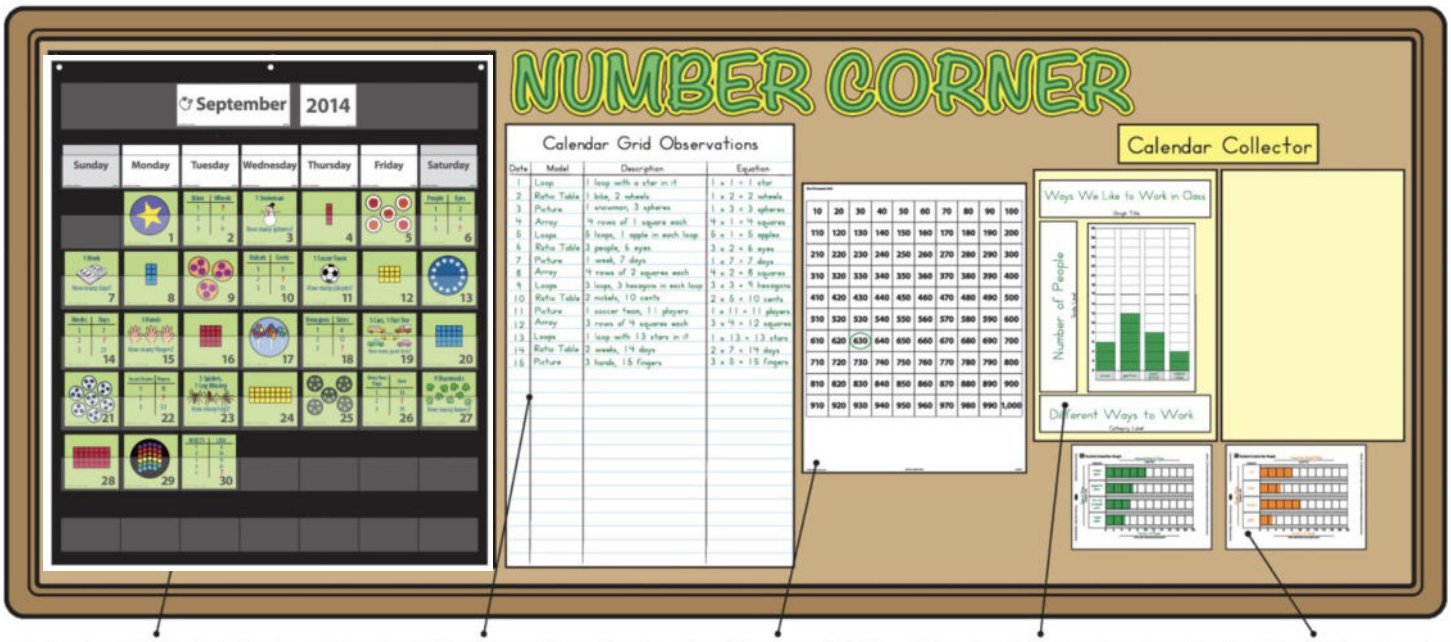
September Number Corner – Gr. 3



Calendar Grid Pocket Chart
Remember to consult a calendar for the starting day for this month and year.

Calendar Grid Observations Chart
You might use 24" × 36" chart paper. If you laminate the paper before writing on it, you can reuse it in future months.

One Thousand Grid
The One Thousand Grid is 17" wide by 22" tall. Remember to use an erasable marker.

Calendar Collector Graphs
These graphs are made from copies of teacher masters with half sentence strips or other strips of paper for labels. If you laminate these elements before writing on them, you can reuse them in future years. You'll post the first graph during Activity 1 and a second graph during Activity 4.

Student Scaled Bar Graphs
You'll record data on these copies of teacher masters while students conduct surveys of their classmates during Activity 3 on days 6 and 11.

September Materials Needed

Task		Done
Copying	Run copies of Teacher Masters T1–T7, T9–T18, and T8 (optional) according to the instructions at the top of each master.	
	Run a single display copy of Number Corner Student Book pages 1–2.	
	If students do not have their own Number Corner Student Books, run a class set of pages 1–3.	
Charts	Prepare the Calendar Grid Observations Chart according to preparation instructions in the Calendar Grid workout.	
	Prepare the Scaled Bar Graph and Scaled Picture Graphs according to preparation instructions in the Calendar Collector workout.	
	Post the One Thousand Grid from your Number Corner kit on your display board before Number Line Activity 1 (day 5).	
Classroom Materials	Before conducting the Baseline Assessment, organize colored tiles and base ten materials (optional) according to preparation instructions.	
Special Tasks	Set up a classroom area to teach problem strings, following preparation suggestions in the Solving Problems workout.	

Calendar Grid Observations

Date	Model	Description	Equation

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

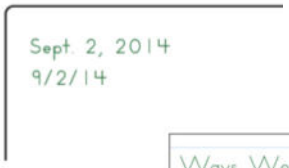
array*
column
date
day
equation*
even number*
group
month
multiply*
observe/observation
odd number*
pattern*
product*
ratio table*
rectangular array
row
week
year

September: Day 1

Need:
-Calendar Grid Markers
-Blank bar graph (labeled columns)
-Crayon or marker
-Sentence strip labels

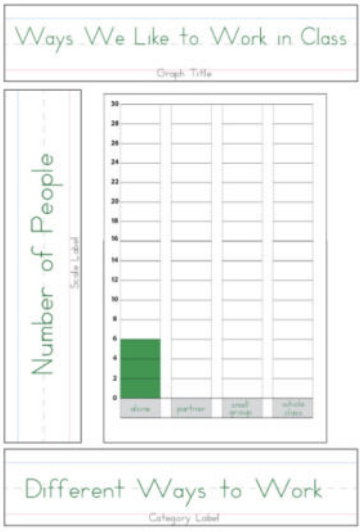
C.Grid: 1-Introducing the September Calendar Markers (p. 8)

