Unit Eight & May/June Key Pages

The pages listed below include information and organizational tools that will help you prepare for and teach Unit Eight and May/June Number Corner. Locate these pages in your Teachers Guides, flag them with sticky notes, read or skim them, and discuss as needed.

MAY/JUNE KEY PAGES (MEETING PART II) (Number Corner Teachers Guide, vol. 2)		
Download the May/June Planner from the Math Learning Center Web site: *www.mathlearningcenter.org/resources/materials/grade-four.asp*		
335–336	**Setup Page**	Shows what materials are posted on the overhead or on your Number Corner display for the month. The illustrations often provide a quick overview of the math addressed by each workout.
341	**Planning Guide**	Shows how often to do each workout and the Student Book pages associated with each workout.
342	**Materials You'll Need for May/June**	Details about the materials, copies, and advance preparation this month. Pay close attention to the copies you'll need to make and the advance preparation.
369–374	**May/June Answer Keys**	Provide answers for Number Corner Student Book pages.
UNIT EIGHT KEY PAGES (MEETING PART V) (Bridges Teachers Guide, vol. 4)		
871–874	**Unit Eight Introduction**	Explains what will happen during the unit and addresses the big mathematical ideas developed during the unit.
875–877	**What's the Big Idea?**	This portion of the Unit Eight Introduction provides a clear explanation of the key mathematical ideas students will explore in this unit.
879	**Unit Eight Planner**	Highlight these sessions, which require more advance preparation than usual: 1, 2, 4, 7, 9, 13, and 18. See p. 545 for more information about the advance preparation required for these sessions. Note that there are no Work Places in Unit Eight. *Use the supplement planner if teachers are using a state supplement.*
882–883	**Materials You'll Need for Unit Eight**	Provides a comprehensive list of everything teachers will need to gather and do to prepare for Unit Eight, including manipulatives and materials, overheads, blacklines, assessments, books, and more.
877–878	**Skills Across the Grade Levels**	Specifies whether key skills are being introduced, developed, or taught for mastery. Also indicates how key skills are addressed in Grades 3 and 5.
878	**Assessment**	Describes the formal assessments provided in Unit Eight.
971–973	**Answer Keys**	Provides answers and sample student work for assessments, Bridges Student Book pages, and Home Connections in Unit Eight.
GETTING STARTED KEY PAGES (MEETING PART V)		
Appendix 1.5 1.13 1.21	**Three Getting Started Resources in the Appendix**	Helping Your Child with Mathematics (1.5–1.6) is a helpful resource for parents and the Grade Four Math Skills & Concepts Student Report (1.13–1.15) and the Math Skills & Concepts Tracking Chart: Late Fourth Grade may help evaluate students and communicate with parents.

Unit Eight & May/June Recommended Mathematical Activities

You will gain insight into some of the most important mathematical ideas addressed in May/June and Unit Eight by doing the activities recommended below. Solve the problems, play the games, and discuss your thinking with one another, just as students will. Keep the big idea and key points in mind as you do these activities. Adjust the activities as needed if you are using a state supplement.

