

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
MATHEMATICS CURRICULUM
GRADE 2**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
APPLICATION OF BASIC NUMBER CONCEPTS	<p>Students will be able to:</p> <ul style="list-style-type: none"> • use a number line to count on to add. 	<ul style="list-style-type: none"> • Do “Making Trains to Count On” activity. • Give each group of students 2 colors of cubes along with 2 number cards, one (1-9), and the other (1-3). Have students in each group work together connecting cubes in 1 color to match one of the numbers, and another color to match the other number. Tell each group: Write the number sentence that shows how many of each color cube are in your train. Repeat by changing the number cards. 	<ul style="list-style-type: none"> • Two colors of connecting cubes • One set of number cards 0-9 • Several additional number cards 0-3 • Workbook Pages 	<ul style="list-style-type: none"> • Teacher Observation 	<p style="text-align: center;"><u>By the end of Grade 2</u></p> <p>4.1 A.1 4.5 B.2</p>
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use a number line to count on to add. 	<ul style="list-style-type: none"> • Do “Number Line Walk” activity. • Create a number line on the floor by taping the numbered 0-12 papers in a line, allowing room for one child to stand on each paper. Write $7 + 2$ on the board. Then ask a volunteer to stand on the 7. Have the student step ahead 2 numbers as the class counts on aloud (8, 9). Repeat with different problems giving each student a turn. 	<ul style="list-style-type: none"> • Masking tape • 13 letter-sized sheets of construction paper numbered 0-12 	<ul style="list-style-type: none"> • Teacher Observation 	<p>4.1 A.1 4.5 B.2</p>

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use the commutative property to find sums. 	<ul style="list-style-type: none"> • Play “Match the Facts” game. • Using prepared index cards, students turn the cards face down. They take turns turning over 2 cards at a time. If the 2 cards have the addends, the player keeps the cards. If not, then he or she turns them back over. 	<ul style="list-style-type: none"> • 24 index cards with related addition facts with sums to 12 written on separate cards • Workbook Pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 D.1
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use the commutative property to find sums. 	<ul style="list-style-type: none"> • Play “Reversing Counter Colors” Game. • One partner rolls 2 number cubes. He or she arranges 2-color counters, using one color to model 1 number and the other to model the other number. The other partner reverses the order, by turning over the 2-color counters. Partners take turns rolling the number cubes modeling the numbers with counters, then turning the counters to reverse the order of the addition facts. 	<ul style="list-style-type: none"> • Number cubes • 2-color counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 D.1
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • determine the information you need to solve a story problem. 	<ul style="list-style-type: none"> • Do “Reading for Information” activity. • Display: a picture book, a math story problem, a recipe, directions for playing a game and directions for making something. Talk about each item and reasons for each one (for fun, to get information, to learn something). 	<ul style="list-style-type: none"> • Picture book • A math story problem • Recipe • Game directions 	<ul style="list-style-type: none"> • Teacher Observation • Close/Assess (see manual) 	4.4 D.1 4.5 A.1 C.3

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • determine the information you need to solve a story problem. 	<ul style="list-style-type: none"> • Do “Number Stories” activity. • Read the story “By the Pond” aloud with students. See manual for discussion questions. 	<ul style="list-style-type: none"> • Big Book Vol. 1 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 D.1 4.5 A.1 C.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • solve problems by drawing pictures. 	<ul style="list-style-type: none"> • Do “Addition Tales” activity. • See manual for activity details. • Do “Sing the Sum” activity. • See manual. 	<ul style="list-style-type: none"> • Cards with pictures of animals • Objects of other familiar things, number cards 0-9 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use a number line to count back to subtract. 	<ul style="list-style-type: none"> • Do “Buying with Pennies” activity. • Give each student 12 pennies. Display one item. Call out a price from 1 cent, 2 cents, or 3 cents. Have each student count back the amount called from their collection. Continue displaying. 	<ul style="list-style-type: none"> • 12 pennies for each student • Toy cards or other inexpensive items 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.1 4.5 B.4
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use a number line to count back to subtract. 	<ul style="list-style-type: none"> • Do “Broken Eggs!” activity. • Give each pair of students an egg carton and 12 cubes. Tell this subtraction story in which students are to count back 0, 1, 2, or 3. Ex:” Tim had 11 eggs. He broke 3. How many does he have now?” Have the students act it out. Repeat with other stories. 	<ul style="list-style-type: none"> • 1 egg carton • 12 connecting cubes per pair 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.1 4.5 B.4