1. Introduce the Calendar Grid:
    a. Post today's calendar marker and any markers that come before
2. Read the date aloud while pointing to the labels. "Today is Tuesday, September 2nd, 2014."
3. Write the date on the class whiteboard, using the abbreviation for September. Review the "code date."
    a. "September is the ninth month of the year."
4. Discuss the markers posted so far.
    a. Have students share their observations



C.Collector: 1-Introducing the Calendar Collector (p. 18)

1. Introduce the Calendar Collector: Write the word *data* on the board. Have students share what they know.
1. Share that the class with collect data by conducting surveys.
    a. A survey is a way to collect data by asking people questions.
2. Today's survey will be about work preferences.
    a. "When working on a challenging math problem or an interesting science experiment, do you prefer to do the work alone, with a partner, in a small group, or with the whole class?"
1. Show the blank bar graph and then conduct the survey with eyes closed. Record the results on the board.
1. Explain that this is a scaled graph where each box stands for more than one vote.
2. Have students share how they would fill in the graph for each column. Then fill each in.
3. Give the graph a title and label for the categories and the scale.



September: Day 2

Need:
- chart paper or whiteboard
- marker

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current to date.

C.Collector: 2-What Would You Like to Know About Our Class? (p. 22)

1. Discuss the previous survey results.
    a. What does the graph tell you about our class?
    b. Which of these four different ways of working is most popular in our class? Least?
    c. Did more people choose working alone or in a small group? How many more? How do you know?
    d. Did fewer people choose working with the whole class or working in pairs? How many more? How do you know?
    e. Who might find this information useful? Why?
    f. If you conducted the same survey in another 3rd grade class, would you get the same results? Why or why not?
2. Work with student input to brainstorm a list of survey topics and questions. What are some things they would like to know about their classmates?
3. Record the ideas on the board, adding four choices for each question.

September: Day 3

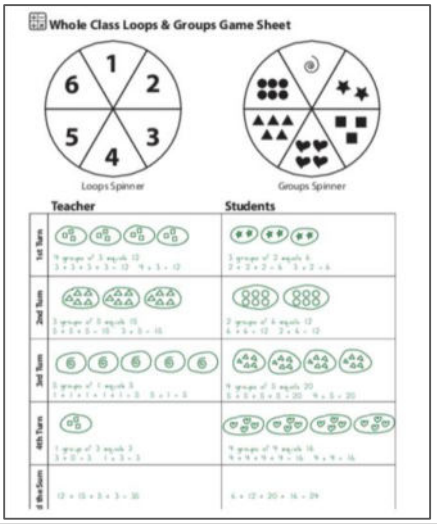
Need:
-Loops & Groups game (project on board)
-Whiteboards & markers for students

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Comp. Fluency: 1-Introducing Loops & Groups (p. 30)

1. Project Loops & Groups Game on SMART board.
2. Explain the game.
    a. You will take turns with the class to spin both spinners. The first loops to draw; the second shows how many shapes you get to draw in each loop. After you spin and draw, multiply to find the total number of shapes in the loops. Each team takes four turns, and then they add up their products to find the total sum. The team with the greater sum wins.
1. Play the game as teacher versus class.
    a. Students could draw their loops & groups on whiteboards during their turn.
1. Have students compare their sum to yours.
    a. Which was greater? By how much?



September: Day 4

Need:
-Calendar Grid Observation Chart
-Marker
-Math notebooks
-Pencils

C.Grid: 2-Charting Observations (p. 9)

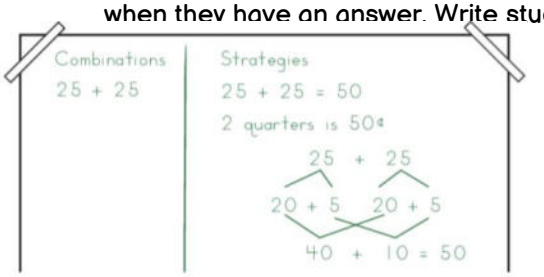
1. Have students make a prediction about the next marker. Then post the marker and record the date.
1. Show students the Calendar Grid Observations Chart.
2. With student help, fill in the chart for all the days posted so far this month.
    a. Describe each multiplication model briefly before filling in the chart.

Calendar Grid Observations

Date	Model	Description	Equation
1	Loop	1 loop with a star in it	1 x 1 = 1 star
2	Ratio Table	1 bike, 2 wheels	1 x 2 = 2 wheels
3	Picture	1 snowman, 3 spheres	1 x 3 = 3 spheres
4	Array	4 rows of 1 square each	4 x 1 = 4 squares
5	Loops	5 loops, 1 apple in each loop	5 x 1 = 5 apples

Solving Problems: 1-Using Doubles to Solve Near Doubles (p. 45)

1. Have students get their math notebooks and a pencil. This month's Number Corner will include three problem strings.
    a. A problem string is a series of related problems that students will solve and discuss one at a time. The problems get harder as the string continues. The problems at the beginning can be used to solve the problems toward the end.
1. Display the problem string on the board. Have students give a thumbs up when they have an answer. Write student strategies on the board.



25 + 25	Students will probably be familiar with this doubles combination from using money and will simply recall that 25 doubled is 50. You might encourage them to think about quarters if they have trouble getting started.
25 + 26	25 + 26 → 25 + 25 + 1 → 50 + 1 → 51 or 25 + 26 → 20 + 5, 20 + 6 → 40, 11 → 40 + 11 = 51 25 + 26 = 51

25 + 24	See splitting diagrams above. You can record strategies like these using equations as well. 25 + 24 = 25 + (25 – 1) 50 – 1 = 49 or 25 + 24 = 20 + 5 + 20 + 4 = 20 + 20 + 5 + 4 = 40 + 9 = 49
25 + 28	See splitting diagrams above. You can record strategies like these using equations as well. 25 + 28 = 25 + (25 + 3) = 50 + 3 = 53 or 25 + 28 = 20 + 5 + 20 + 8 = 20 + 20 + 5 + 8 = 40 + 13 = 53
40 + 40	Students who know that 4 + 4 = 8 and who have a solid sense of place value will know that 40 doubled is 80.
38 + 40 39 + 41 39 + 39	See the splitting diagrams and equations above for examples of how you can record students' strategies.