MAY/JUNE RECOMMENDED MATHEMATICAL ACTIVITIES (MEETING PART II)	
May/June Number Corner: The Calendar Grid, Calendar Collector, and Problem Solving revolve around an imaginary road trip and involve map skills, coordinate points, estimation, adding 4-and 5-digit numbers, and data analysis. Computational Fluency and Number Line are games with all operations, fractions and decimals.	
Activity	**Key Points**
Calendar Grid (Pages 343–348)	Read pages 344–346 and examine markers 1 and 2; discuss. Add markers 3–9 and use the description of Week 2 (pp. 346–347) to find the locations and chart the family's movement on Overhead NC 9.1 or Student Book p. 94. Consider the questions on p. 346. Look over Student Book pp. 101–102 and 104–105; notice how this workout is connected to the Calendar Collector and Problem Solving.
Number Corner Checkup 4 (Pages 365–369)	Look at each page of the final checkup on the overhead, taking time to look over each page. Note that the checkup provides a good summary of what students know and can do at the end of the year. Read the list of skills and concepts addressed on p. 365 and the table of Support Activities on p. 369.
Computational Fluency or Number Line	Play either Roll 5 (Computational Fluency pp. 354–356) or What's My Number (Number Line, pp. 360–364). Note that you can adapt the games to address any skills that students need to work on before the end of the school year.
UNIT EIGHT RECOMMENDED MATHEMATICAL ACTIVITIES (MEETING PART VII)	
Wingspans: Measurement & Data Analysis: Students collect and interpret numerical data through constructing and analyzing several types of graphs. They look at the shape of a data set and work to identify patterns and landmark features and to interpret relationships within and between data sets. They use various types of graphs including line plots and scatter plots and they examine trend lines.	
Session 6 Wingspans of Owls **(Pages 902–905)**	Study Student Book p. 178 and discuss the similarities and differences between the three formats. Then, complete Student Book pp. 179–180 (Work Sample) in pairs. Take time to find and discuss the Word Resource Cards for *cluster* and *gap* and other related words. Conclude with a group discussion of questions 5 and 6 and then read and discuss p. 905, focusing on developing and supporting different theories.
Sessions 15, 16, and 17 Making Paper Airplanes, Flight Day 1, and Plotting and Analyzing Paper Airplane Flight Data **(Pages 948–962)**	*Note: These sessions require special materials and preparation.* It is highly recommended that you have the experience of making and flying planes before attempting to do these lessons in the classroom. You may want to work in pairs and use the guidelines on Student book p. 201. Then, read and discuss Teachers Guide pp. 950–953. Look at Student book p. 202. Then, work together to set up the Airfield (see Teachers Guide p. 955). When everyone is ready, fly your planes 10 times, taking time to record your flight distances (p. 956). Use the descriptions in the Teachers Guide on pp. 957–959 to make a line plot. Read about finding the mean (pp. 959–961), noting techniques that may be new or unfamiliar to you. Find your average flight distance using a method described in the Teachers Guide. Take time to brainstorm challenges and solutions for this set of lessons. Note that students have a chance to make modifications and fly planes again.
Supplemental Activities	While there are no supplemental activities relating specifically to data analysis, you may want to consider looking at the list of supplemental activities to meet student needs and/or state standards before the end of the school year. http://www.mathlearningcenter.org/resources/materials/grade-four/ supplements.asp

Instruction & Assessment of Key Unit Eight Learning Objectives

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. Keep in mind that Work Places provide recurring opportunities for instruction, practice, and assessment of many, but not all key skills; and try to identify both formative and summative assessments for each skill.

Learning Objective	Instruction of Learning Objective	Assessment of Learning Objective
1 Reading, interpreting, and constructing a variety of graphs, including scatter plots and line plots	**Key Sessions**	**Key Sessions**
Additional instruction and practice in January–March and May/June Number Corner and Units Five and Seven		
2 Identifying the maximum, minimum, range, median, mean, and mode in a data set	**Key Sessions**	**Key Sessions**
Additional instruction and practice in May/June Number Corner and Unit Five		
3 Selecting an appropriate unit of measure	**Key Sessions**	**Key Sessions**
Additional instruction and practice in September–November Number Corner and Unit Two		

Skills Assessed in May/June Number Corner

Number Corner teaches a variety of important skills that your students need to know. Each routine offers opportunities—formal and informal—to assess these skills. The chart below shows the skills that are formally assessed with paper-and-pencil methods during the May/June Number Corner. (You will have opportunities during class discussions to assess other skills informally—note that the skills and concepts addressed are written at the beginning of each routine.) Do keep in mind that it is best to evaluate students' understanding using more than one assessment*.

