



San Diego Unified School District

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Instructional Module to Enhance the Teaching of

H A R C O U R T

**Math**

California Edition

**Grade 2**

**Module 1 - Revised**

Addition and Subtraction Strategies and  
Facts, Place Value, and Graphing

- WORK IN PROGRESS -

**Grade Two – Traditional Calendar – 2006-2007  
Order of Units and Pacing Guide**

<b>Month</b>	<b>Module</b>	<b>Number of Days</b>
<b>September</b> 19 instructional days	<b>Module 1:</b> Addition and Subtraction Strategies and Facts; Graphing	19 days
<b>October</b> 22 instructional days	<b>Module 1:</b> Addition and Subtraction Strategies and Facts; Graphing	6 days
	<b>Module 2:</b> Geometry	11 days
	<b>Module 3:</b> Money and Time	5 days
<b>November</b> 16 instructional days	<b>Module 3:</b> Money and Time	7 days
	<b>Module 4:</b> 2-Digit Addition and Subtraction	9 days
<b>December</b> 11 instructional days Winter Break 12/18 – 1/1	<b>Module 4:</b> 2-Digit Addition and Subtraction	7 days
	<b>Module 5:</b> Measurement	4 days
<b>January</b> 21 instructional days	<b>Module 5:</b> Measurement	9 days
	<b>Module 6:</b> 2-Digit Addition and Subtraction	12 days
<b>February</b> 18 instructional days	<b>Module 6:</b> 2-Digit Addition and Subtraction	8 days
	<b>Module 7:</b> Number Sense and Fractions	10 days
<b>March</b> 22 instructional days	<b>Module 7:</b> Number Sense and Fractions	1 day
	<b>Module 8:</b> Multiplication and Division	16 days
	<b>Module 9:</b> 3-Digit Addition and Subtraction	5 days
<b>April</b> 16 instructional days Spring Break 4/2 – 4/6	<b>Module 9:</b> 3-Digit Addition and Subtraction	11 days
	<b>Module 10:</b> Number Sense and Fractions	5 days
<b>May</b> 22 instructional days STAR 4/26 – 5/17	<b>Module 10:</b> Number Sense and Fractions	6 days
	<b>Module 11:</b> Money and Time	11 days
<b>June</b> 13 instructional days	<b>Module 12:</b> 3-Digit Addition and Subtraction	10 days

**Grade Two – Year Round Calendar – 2006-2007  
Order of Units and Pacing Guide**

<b>Month</b>	<b>Module</b>	<b>Number of Days</b>
<b>September</b> 19 instructional days	<b>Module 1:</b> Addition and Subtraction Strategies and Facts; Graphing	19 days
<b>October</b> 22 instructional days	<b>Module 1:</b> Addition and Subtraction Strategies and Facts; Graphing	6 days
	<b>Module 2:</b> Geometry	11 days
	<b>Module 3:</b> Money and Time	5 days
<b>November</b> 16 instructional days	<b>Module 3:</b> Money and Time	7 days
	<b>Module 4:</b> 2-Digit Addition and Subtraction	9 days
<b>December</b> 11 instructional days Winter Break 12/18 – 1/15	<b>Module 4:</b> 2-Digit Addition and Subtraction	7 days
	<b>Module 5:</b> Measurement	4 days
<b>January</b> 12 instructional days	<b>Module 5:</b> Measurement	9 days
	<b>Module 6:</b> 2-Digit Addition and Subtraction	3 days
<b>February</b> 18 instructional days	<b>Module 6:</b> 2-Digit Addition and Subtraction	17 days
	<b>Module 7:</b> Number Sense and Fractions	1 day
<b>March</b> 21 instructional days Spring Break 3/20 – 4/24	<b>Module 7:</b> Number Sense and Fractions	10 days
	<b>Module 8:</b> Multiplication and Division	11 days
<b>April</b> 4 instructional days	<b>Module 8:</b> Multiplication and Division	4 days
<b>May</b> 22 instructional days	<b>Module 8:</b> Multiplication and Division	1 day
	<b>Module 9:</b> 3-Digit Addition and Subtraction	16 days
	<b>Module 10:</b> Number Sense and Fractions	5 days
<b>June</b> 21 instructional days STAR 5/29 – 6/19	<b>Module 10:</b> Number Sense and Fractions	6 days
	<b>Module 11:</b> Money and time	11 days
<b>July</b> 14 instructional days	<b>Module 12:</b> 3-Digit Addition and Subtraction	10 days