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use related addition facts to find differences. 	<ul style="list-style-type: none"> • Do “Show Addition” activity. • See manual for activity details. 	<ul style="list-style-type: none"> • Pattern blocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.1
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use related addition facts to find differences 	<ul style="list-style-type: none"> • Do “Dominoes” activity. • See manual for activity details. 	<ul style="list-style-type: none"> • Paper • Crayons • 3 & 4 part spinner (TT10) 	<ul style="list-style-type: none"> • Close/Assess (see manual) 	4.1 B.1
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use related addition and subtraction facts to complete fact families. 	<ul style="list-style-type: none"> • Play “Relate Facts with Counters” game. • Give each pair 12 or fewer counters and a cup. Have 1 partner shake and spill out counters. Have that partner record the 2 addition facts. Have the other partner record the 2 subtraction facts. Change roles and repeat. 	<ul style="list-style-type: none"> • Two-color counters • Cup 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.4,5,8 4.3 D.1

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use related addition and subtraction facts to complete fact families. 	<ul style="list-style-type: none"> • Do “Domino Families” activity. • Give each group of 4 students a domino. Invite 2 students from each group to come to the chalkboard, each writing one of the turn around addition facts. Ask “What 2 addition facts can you make from the dots on your group domino?” Invite the 2 remaining students from each group to come to the board to add the facts and then make 2 subtraction facts, using the dominoes. 	<ul style="list-style-type: none"> • Dominoes (TT7) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,8 4.3 D.1 4.5 B.2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Do “Picture This” activity. • See manual for details. 	<ul style="list-style-type: none"> • Magazines • Oaktag 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 B.2 4.5 B.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Do “Farm Diagram” activity. • Have students draw a farm scene with animals and label each part. See manual for discussion questions. 	<ul style="list-style-type: none"> • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 B.2 4.5 B.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Do “Feathered Friends” activity. • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 B.2 4.5 B.3

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Do “How to Keep Warm” group activity. • Discuss with students other ways to keep warm besides feathers. Have students help generate a list of other coverings. List examples. Then complete worksheet on problem solving together. 	<ul style="list-style-type: none"> • Various pictures of different animals with a variety of body coverings (ex., fur, scales, hair...) 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1 C.3,4,6
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • identify functional number relationships and choose addition or subtraction to complete tables. 	<ul style="list-style-type: none"> • Play an enrichment game demonstrating how to use in and out tables. • See manual for details. 	<ul style="list-style-type: none"> • Workbook Pages (see manual) 	<ul style="list-style-type: none"> • Chapter One Assessment Test 	4.3 B.1 C.2 4.5 B.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use doubles to add. 	<ul style="list-style-type: none"> • Have each pair of students put their 2 egg cartons end to end on the table between them. Then tell an addition story involving doubles or doubles plus 1. Example: “How many cubes should you put in your egg carton? Which double or double plus 1 did you use to solve the problem?” Have each pair share with the whole class as time permits. 	<ul style="list-style-type: none"> • 2 egg cartons per pair of students • Connecting cubes 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 D.1 4.5 B.1,2