September: Day 5

Need:
-One Thousand Grid

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Number Line: 1-Introducing Spud- the Counting Game (p. 36)

1. Have students make observations about the One Thousand Grid.
2. The game Spud will use the One Thousand Grid. Students will count by 10s going around a circle. On each multiple of 100, the student will say "SPUD" instead of the number.
    a. If the student says the number instead of "SPUD," they sit down. I
    b. f the next person does not know what number, they must also sit down.
    c. Play until the class reaches 1,000.

September: Day 6

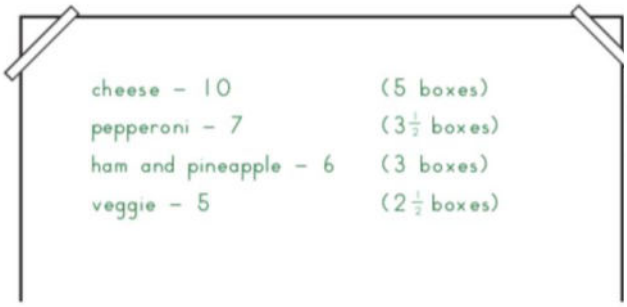
Need:
-Chart paper or whiteboard
-Marker
-List of brainstormed survey topics

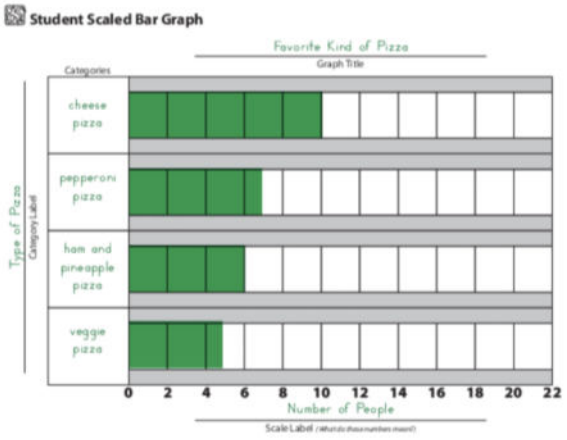
C.Grid: 2-Charting Observations (p. 9)

1. Have students make a prediction about the next marker. Then post the marker and record the date.
1. Show students the Calendar Grid Observations Chart.
2. With student help, fill in the chart for all the days posted so far this month.
    a. Describe each multiplication model briefly before filling in the chart.

C.Collector: 3-Student Surveys (p. 24)

1. Choose one survey topic from the list the class brainstormed.
2. Write the four category choices on the Scaled Bar Graph.
3. Conduct the survey with eyes closed. Record the results on the board.
1. Work as a class to fill in the bar graph. Add a title and category labels.





September: Day 7

Need:
- Baseline assessment
- Red crayons
- Pencils
- Rulers

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Assessment: Baseline Assessment Part 1 (p. 52)

1. Explain that a baseline assessment is a way of finding out where everyone is in math at the very start of school. It helps the teacher do a better job of teaching because they know what everyone needs to review and learn.
2. Explain that the class will listen to the instructions for each problem. They will work independently. They should try to answer all of the questions.
3. The first problem is timed but the rest are not. Encourage students to look for problems they know first and skip any that seem difficult. Start the timer, have students complete as many problems as they can, and then stop them when the timer ends.
4. Read the directions for the rest of page one and two. Then give students time to complete these problems.

September: Day 8

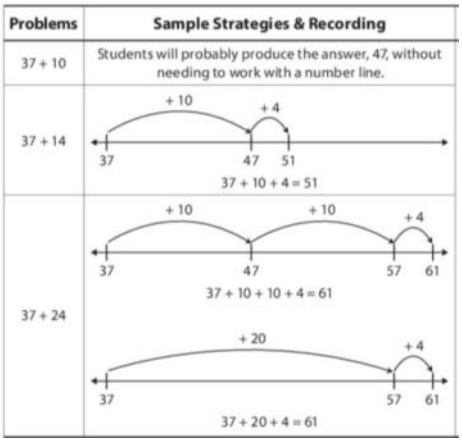
Need:
-Math notebooks
-Pencils
-Problem string

C.Grid: 2-Charting Observations (p. 9)

1. Have students make a prediction about the next marker. Then post the marker and record the date.
1. Show students the Calendar Grid Observations Chart.
2. With student help, fill in the chart for all the days posted so far this month.
    a. Describe each multiplication model briefly before filling in the chart.

Solving Problems: 2-Jumping by Friendly Numbers (p. 48)

1. Have students write the date and problem string title at the top of the page. As each problem is uncovered, have students solve and share their strategies.



September: Day 9

Need:
- Baseline Assessment
- Colored tiles

C.Grid. : Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Assessment: Baseline Assessment Part 2 (p. 54)

1. Complete pages 3 & 4 of the Baseline Assessment
    a. Read the directions and answer any questions
    b. Show students the colored tiles that are available to help with problem seven.
    c. Give students time to finish page 3 & 4.