**MODULE 1 – ADDITION AND SUBTRACTION STRATEGIES AND FACTS, AND GRAPHING**  
**Modules represent individual units of study that lead to essential learnings**

<p><b>THREADS THROUGHOUT THE YEAR:</b>  <i>The threads represent ongoing learning opportunities in which students should be actively engaged throughout all units of inquiry during the entire school year. These items should not be isolated to any one particular unit of inquiry.</i></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>• Develop understanding of numbers and the number system and use their understanding to solve problems and recognize reasonable results.</li> <li>• Develop understanding of and fluency in basic computation and procedural skills.</li> <li>• Use mathematical reasoning to solve problems.</li> <li>• Communicate their mathematical thinking by using words, numbers, symbols, graphs and charts, and translate between different representations.</li> <li>• Express generalizations of patterns and relationships.</li> <li>• Develop logical thinking to analyze evidence and build arguments to support or refute a hypothesis.</li> <li>• Make connections among mathematical ideas and between other disciplines.</li> <li>• Develop and use strategies, skills, and concepts to solve problems.</li> <li>• Use appropriate tools, including technology, as vehicles to learn mathematical concepts.</li> </ul>	<p><i>These are essential learnings that represent bigger idea/concepts:</i></p> <ul style="list-style-type: none"> <li>• Students make decisions about the organization and display of information in different graphical forms</li> <li>• Students record, analyze and interpret data in various ways including: identifying the data appearing the most frequently (mode) and how spread out the data is (range).</li> </ul>	<p><i>These are essential learnings that represent bigger idea/concepts:</i></p> <ul style="list-style-type: none"> <li>• Students model, represent, and interpret number relationships to create and solve problems using addition and subtraction.</li> <li>• Students understand the relationships between numbers, quantities, and place value in whole numbers (implicit in this learning is the idea for making 10's and 1's).</li> <li>• Student use the commutative and associative properties to simplify mental calculations and to check results.</li> <li>• Students use flexible strategies to solve addition and subtraction story problems and write equations that represent their thinking.</li> <li>• Students understand and use the inverse relationships between addition and subtraction to solve problems and check solutions.</li> </ul>
<p><i>These are essential learnings that represent bigger idea/concepts:</i></p> <ul style="list-style-type: none"> <li>• Students describe and generalize how patterns grow.</li> <li>• Students recognize, describe, and extend patterns and determine a next term in linear patterns.</li> </ul>		

**MODULE 1 (continued) – ADDITION AND SUBTRACTION STRATEGIES AND FACTS, AND GRAPHING**  
 Modules represent individual units of study that lead to essential learnings