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use doubles to add. 	<ul style="list-style-type: none"> • Do “Take Turns Telling Stories” activity. • See manual for details. 	<ul style="list-style-type: none"> • 20 connecting cubes per pair 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 D.1 4.5 B.1,2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use “Make a Ten Strategy” to add 7, 8, or 9. 	<ul style="list-style-type: none"> • Play “Use a Spinner” game. • One partner spins the spinner and connects that many cubes of one color. The other partner rolls the number cube and gets that many cubes of another color. Using those cubes, the team makes a ten train and leaves the rest in a pile. Have students record the number sentences. Repeat the activity. Have partners switch roles. 	<ul style="list-style-type: none"> • Spinner: 7, 8, & 9 (TT10) • Number cube (TT12) • Connecting cubes 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.4 D.3 4.5 B.2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use “Make a Ten Strategy” to add 7, 8, or 9. 	<ul style="list-style-type: none"> • Do “Play Money Stories” activity. • See manual for details. 	<ul style="list-style-type: none"> • Pennies, dimes, 10 frame (TT5) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.4 D.3 4.5 B.2

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • add three 1-digit numbers. 	<ul style="list-style-type: none"> • Play the “Highest Sum” game. • Start the game with 7 counters on the table. Place one set of number cards in each of the 3 separate bags. One partner draws a card from each of the 3 bags. The same partner records the numbers and finds the sum. The other partner repeats the process drawing 3 new numbers. The student with the highest sum gets a counter. The player with the most counters is the winner. 	<ul style="list-style-type: none"> • 3 sets of number cards 0-9 (TT2) • 3 paper bags • Counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.3,6 4.3 D.1 4.5 B.2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • add three 1-digit numbers. 	<ul style="list-style-type: none"> • Play “Get the Point?”, a group activity. • See manual for details. 	<ul style="list-style-type: none"> • Counters • Index cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.3,6 4.3 D.1 4.5 B.2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • summarize to solve story problems. 	<ul style="list-style-type: none"> • Do a “Telling Tales” activity. • Read the class a story and ask students to tell the story in their own words. Use a story frame to ask guided questions as needed to create a summary. 	<ul style="list-style-type: none"> • Storybook 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1,2 B.2

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • summarize to solve story problems. 	<ul style="list-style-type: none"> • Do a group activity entitled "What's the Story?" • See manual for details. 	<ul style="list-style-type: none"> • Chart • Paper • Big Book Vol. 1 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1,2 B.2
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • write a number sentence to solve problems. 	<ul style="list-style-type: none"> • Do a whole class activity entitled "Class Equipment." • See manual for details. 	<ul style="list-style-type: none"> • Chart entitled "Class Equipment" 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5 4.5 A.2,4 B.2,3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • write a number sentence to solve problems. 	<ul style="list-style-type: none"> • Play "Add or Subtract?" • Say aloud a story such as, "Tim had 12 cars. He gave 5 cars to a friend. How many cars does Tim have now? How many counters should you start with?" (12) Have students show 12 counters. "Should you add counters to take them away?" (Take away) How many should you take away? (5) How many more are left?" (7) What number sentence can you write to show this?" (12-5=7) Repeat with an additional story. 	<ul style="list-style-type: none"> • Counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5 4.5 A.2,4 B.2,3

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use doubles to subtract. 	<ul style="list-style-type: none"> • Play a “Using Doubles” whole class activity. • Give each student a cut out shape and have them fold it in half (along the line of symmetry). On one half, have students draw from 5-10 dots on the shape. They should draw the same number on the other side. Have students write the addition doubles fact to match their picture and then write the related subtraction sentence. 	<ul style="list-style-type: none"> • Cut out symmetrical shapes, such as hearts or butterflies • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,8 4.3 A.1,3 4.5 B.1,2,3,4
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use doubles to subtract. 	<ul style="list-style-type: none"> • Play “One Potato.” • See manual for details. 	<ul style="list-style-type: none"> • Counters • Work mat divided into 2 sections 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,8 4.3 A.1,3 4.5 B.1,2,3,4
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use doubles to subtract. 	<ul style="list-style-type: none"> • Play “Beans Plus More Beans.” • Give each student 2 paper plates and 2 kinds of beans. Tell an addition story using an addition fact such as , “Dad put 8 beans on my plate and 7 on my brother’s. How many beans did Dad serve?” Students act it out using the 2 different beans and the 2 plates for the addends. Invite students to tell a related subtraction sentence. 	<ul style="list-style-type: none"> • Small paper plates • 2 kinds of beans or counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,8 4.3 A.1,3 4.5 B.1,2,3,4