September: Day 10

Need:
- One Thousand Grid
- Two different color markers
- Whiteboard or chart paper

C.Grid: Update

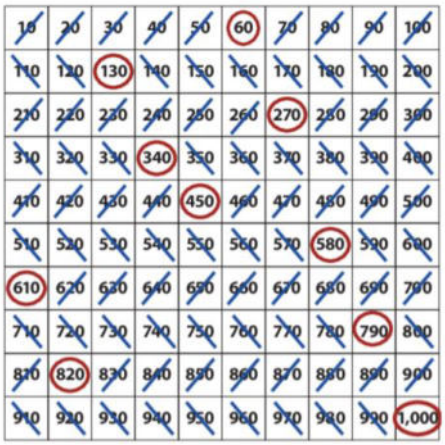
1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Number Line: 2-Spud Revisited (p. 38)

1. Review how to play SPUD. (Counting by 10s and saying SPUD on multiples of 100.)
2. Explain that you will cross off the numbers as students say them. You will also circle some numbers.
3. Play the game.
    a. As students count by 10s, cross them off the grid. Circle a ran
    b. After the game, have students share any observations they ha numbers.
    c. Work with the class to describe each of the circled numbers by how many hu the board or ch

1. Have students share any final observations.

60 = 6 tens
130 = 1 hundred and 3 tens or 13 tens
270 = 2 hundred and 7 tens or 27 tens
340 = 3 hundreds and 4 tens or 34 tens
450 = 4 hundreds and 5 tens or 45 tens
580 = 5 hundreds and 8 tens or 58 tens

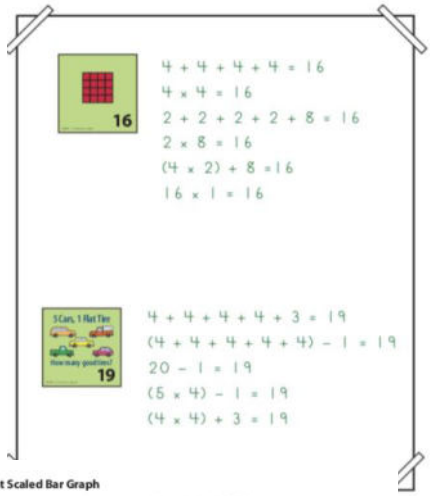


September: Day 11

Need:
-Whiteboards -
Scaled bar graph
-Markers

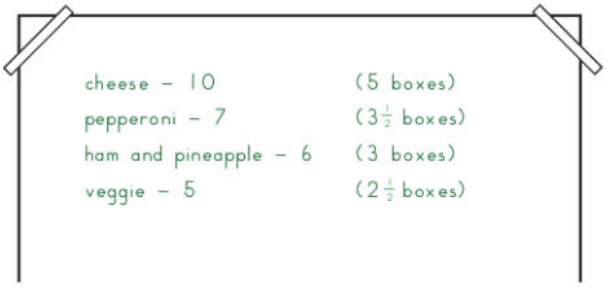
C.Grid: 3-Making Predictions & Writing Equations (p. 11)

1. Update the Calendar Grid Observation Grid through the previous day.
   a. Have students record an equation for each on their whiteboards.
2. Have students make predictions about today's calendar marker.
   a. Post today's marker and write the date.
   b. Students should write one or more equations on their whiteboards.
3. Have students share their equations while you write them on the board.
   a. Choose one to write on the Observation Grid.

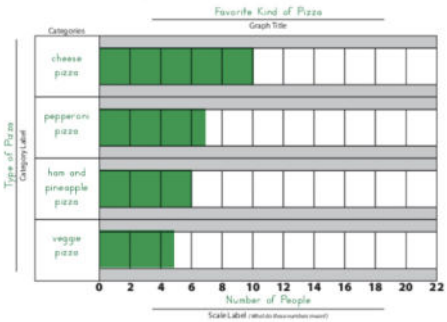


C.Collector: 3-Student Surveys (p. 24)

1. Choose one survey topic from the list the class brainstormed.
2. Write the four category choices on the Scaled Bar Graph.
3. Conduct the survey with eyes closed. Record the results on the board.
1. Work as a class to fill in the bar graph. Add a title and category labels.



Student Scaled Bar Graph



September: Day 12

Need:
-Student Number Line T.M.
-Number Line Clues T.M.
-Scissors
-Glue sticks
-Yellow crayons
-Envelopes or Ziplocs

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
   a. Post one or more calendar markers so that the Calendar Grid is current.
   a. Write the date on the whiteboard.

Number Line: 3-From Grid to Line (p. 41)

1. Give each student a copy of the Student Number Line Teacher Master. Display your own copy for students to see.
2. Students will color the "SPUD" numbers in yellow. Then they will cut out each row and glue together on the "tab." (Model this first.)
3. Once all students have constructed their number lines, display the Number Line Clues with only the top showing.
4. Read each clue one at a time. Give students time to color the correct number and then call on a few students to share. (Encourage students to work with classmates near them.)
   a. Record the correct answers below each clue.
5. After all the clues have been solved, have students put their number lines in an envelope or Ziploc and store in their math folder.

10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	tab

September: Day 13

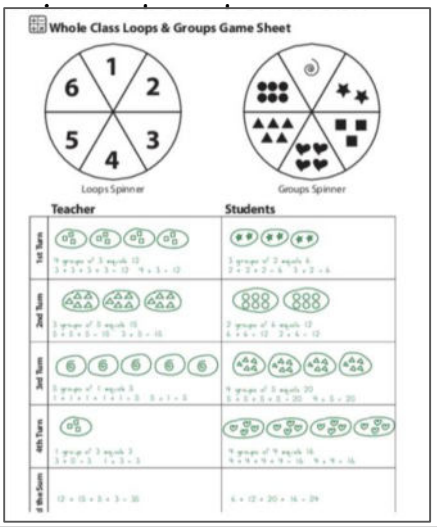
Need:
-Loops & Groups game (project on board)
-Whiteboards & markers for students

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Comp. Fluency: 2-Loops & Groups Rematch (p. 33)

1. Project Loops & Groups Game on SMART board.
2. Review the game.
    a. You will take turns with the class to spin both spinners. The first loops to draw; the second shows how many shapes you get to draw in each loop. After you spin and draw, multiply to find the total number of shapes in the loops. Each team takes four turns, and then they add up their products to find the total sum. The team with the greater sum wins.
1. Play the game as teacher versus class.
    a. Students could draw their loops & groups on whiteboards during their turn.
1. Have students compare their sum to yours.
    a. Which was greater? By how much?