<p><i>These are essential questions that learners ask themselves in order to achieve the essential learnings:</i></p> <ul style="list-style-type: none"> <li>• <i>How do I record, collect, organize and interpret data</i> * by using different graphical representations?</li> <li>• How do I find the range and mode for a set of data?</li> <li>• How do I use information from graphs to solve problems?</li> <li>• <i>How do I draw conclusions from graphic displays of data?</i> *</li> <li>• How do I make and read a bar graph?</li> </ul> <p style="text-align: right;">* Presented in previous grade(s)</p>	<p><i>These are essential questions that learners ask themselves in order to achieve the essential learnings:</i></p> <ul style="list-style-type: none"> <li>• How can I use the inverse relationships between addition and subtraction to solve problems and check solutions?</li> <li>• How can I reorder, take apart and recombine addends to solve addition problems?</li> <li>• <i>How can I use what I know about addition to help me solve subtraction problems?</i> *</li> <li>• How can I estimate addition and subtraction problems?</li> <li>• <i>How can I use number relationships to develop strategies for solving addition and subtraction problems?</i> *</li> <li>• <i>How do I use my knowledge about tens and ones to order and compare whole numbers?</i> *</li> <li>• How can I show the relationship between addition and subtraction?</li> <li>• How can I use the inverse relationship between addition and subtraction to help me solve problems.</li> </ul> <p style="text-align: right;">* Presented in previous grade(s)</p>	<p><i>These are essential questions that learners ask themselves in order to achieve the essential learnings:</i></p> <ul style="list-style-type: none"> <li>• <i>How can I identify, describe, extend and explain linear patterns?</i> *</li> <li>• How do I know what comes next in a pattern?</li> </ul> <p style="text-align: right;">*Presented in previous grade(s)</p>
<p><i>Resources:</i> Van de Walle, Chapter 13, 201- 214, Chapter 21, pp.386–394, Chapter 22, pp. 417-420; <i>Mathematics Source Book</i>, pp. 14 –26.</p>		

**Harcourt Math – Grade 2**  
**MODULE 1:**  
**Addition and Subtraction Strategies and Facts,**  
**Place Value and Graphing**

Key Mathematical Concepts:

- Collect, represent and interpret data
- Understand properties of addition
  - zero property
  - commutative property
  - associative property
- Learn and use the addition strategies of counting on, doubles, making tens
- Understand properties of subtraction
  - zero property
- Learn and use the subtraction strategy of counting back
- Understand that addition and subtraction are inverse operations
- Use “fact families” to find sums and differences
- Represent problems through drawings and equations
- Group and count objects
- Develop mathematical vocabulary
- Learn mathematical symbols (<, >, =)
- Compare quantities
- Identify number patterns

<p><b>Chapter 6 Data and Graphing</b>                      Lesson 6.1: Picture Graphs                      Lesson 6.2: Bar Graphs                      Lesson 6.3: Use a Graph                      Lesson 6.4: Take a Survey                      Lesson 6.5: Interpret Data</p>	<p><b>Chapter 1 Addition Strategies</b>                      Lesson 1.1 and 1.2: Order and Zero Properties and Counting On 1, 2, and 3                      Lesson 1.3: Doubles and Doubles Plus One                      Lesson 1.4: Make a Ten</p>
<p><b>Chapter 2 Subtraction Strategies</b>                      Lesson 2.1 and 2.2: Subtract All or Zero and Count Back                      Lesson 2.3: Think Addition to Subtract                      Lesson 2.4: Fact Families                      Lesson 2.5: Number Expressions</p>	<p><b>Chapter 3 Addition and Subtraction Practice</b>                      Lesson 3.1: Remember Addition Facts                      Lesson 3.2: Missing Numbers                      Lesson 3.3: Remember Subtraction Facts                      Lesson 3.4: Write a Number Sentence</p>
<p><b>Chapter 4 Numbers to 100</b>                      Lesson 4.1: Tens                      Lesson 4.2: Tens and Ones                      Lesson 4.3: Understand Place Value                      Lesson 4.4: Read and Write Numbers</p>	<p><b>Chapter 5 Number Patterns, Compare and Order</b>                      Lesson 5.2: Compare Numbers                      Lesson 5.3: Order Numbers                      Lesson 5.4: Even and Odd                      Lesson 5.5: Skip Count                      Lesson 5.6: Find a Pattern</p>

**Harcourt Math – Grade 2**  
**MODULE 1:**  
**Addition and Subtraction Strategies and Facts,**  
**Place Value and Graphing**  
 Days 1 - 24