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use related facts to find missing addends and signs. 	<ul style="list-style-type: none"> • Play the “Add or Subtract?” game. • See manual for details. 	<ul style="list-style-type: none"> • 2 number cubes & 5-10 (TT12) • 2 charts with numbers 0-15 • 2 colors of crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.8 4.3 C.2 D.1
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use related facts to find missing addends and signs. 	<ul style="list-style-type: none"> • Play “Under the Tub.” • Turn a butter tub or bowl upside down covering 8 connecting cubes. Place 6 cubes on top. Show students the 6 cubes on top telling them that you have some more cubes under the tub and that altogether you have 14 cubes. Write the number sentence $6 + \underline{\quad} = 14$. Ask “How many cubes are under the tub?” (8) “What number sentence can you write?” ($6 + 8 = 14$) “What is the related subtraction sentence? ($14 - 6 = 8$) Continue with other numbers of cubes on top and under the tub. 	<ul style="list-style-type: none"> • Connecting cubes • Large butter tub or bowl 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.8 4.3 C.2 D.1

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APPLICATION OF BASIC NUMBER CONCEPTS	Students will be able to: <ul style="list-style-type: none"> • use related facts to complete fact families. 	<ul style="list-style-type: none"> • Play “Connect the Rings.” • Have one partner string from 1-9 paper rings of all one color on a piece of yarn. The partner then puts on from 1-9 rings of different colored paper. They record the addition fact including the sum. Have students turn the string around to write the other addition fact. Have one student slide off the paper rings of one color and write the subtraction fact. Put the pieces back. Have the other student take off the other color and write the related subtraction fact. 	<ul style="list-style-type: none"> • 2 colors of colored paper rings • Yarn 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.4 4.3 D.1 4.5 B.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • use related facts to complete fact families. 	<ul style="list-style-type: none"> • Play “Write the Facts” which is a group activity. • See manual for details. 	<ul style="list-style-type: none"> • 2 sets of number cards 0-9 (TT2) • Connecting cubes 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.4 4.3 D.1 4.5 B.3
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play the game “The Price of Stamps,” a partners activity. • Give one student in the pair a collection of stamps with different values. Give the other student a collection of coins. The student with the coins will use them to purchase stamps. Have the students trade roles. 	<ul style="list-style-type: none"> • Collection of used stamps • Coins 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.3 4.4 A.1,2 4.5 C.1,3

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APPLICATION OF BASIC NUMBER CONCEPTS	<p>Students will be able to:</p> <ul style="list-style-type: none"> analyze data and make decisions. 	<ul style="list-style-type: none"> Split the class into small groups. Assign each group a coin or money bill to design. Tell them they will work together to design a new one. Have them decide what will be written on it and have them draw the pictures to go on them. Share their results. 	<ul style="list-style-type: none"> Paper Crayons Scissors Real coins & paper money to look at as a guide 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.4 A.2 4.5 A.3,5</p>
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> Play the "Glue Who" game. Brainstorm with students many different kinds of glue such as school glue, paste, rubber cement, glue on stamps, and so on. Have them sort the list by "permanent" and "not permanent" glue. 	<ul style="list-style-type: none"> Various types of glue 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.4 C.1 4.5 C.3,4</p>
APPLICATION OF BASIC NUMBER CONCEPTS	<ul style="list-style-type: none"> apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> Play "Stick to Me." Give each student small pieces of cardboard to represent a stamp. On a piece of paper put a drop of one sticky food. Have students attach a piece of cardboard. Then have students hold the paper upside down. Have students time how long the cardboard sticks before it falls off. Repeat with other sticky foods and discuss which glue is the best. 	<ul style="list-style-type: none"> "Sticky" food items such as syrup, honey, jelly, peanut butter, Small pieces of cardboard and paper 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.4 C.1 4.5 C.3,4</p>