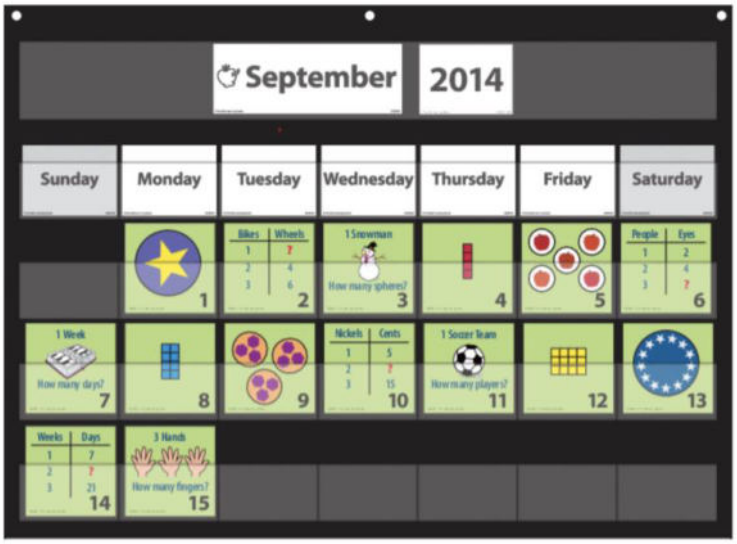


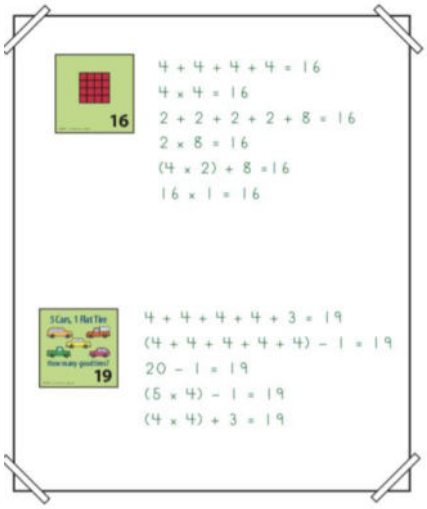
September: Day 14

Need:
- Whiteboards & markers (for students)

C.Grid: Making Predictions & Writing Equations (p. 11)

1. Update the Calendar Grid Observation Grid through the previous day.
    a. Have students record an equation for each on their whiteboards.
2. Have students make predictions about today's calendar marker.
    a. Post today's marker and write the date.
    b. Students should write one or more equations on their whiteboards.
3. Have students share their equations while you write them on the board.
    a. Choose one to write on the Observation Grid.





September: Day 15

Need:
-One Thousand Grid
-Individual student number lines

C.Grid: Update

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

Number Line: 4-Number Riddles (p.42)

1. Have students get their number lines made on Day 12.
2. Students will work in pairs to identify which number each riddle is describing.
    a. I'm thinking of the number that's between 420 and 440 on your number line. What's my number? [430]
    b. I'm thinking of a number. If you jump by 100 four times starting at 370 you'll be on my number. What's my number? [770]
    c. I'm thinking of a number that's 5 tens more than 150. What's my number? [200]
    d. I'm thinking of a number that's 12 times more than 400. What's my number? [520]
    e. I'm thinking of a number that's 33 tens more than 300. What's my number? [630]
    f. I'm thinking of a number. If you double 2 hundreds + 2 tens you'll know my number. What's my number? [440]
    g. I'm thinking of a number. If you start at 200 and add half of my number you'll be at 600. What's my number? [800]
    a. I'm thinking of a number. It is 99 tens less than 1,000. What's my number? [10]
1. As you pose each riddle, give student pairs time to work together to find the answer.
    a. Have students show thumbs up when they have an answer.
    b. Call on pairs to share and explain their answers.
2. Circle the correct answers on the One Thousand Grid.

September: Day 16

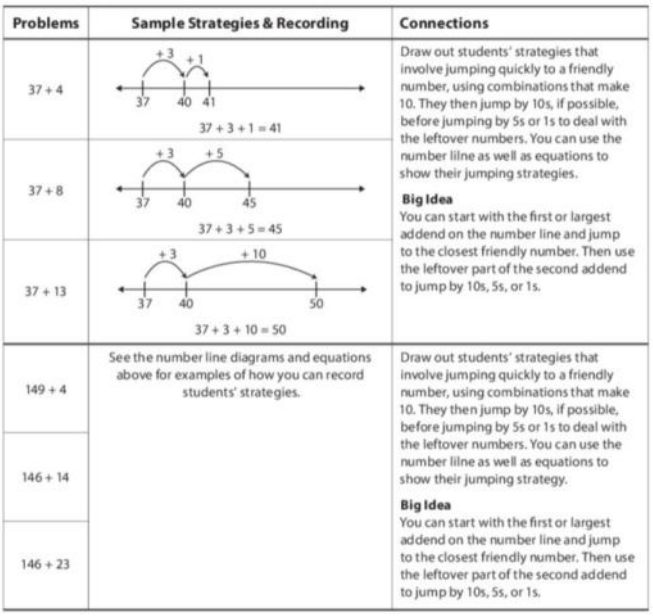
Need:
-Whiteboards & markers (for students)
-Math notebooks
-Pencils
-Problem string

C. Grid: 3-Making Predictions & Writing Equations (p.11)

1. Update the Calendar Grid Observation Grid through the previous day.
    a. Have students record an equation for each on their whiteboards.
2. Have students make predictions about today's calendar marker.
    a. Post today's marker and write the date.
    b. Students should write one or more equations on their whiteboards.
3. Have students share their equations while you write them on the board.
    a. Choose one to write on the Observation Grid.