<b><u>Day 1</u></b> Unit 1 Lesson 6.1 & 6.2	<b><u>Day 2</u></b> Unit 1 Lesson 6.3	<b><u>Day 3</u></b> Unit 1 Lesson 6.4	<b><u>Day 4</u></b> Unit 1 Lesson 6.5	<b><u>Day 5</u></b> Unit 1 Lesson 1.1 & 1.2
<b><u>Day 6</u></b> Unit 1 Lesson 1.3	<b><u>Day 7</u></b> Unit 1 Lesson 1.4	<b><u>Day 8</u></b> Unit 1 Lesson 2.1 & 2.2	<b><u>Day 9</u></b> Unit 1 Lesson 2.1 & 2.3	<b><u>Day 10</u></b> Unit 1 Lesson 2.4
<b><u>Day 11</u></b> Unit 1 Lesson 2.5	<b><u>Day 12</u></b> Unit 1 Lesson 3.1	<b><u>Day 13</u></b> Unit 1 Lesson 3.2	<b><u>Day 14</u></b> Unit 1 Lesson 3.3	<b><u>Day 15</u></b> Unit 1 Lesson 3.4
<b><u>Day 16</u></b> Unit 1 Lesson 4.1	<b><u>Day 17</u></b> Unit 1 Lesson 4.2	<b><u>Day 18</u></b> Unit 1 Lesson 4.3	<b><u>Day 19</u></b> Unit 1 Lesson 4.4	<b><u>Day 20</u></b> Unit 1 Lesson 5.2
<b><u>Day 21</u></b> Unit 1 Lesson 5.3	<b><u>Day 22</u></b> Unit 1 Lesson 5.4	<b><u>Day 23</u></b> Unit 1 Lesson 5.5	<b><u>Day 24</u></b> Unit 1 Lesson 5.6	

Day 1  
Unit 1: Addition and Subtraction Strategies and Facts,  
Place Value, and Graphing  
 Chapter 6: Data and Graphing  
 LESSON 6.1 and 6.2  
 TE, P. 75A and 77A

<b>LESSON FOCUS:</b>	Picture and Bar Graphs
<b>CALIFORNIA STANDARD:</b>	<b>Algebra and Functions: 1.3</b> Solve addition and subtraction problems by using data.
<b>Purpose of Lesson:</b>	<b>Make and Interpret Graphs</b>
<b>Routine Materials:</b> • chart paper • adding machine paper (number line)	<b>Suggestion: Number of the Day</b> <ul style="list-style-type: none"> <li>• Number of the Day refers to the number of days students have been in school.</li> <li>• On Day One, record 'one' and '1' on a larger piece of chart paper.</li> <li>• Have students brainstorm equations that equal one.</li> <li>• Using adding machine paper, begin a number line to hang around the perimeter of the classroom, in full view of the students.</li> <li>• Record a '1' on the number line (you may want to leave space to the left, in case a discussion of negative numbers comes up).</li> <li>• Prepare a large chart with 10 squares across, 18 squares down; in the top left hand corner, record a '1'.</li> </ul>
<b>LAUNCH</b>	<b>Introduction: Model a Picture Graph</b> TE, Pg 75A
<b>EXPLORE</b>	<b>Represent Data in Different Ways</b> Have students transfer the picture graph information (Launch) to create a tally graph (see Use "Advanced Learners", TE, Pg 78A for an example) and bar graph (see "Alternative Teaching Strategy" and "Early Finishers," TE, pg. 78A for two examples). <b>Graph Observations</b> Students write statements to answer the following questions: <ul style="list-style-type: none"> <li>• "What do you know about our class from looking at these graphs?"</li> <li>• "What do you wonder about our class from looking at these graphs?"</li> </ul>
<b>PRACTICE</b>	As time allows: Pgs. 77, 78.
<b>SUMMARIZE</b>	Closure: Revisit purpose of the lesson with students. Students compare their graphs and discuss their similarities and differences. Write/discuss: <ul style="list-style-type: none"> <li>• What is a picture graph?</li> <li>• What is a bar graph?</li> <li>• When do we use them?</li> <li>• What do they tell us?</li> </ul>
<b>Homework Materials:</b> • 1 inch graph paper	<b>Suggestion:</b> Students poll family members on a question. They record information in a tally and bar graph. Whereas categories for Launch/Explore are "sneakers," "boots," and "slip-on shoes," categories for this task are names of family members. <b>Possible questions:</b> <ul style="list-style-type: none"> <li>• How many hours do you sleep each night?</li> <li>• How many snacks do you eat during the day?</li> <li>• How many hours of work do you do each day?</li> <li>• How many hours of play do you do each day?</li> </ul>

