Sessions</p>
<p>Additional instruction and practice in Unit Eight</p>		

Sheet U4.3 Sharing Responsibilities for Unit Five (Part VII)

Note If a State Supplement was included with your Bridges kit, you'll need to adjust this list if some original sessions are being replaced with supplement sessions. You'll also need to add to this list if you are not using the Deluxe Bridges kit.

Task	Team Member	Date Due to Others
1. Run and distribute copies of participants completed Successes & Challenges sheets, as well as the completed master copies of the Instruction & Assessment of Key Unit Two Learning Objectives sheet and this Sharing Responsibilities for Unit Two sheet. This includes providing your principal with a copy of any sheets she or he has requested.		
2. Prepare for and host Meeting 5. This involves some prep work (e.g., copies).		
3. Run off copies of Assessment Blacklines. Run a class set of Blacklines A 5.1–A 5.4, A 5.5–A 5.9, A 5.11, A 5.12, and A 5.14 for each class. Run a few copies of Blacklines A 5.10 and A 5.13 for each class.		
4. Run Blacklines needed for Unit Five. Run a class set of Blackline 2.4 and a half class set of Blacklines 5.3–5.5 for each class.		
5. If you have not purchased Bridges Student Books, run a class set of pages 95–121 for each class.		
6. If you have not purchased the Home Connections, run a class set of pages 113–124 for each class		
7. Create a “Probability Line” for each class. This will be displayed on the wall for the entire unit. See page 545 for specific directions. You need a 3' by 3' piece of white butcher paper. Laminate the “Probability Line” for future use.		
8. There are various advance preparation tasks for sessions 4, 7, 9 and 13 that are individual to each classroom during the unit. See page 545 for more information.	Each teacher will do this independently.	N/A
9. Before Session 7, each teacher will need to transfer class data from Overheads 5.5 and 5.6 to Blacklines 5.1 and 5.2 and then to copy a class set of these Blacklines. 10.	Each teacher will do this independently.	Before Session 7