Solving Problems: 3-Jumping to Get to a Friendly Number (p.49)

1. Have students write the date and problem string title at the top of the page. As each problem is uncovered, have students solve and share their strategies.



Problems	Sample Strategies & Recording	Connections
37 + 4	37 + 3 + 1 = 41	Draw out students' strategies that involve jumping quickly to a friendly number, using combinations that make 10. They then jump by 10s, if possible, before jumping by 5s or 1s to deal with the leftover numbers. You can use the number lilne as well as equations to show their jumping strategies. **Big Idea** You can start with the first or largest addend on the number line and jump to the closest friendly number. Then use the leftover part of the second addend to jump by 10s, 5s, or 1s.
37 + 8	37 + 3 + 5 = 45	
37 + 13	37 + 3 + 10 = 50	
149 + 4	See the number line diagrams and equations above for examples of how you can record students' strategies.	Draw out students' strategies that involve jumping quickly to a friendly number, using combinations that make 10. They then jump by 10s, if possible, before jumping by 5s or 1s to deal with the leftover numbers. You can use the number lilne as well as equations to show their jumping strategy. **Big Idea** You can start with the first or largest addend on the number line and jump to the closest friendly number. Then use the leftover part of the second addend to jump by 10s, 5s, or 1s.
146 + 14		
146 + 23		

September: Day 17

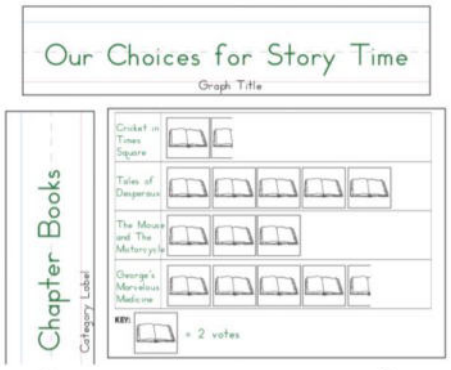
Need:
-Chart paper
-Picture graph & markers
-Glue
-Markers

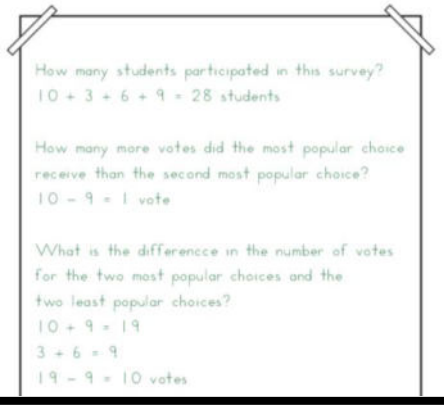
C.Grid: Update

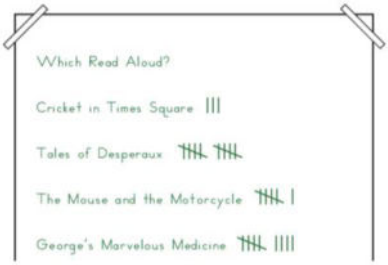
1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    b. Write the date on the whiteboard.

C. Collector: 4-Which Read-Aloud? (p.26)

1. Write 4 read alouds on a piece of chart paper.
2. Have students vote for which read aloud they would like to hear.
3. Once all students have voted, show students the prepared picture graph markers. Glue one marker in the "key" section
1. Have students help determine how many markers to put in each row.
    a. They can draw their answers on their whiteboards.
    b. Then, glue the correct number of markers on the blank graph.
2. Write questions about the graph on chart paper. Have students help write equations to solve each question.
1. Work with input from the class to generate a title and category label.







September: Day 18

Need:
-Partner Loops & Groups game sheets (half class set)
-Spinner overlays (1 for every 2 students)

C.Grid: Update:

1. Have your student helper complete this update procedure everyday.
    a. Post one or more calendar markers so that the Calendar Grid is current.
    a. Write the date on the whiteboard.

Comp. Fluency: 3-Loops & Groups with a Partner (p.34)

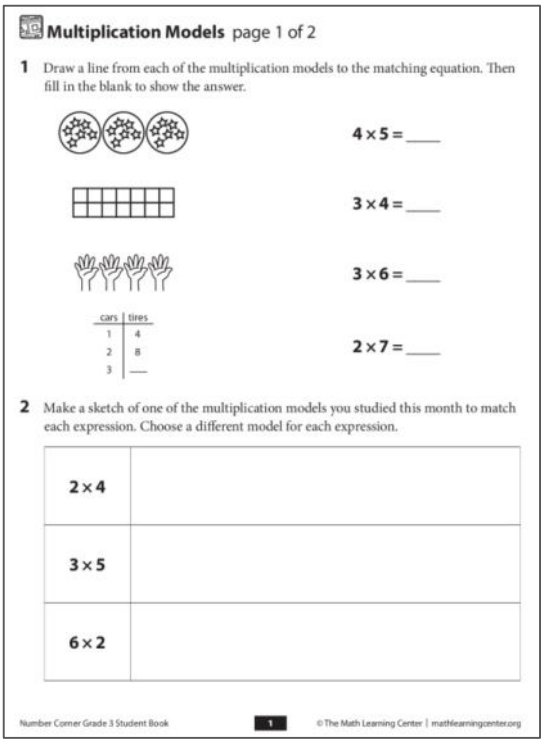
1. Display the Partner Loops & Groups game sheet.
2. Review the rules of the game.
3. Each student pair needs one copy of the game sheet and a spinner overlay.
4. Give students the remaining time to play the game.