## Day 2

Unit 1: Addition and Subtraction Strategies and Facts,Place Value, and Graphing

## Chapter 6: Data and Graphing

## LESSON 6.3, TE, P. 79A

<b>LESSON FOCUS:</b>	<b>Problem Solving: Use a Graph</b>
<b>CALIFORNIA STANDARD:</b>	<b>Statistics, Data Analysis and Probability: 1.2</b> Represent the same data set in more than one way
<b>Purpose of Lesson:</b>	<b>Use information from graphs to solve problems</b>
<b>Routine</b>	<b>Suggestion: Number of the Day</b> <ul style="list-style-type: none"> <li>• Number of the Day refers to the number of days students have been in school.</li> <li>• For Day Two, record 'two' and '2' on a larger piece of chart paper.</li> <li>• Have students brainstorm equations that equal two.</li> <li>• Record a '2' on the number line (you may want to mark the 2 in some way, such as a red circle, to begin a counting by twos number pattern).</li> <li>• On the 10x18 square chart, record a '2' to the right of the '1'.</li> </ul>
<b>LAUNCH</b> <b>Materials:</b> • graph chart paper, post-its, cubes	<b>Introduction: Name Graphs</b> - How many letters are in your first name? Students contribute to three separate graphs asking for data about the length (number of letters) of their first name: <ul style="list-style-type: none"> <li>• Tally graph,</li> <li>• Post-it/bar graph,</li> <li>• Connecting cube graph.</li> </ul>
<b>EXPLORE</b>	<b>Representing Data in Many Ways</b> Respond through discussion/writing: <ul style="list-style-type: none"> <li>• What does each graph tell?</li> <li>• How are they alike? How are they different?</li> <li>• How many students responded?</li> <li>• What do the tally marks/post-its/cubes/cube tower represent?</li> <li>• How many more children have ___ letters than ___ letters?</li> <li>• How many students have more than/less than ___ letters in their names?</li> </ul> <b>Comparing Graphs</b> Give pairs of students examples of tally and bar graphs (Pgs. 79, 80; Reteach/Practice/Reading Strategy/Challenge 6.3). Have students compare the tally and bar graphs and write statements and equations about what they see (e.g., "12 people responded to the favorite colors graph. $6 + 1 + 2 + 3 = 12$ ").
<b>PRACTICE</b>	As time allows: pgs. 79, 80. (Use graph questions at page bottoms; you may want to omit equations.
<b>SUMMARIZE</b>	Closure: Revisit purpose of the lesson with students. What new information have you learned about using graphs? Why do we use graphs?
<b>Homework</b>	Suggestion: Represent the number of letters in the names of your family members in tallies. Make a bar graph from your tally information.