SKILLS	WHERE SKILLS ARE ASSESSED
Calendar Grid (pp. 343–348)	
• Locating and identifying coordinates on maps • Identifying directions on a map (North, South, East, and West) • Using a map scale to figure distances • Solving story problems using a variety of efficient strategies • Accurately measuring length to the nearest centimeter	Number Corner Student Book, pages 101–102 and 104–105
Calendar Collector (pp. 349–353)	
• Adding up to 5-digit numbers with and without regrouping • Exploring column addition with multi-digit numbers • Gathering information from a complex table • Constructing a bar graph, labeling the axes, and selecting an appropriate scale • Determining the range of a set of data • Making and refining estimates on the basis of a growing collection of data	Number Corner Student Book, pages 95–97 and 107
Computational Fluency (pp. 354–356)	
• Adding, subtracting, multiplying, and dividing numbers using mental strategies • Applying the commutative, associative, distributive, and identify properties to calculations with whole numbers	Number Corner Student Book, pages 52–54
Problem Solving (pp. 357–359)	
• Adding and subtracting 2- and 3-digit numbers with and without regrouping • Multiplying and dividing multiples of 10 or 100 • Using different models of division to solve problems • Multiplying and dividing 2-digit numbers by 1-digit numbers • Selecting methods and tools appropriate to a particular context for operations with whole numbers • Solving multi-step story problems using a variety of strategies	Number Corner Student Book, pages 99, 100, 103, and 106

*Also see page 365 for the skills assessed on Number Corner Checkup 4.

Sharing Responsibilities for May/June Number Corner

Task	Team Member	Date Due to Others
1. Run copies of work products from this meeting: Successes & Challenges and Sharing Responsibilities for May/June. Bring a copy of Sharing Responsibilities to your administrator, if this is what has been agreed upon.		
2. Run 1 copy of blackline NC 1.1, 4 class sets of blackline NC 6.5, 1 copy of blackline NC 9.3, and a class set of blacklines NC 9.4 and 9.5 for each class.		
3. Run a copy of blacklines NC 9.1–9.2 for each class. Trim and glue the sheets together to form a record sheet for each classroom.		
4. Run a class set of blacklines NC A 9.1–A NC 9.7 for each class. Run 2 or 3 copies of blacklines NC A 9.8–A 9.10 for each class.		
5. If you don't have copies of the Number Corner Student Book, run a class set of pages 51–54 and pages 94–107 for each class.		
6. Other:		
7. Other:		

Sharing Responsibilities for Unit Eight

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 the completed master copies of the Instruction & Assessment of Key Unit Eight Learning Objectives sheet and this Sharing Responsibilities for Unit Eight sheet. This includes providing your principal with a copy of any sheets she or he has requested.		
2. Run a class set of assessment blacklines A 8.1, A 8.2–A 8.5, A 8.7–A 8.8, and A 8.10 for each class. Run a few copies of assessment blacklines A 8.6 and A 8.9 for each class.		
3. If you don't have a class set of Bridges Student Books, run a class set of pages 173–203 for each class.		
4. If you don't have a class set of Home Connections Books, run a class set of pages 171–176 for each class.		
5. Cut 1" by 1" squares of construction paper—each *student* will need several—for each class.		
6. Cut or find 26 pieces of 4" by 11.5" cardstock or 4" by 12" tagboard plus a few extra for each class.		
7. Gather reference and fiction books about birds and flying. See pages 880, 882, and 885 for more information.	Each teacher will do independently	N/A
8. Gather a quarter-class set of 18" by 24" poster board, grid paper in various sizes, 12" by 18" construction paper, a triple class set of unlined 8 ½" by 11" paper in many different colors, 3" by 5" index cards, and several sheets of 18" by 24" paper	Each teacher will do independently	N/A
9. Gather heavy string, twine, or ribbon, several tape measures, 4 or more dispensers of clear tape, a bathroom scale, several paper grocery bags, a dishpan sized container, 27 rocks, and a container for the 27 rocks	Each teacher will do independently	N/A
10. Be sure to read pages 882–883 to see any other materials you will need to gather for this unit.	Each teacher will do independently	N/A
11. Other:		