September: Day 19

Need:
-Pages 1 & 2 in Student books
-Colored tiles

C.Grid: 4-Completing the Multiplication Models Page (p.13)

1. Explain each page and then give students the rest of the time to complete.
    a. Make colored tiles available for students to use



Multiplication Models page 1 of 2

1 Draw a line from each of the multiplication models to the matching equation. Then fill in the blank to show the answer.

4 × 5 = ____

3 × 4 = ____

3 × 6 = ____

cars	tires
1	4
2	8
3	___

2 × 7 = ____

2 Make a sketch of one of the multiplication models you studied this month to match each expression. Choose a different model for each expression.

2 × 4	
3 × 5	
6 × 2	

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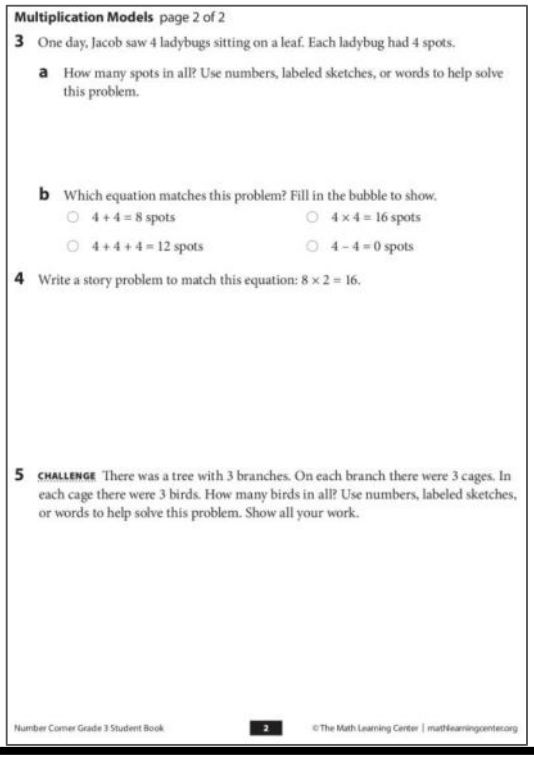

Multiplication Models page 2 of 2

3 One day, Jacob saw 4 ladybugs sitting on a leaf. Each ladybug had 4 spots.

a How many spots in all? Use numbers, labeled sketches, or words to help solve this problem.

b Which equation matches this problem? Fill in the bubble to show.

- ○ 4 + 4 = 8 spots
- ○ 4 × 4 = 16 spots
- ○ 4 + 4 + 4 = 12 spots
- ○ 4 − 4 = 0 spots

4 Write a story problem to match this equation: 8 × 2 = 16.

5 **CHALLENGE** There was a tree with 3 branches. On each branch there were 3 cages. In each cage there were 3 birds. How many birds in all? Use numbers, labeled sketches, or words to help solve this problem. Show all your work.

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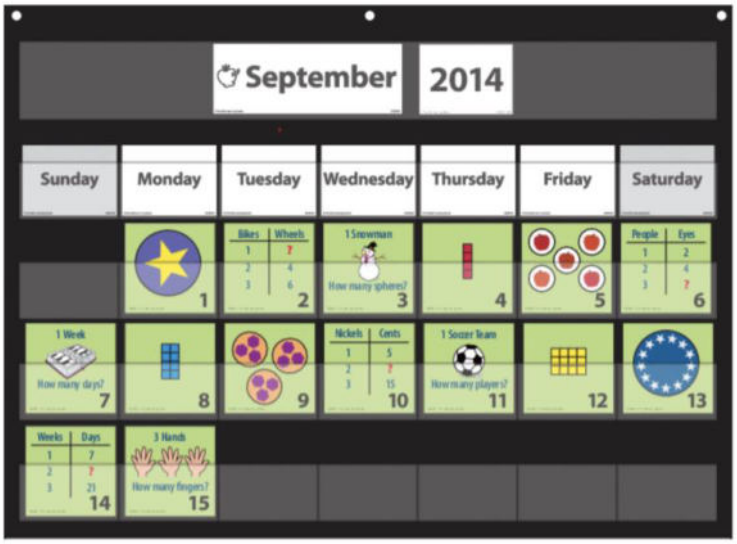
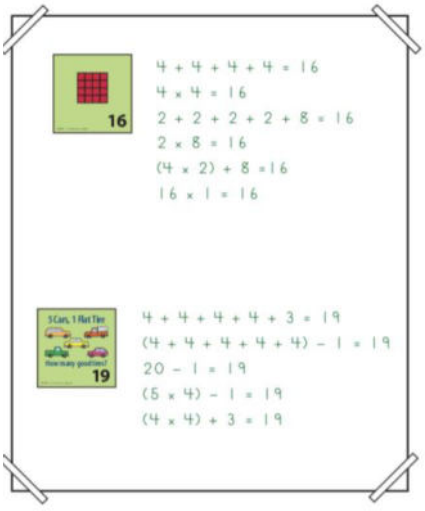
September: Day 20

Need:
- Whiteboards & markers (for students)

C. Grid: 3-Making Predictions & Writing Equations (p.11)

1. Update the Calendar Grid Observation Grid through the previous day.
    a. Have students record an equation for each on their whiteboards.
2. Have students make predictions about today's calendar marker.
    a. Post today's marker and write the date.
    b. Students should write one or more equations on their whiteboards.
3. Have students share their equations while you write them on the board.
    a. Choose one to write on the Observation Grid.