**DAY 3:**  
**UNIT 1: ADDITION AND SUBTRACTION STRATEGIES AND**  
**FACTS, PLACE VALUE, AND GRAPHING**

Chapter 6: Data and Graphing

LESSON 6.4, TE, P. 81A

<b>LESSON FOCUS:</b>	<b>Take a Survey</b>
<b>CALIFORNIA STANDARD:</b>	<b>Statistics, Data Analysis and Probability: 1.0</b> Students collect numerical data and record, organize, display, and interpret the data on bar graphs and other representations
<b>Purpose of Lesson:</b>	<b>Create and interpret graphs based on survey information.</b>
<b>Routine:</b>	<b>Suggestion: Number of the Day</b> <ul style="list-style-type: none"> <li>• For Day Three, record 'three' and '3' on a larger piece of chart paper.</li> <li>• Have students brainstorm equations that equal three.</li> <li>• Record a '3' on the number line.</li> <li>• On the 10x18 square chart, record a '3' next to the '2'.</li> </ul>
<b>LAUNCH</b> <b>Materials:</b> • graph paper	<b>Model a Survey (TE, Pg 81A)</b> The teacher demonstrates and facilitates: <ul style="list-style-type: none"> <li>• Collecting survey information.</li> <li>• Tallying results.</li> <li>• Representing tally table information in the form of a bar graph.</li> <li>• A whole class discussion to compare data.</li> </ul>
<b>EXPLORE</b>	<b>Conducting a Survey Data</b> <ul style="list-style-type: none"> <li>• Brainstorm possible surveys (e.g., favorite after school activities, favorite snacks, favorite cartoon).</li> <li>• Discuss confining survey categories to three choices (e.g., reading, playing sports, visiting a friend; fruit, crackers, nuts; Pokemon, Scooby Doo, Rugrats).</li> <li>• Discuss ways to survey all/some classmates.</li> <li>• Students conduct surveys as individuals/pairs.</li> </ul>
<b>PRACTICE</b> <b>Materials:</b> • graph paper	As time allows: Students represent data in tally tables and bar graphs. Students write statements to reflect information in their graphs.
<b>SUMMARIZE</b>	Closure: Revisit purpose of the lesson with students. Students present the results of their surveys. Discuss: Why is it useful to make tally tables and bar graphs?
<b>Homework</b>	Suggestion: Students share survey information with someone at home. Parents/adults add to list of graph observations from Practice.

## DAY 4

UNIT 1: ADDITION AND SUBTRACTION STRATEGIES AND  
FACTS, PLACE VALUE, AND GRAPHING

## Chapter 6: Data and Graphing

## LESSON 6.5, TE, P. 83A

<b>LESSON FOCUS:</b>	<b>Interpret Data</b>
<b>CALIFORNIA STANDARD:</b>	<b>Statistics, Data Analysis and Probability: 1.3</b> Identify features of data sets (range and mode).
<b>Purpose of Lesson:</b>	<b>Make and use bar graphs to interpret data.</b>
<b>Routine</b>	<b>Suggestion: Number of the Day</b> <ul style="list-style-type: none"> <li>For Day Four, record 'four' and '4' on a larger piece of chart paper.</li> <li>Have students brainstorm equations that equal four.</li> <li>Record a '4' on the number line and circle it in red (to continue the counting by twos number pattern).</li> <li>On the 10x18 square chart, record a '4' next to the '3'.</li> </ul>
<b>LAUNCH Materials:</b> • graph paper	<b>Introduce: Creating a Bar Graph from a Table</b> <ul style="list-style-type: none"> <li>The teacher and students create a table with two to four categories (see examples in TE, Pgs. 83, 84, including Reteach/Practice/Challenge 6.5).</li> <li>The class discusses information in the table.</li> <li>The teacher models making a bar graph from table data. In this bar graph, each colored square represents two (rather than one).</li> <li>Introduce 'mode' and 'range' (Range: describes numerically the distance between the highest and lowest data values. Mode: the number that occurs most frequently.)</li> </ul>
<b>EXPLORE Materials:</b> • graph paper	<b>Tables and Bar Graphs</b> <ul style="list-style-type: none"> <li>Compile data for the number of second grade students at your school, by class.</li> <li>Individual/pairs of students arrange data in a table.</li> <li>Table data is used to create a bar graph in which each colored square represents two students.</li> <li>Students write about their graph, including the range, mode and other graph observations.</li> </ul>
<b>PRACTICE</b>	As time allows: Pgs. 83 and/or 84.
<b>SUMMARIZE</b>	Closure: Revisit purpose of the lesson with students. Students present their bar graphs and writing.
<b>Homework</b>	Suggestion: Ask your parents to help you find a graph in the newspaper. Have them explain to you what it means.

## DAY 5

UNIT 1: ADDITION AND SUBTRACTION STRATEGIES AND  
FACTS, PLACE VALUE, AND GRAPHINGChapter 1: Addition Strategies  
LESSON 1.1 and 1.2, TE, P. 3A and 5A

<b>LESSON FOCUS:</b>	<b>Order and Zero Properties/Count On 1, 2, and 3</b>
<b>CALIFORNIA STANDARD:</b>	<b>Algebra and Functions: 1.1</b> Use the commutative and associative rules to simplify mental calculations and to check results. <b>Number Sense 2.2</b> Find the sum or difference of two whole numbers.
<b>Purpose of Lesson:</b>	<b>To review the order and zero properties of addition; to review counting on to find sums.</b>
<b>Routine Materials:</b> • cubes	<b>Suggestion: Number of the Day</b> <ul style="list-style-type: none"> <li>• For Day Five, record 'five' and '5' on a larger piece of chart paper.</li> <li>• Have students brainstorm equations that equal five.</li> <li>• Record a '5' on the number line (you may want to mark the '5' in some way, such as a purple square, to begin a counting by fives number pattern).</li> <li>• On the 10x18 square chart, record a '5' next to the '4'.</li> <li>• Focus on the order and zero properties (see TE, Pg 3 for definitions) as well.</li> <li>• For the zero property, write several zero facts on the board; discuss how these are alike and have students model with materials.</li> <li>• For the order property, have students model addend order with cubes (TE, Pg 3A). Do this several times.</li> <li>• Have students finish by helping create equations for Number of the Day, focusing on these properties.</li> </ul>
<b>LAUNCH Materials:</b> • counters	<b>Introducing: Counting On and Other Addition Strategies</b> <ul style="list-style-type: none"> <li>• Give students problem from Pg 5 (e.g., <math>9 + 2</math>).</li> <li>• Students brainstorm a few situations to go with one problem (e.g., "Nine children were on the playground. Two more came. How many children were on the playground?").</li> <li>• Students solve the problem and share their solution strategies (these may include using counters to represent all quantities, counting on and drawing a picture).</li> <li>• Class discussion focuses on "counting on."</li> <li>• Students compare the first problem (<math>9 + 2</math>) with the related "turn around" problem, in which the first addend is 1, 2, or 3 (e.g., <math>2 + 9</math>). Discuss how the two problems are related.</li> <li>• Which is easier to solve (<math>9 + 2</math> or <math>2 + 9</math>)? Why?</li> </ul>
<b>EXPLORE</b>	Students find ten problems to solve on Pgs. 5 and/or 6. They explain to a classmate how they solved five of these problems. Students choose one problem from Pg 5 or 6. They write a situation to go with the problem, solve the problem and write about the strategy they used to solve it.
<b>PRACTICE Materials:</b> <b>Alternative Teaching Strategy</b> • two 3-section spinners (pg. TR 106) per pair	As time allows: Alternative Teaching Strategy (use of floor number line is optional) and/or Advanced Learners, P. 6A (directions follow) <ul style="list-style-type: none"> <li>▪ Write the numbers 5, 6, 7 on one spinner and label it "A." Write the numbers 1, 2, 3 on the other spinner and label it "B."</li> <li>▪ One partner spins the pointer "A" and calls out the number (5). The other partner advances to that number on the</li> </ul>

<ul style="list-style-type: none"> <li>• floor number line 0-10 (optional) per pair</li> <li><b>Advanced Learners</b></li> <li>• 4-section spinner, labeled 0, 1, 2, 3 (p. TR 106)</li> </ul>	<p>number line, starting at zero. (could use desktop #lines – and track with counters)</p> <ul style="list-style-type: none"> <li>▪ First partner spins pointer “B” and calls out the number (3). The other partner says the number before he/she is standing on (or has a counter on) then counts on (3), and says the number he/she is now on (8).</li> <li>▪ Partners reverse rolls and continue.</li> </ul>
<p><b>SUMMARIZE</b></p> <p>Materials:</p> <ul style="list-style-type: none"> <li>• transparency or enlarged version of p. TR 15</li> </ul>	<p>Closure: Revisit purpose of the lesson with students.</p> <p>Discuss and chart: What strategies did we use to today to solve problems?</p> <p>Shade in on an addition chart: all the zero facts.</p>
<p><b>Homework</b></p>	<p>Suggestion: Students complete pages 5 and 6. Students show a parent the strategies used to solve 5 problems.</p>