☑ September Daily Planner

Day	Date	Calendar Grid	Calendar Collector	Computational Fluency	Number Line	Solving Problems	Assessment
1		**Activity 1** Introducing the September Calendar Markers (p. 8)	**Activity 1** Introducing the Calendar Collector (p. 18)				
2		*Update*	**Activity 2** What Would You Like to Know About Our Class? (p. 22)				
3		*Update*		**Activity 1** Introducing Loops & Groups (p. 30)			
4		**Activity 2** Charting Observations (p. 9)				**Activity 1** Using Doubles to Solve Near Doubles (p. 45)	
5		*Update*			**Activity 1** Introducing Spud—the Counting Game (p. 36)		
6		**Activity 2** Charting Observations (p. 9)	**Activity 3** Student Surveys (p. 24)				
7		*Update*					Baseline Assessment, Part 1 (p. 52)
8		**Activity 2** Charting Observations (p. 9)				**Activity 2** Jumping by Friendly Numbers (p. 48)	
9		*Update*					Baseline Assessment, Part 2 (p. 54)
10		*Update*			**Activity 2** Spud Revisited (p. 38)		
11		**Activity 3** Making Predictions & Writing Equations (p. 11)	**Activity 3** Student Surveys (p. 24)				
12		*Update*			**Activity 3** From Grid to Line (p. 41)		
13		*Update*		**Activity 2** Loops & Groups Rematch (p. 33)			
14		**Activity 3** Making Predictions & Writing Equations (p. 11)					
15		*Update*			**Activity 4** Number Riddles (p. 42)		
16		**Activity 3** Making Predictions & Writing Equations (p. 11)				**Activity 3** Jumping to Get to a Friendly Number (p. 49)	
17		*Update*	**Activity 4** Which Read-Aloud? (p. 26)				
18		*Update*		**Activity 3** Loops & Groups with a Partner (p. 34)			
19		**Activity 4** Completing the Multiplication Models Page (p. 13)					
20		**Activity 3** Making Predictions & Writing Equations (p. 11)					

Note *On days when the Calendar Grid is not featured in an activity, a student helper will update it before or after Number Corner. Summaries of the update routines appear below.*

Calendar Grid — If the Calendar Grid isn't one of the featured workouts for the day, the student helper posts the marker before or after the class meets for Number Corner and records the day's date on the whiteboard.

September Calendar Grid Answer Key

About the Pattern:

- The first pattern students will likely become aware of is the ABCD pattern in the types of visuals/ models shown on the markers; looped groups, ratio table, picture, rectangular array.
- Another pattern students might observe within the first week or two is the fact that the product always matches the date. The rectangular array on the marker for the 8th is composed of 8 squares. There are 3 hexagons in each of 3 loops on the 9th. The number of cents in 2 nickels corresponds to the date on the marker for the 10th, and there is 1 group of 11 on the marker for the 11th.
- The arrays are patterned by color: red, blue, yellow; red, blue, yellow.
- The arrays of squares on Markers 4, 8, 12, 16, 20, and so on, are arranged into 4 rows, 4 rows, 3 rows; 4 rows, 4 rows, 3 rows (i.e., 4 x 1, 4 x 2, 3 x 4, 4 x 4, 4 x 5, 3 x 8).
- The rectangular arrays are all multiples of 4: 4, 8, 12, 16, 20, 24, and so on. It might be noted that all of these numbers are even.

Date	Model	Description	Equation
1	Loop	1 loop with 1 star	1 × 1 = 1 star
2	Ratio Table	1 bike with 2 wheels	1 × 2 = 2 wheels
3	Picture	1 snowman with 3 spheres	1 × 3 = 3 spheres
4	Array	4 rows with 1 square each	4 × 1 = 4 squares
5	Loop	5 loops with 1 apple in each loop	5 × 1 = 5 apples
6	Ratio Table	3 people with 2 eyes each	3 × 2 = 6 eyes
7	Picture	1 week with 7 days each	1 × 7 = 7 days
8	Array	4 rows with 2 squares each	4 × 2 = 8 squares
9	Loop	3 loops with 3 hexagons each	3 × 3 = 9 hexagons
10	Ratio Table	2 nickels equal 10 cents	2 × 5 = 10 cents
11	Picture	1 soccer team with 11 players	1 × 11 = 11 players
12	Array	4 rows with 3 squares each	4 × 3 = 12 squares
13	Loop	1 loop with 13 stars	1 × 13 = 13 stars
14	Ratio Table	2 weeks equal 14 days	2 × 7 = 14 days
15	Picture	3 hands with 5 fingers each	3 × 5 = 15 fingers
16	Array	4 rows with 4 squares each	4 × 4 = 16 squares
17	Loop	1 loop with 17 balloons	1 × 17 = 17 balloons
18	Ratio Table	3 hexagons with 6 sides each	3 × 6 = 18 sides
19	Picture	5 cars with a total of 1 flat tire and 19 good tires	5 × 4 - 1 = 19 tires
20	Array	4 rows with 5 squares each	4 × 5 = 20 squares
21	Loop	7 loops with 3 bugs each	7 × 3 = 21 bugs
22	Ratio Table	2 soccer teams have 22 players	2 × 11 = 22 players
23	Picture	3 spiders with 8 legs each, except one spider has a missing leg	3 × 8 – 1 = 23 legs
24	Array	3 rows with 8 squares in each	3 × 8 = 24 squares
25	Loop	5 loops with 5 stars in each	5 × 5 = 25stars
26	Ratio Table	2 Besty Ross flags with 13 stars each	2 × 13 = 26 stars
27	Picture	9 shamrocks with 3 leaves each	9 × 3 = 27 leaves
28	Array	4 rows of 7 squares each	4 × 7 = 28 squares
29	Loop	1 loop with 29 dots	1 × 29 = 29 dots
30	Ratio Table	5 insects with 6 legs each	5 × 6 = 30 legs
31	Picture	October has 31 days	1 × 31 = 31 days