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<p>APPLICATION OF BASIC NUMBER CONCEPTS</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> explore and solve problems involving simple number patterns. 	<ul style="list-style-type: none"> Using the chalkboard, provide a review game by having a small group of students come up to the board at one time. Give each student a long vertical strip of paper with numbers on it. Have the board with a magnet. Then call out the rule. Example: Subtract 6 or add 7. As quickly as possible, the students have to use the rule with their list of numbers, by writing the answers on the board next to each number. The student completing the problems first or with the most correct answers wins for the group. <p><u>Example:</u> <u>Answers:</u></p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 0 20px;">9</td> <td>3</td> </tr> <tr> <td>11</td> <td>5</td> </tr> <tr> <td>10</td> <td>4</td> </tr> <tr> <td>15</td> <td>9</td> </tr> <tr> <td>12</td> <td>6</td> </tr> </table> <p><u>Rule:</u> Subtract 6</p>	9	3	11	5	10	4	15	9	12	6	<ul style="list-style-type: none"> Chalk Chalkboard Long strips of paper with various numbers below 20 printed on them 	<ul style="list-style-type: none"> Chapter 2 Assessment Test 	<table style="width: 100%;"> <tr> <td style="width: 50%;">4.3</td> <td>A.1</td> </tr> <tr> <td>4.5</td> <td>B.1,2</td> </tr> </table>	4.3	A.1	4.5	B.1,2
9	3																		
11	5																		
10	4																		
15	9																		
12	6																		
4.3	A.1																		
4.5	B.1,2																		

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • Read, write, and represent 10's. 	<ul style="list-style-type: none"> • Count by 10's on paper. • Give each student 10 tens models. Have them put them in a line across the top of their desk. Ask them to group the models to help them answer the questions. <ul style="list-style-type: none"> – “How many does each tens model show?” (10) – “How many do 2 tens model show?” (20) – “How many does 3 tens models show?” (30) • Have them point to the tens models as they count from 10 - 100 by tens. 	<ul style="list-style-type: none"> • Paper • Tens Model 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.3 A.1
NUMBER SENSE	<ul style="list-style-type: none"> • Read, write, and represent 10's. 	<ul style="list-style-type: none"> • Play “How Many Tens?” • Have students make macaroni bags to show groups of tens from 10 - 100. Label each bag with tape and the number. Have the class order the bags to show counting by tens. Hold up the bag of 40. How many tens? (4) Repeat with other bags of macaroni. 	<ul style="list-style-type: none"> • Large pasta pieces • Small plastic sandwich bags • Masking tape 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.3 A.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • estimate magnitude of numbers. 	<ul style="list-style-type: none"> • Play “About How Many?” • Make cups of cubes each containing varying groups of ten. Show students the cup of 10 cubes and ask the questions: “Do you think there are about 10 cubes or 50 cubes in my cup?” Show a cup of 30 cubes and ask again: “Do you think I have about 10 cubes or 30 cubes in my cup?” Try the same activity using different objects such as paper clips or pencils. 	<ul style="list-style-type: none"> • Clear cups • Cubes • Paper clips • Pencils 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.1,2
NUMBER SENSE	<ul style="list-style-type: none"> • estimate magnitude of numbers. 	<ul style="list-style-type: none"> • Play “Number Music” which is a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Drums (or a box and sticks) • Triangles (or pencils) • Maracas (or beans in a bag) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.1,2
NUMBER SENSE	<ul style="list-style-type: none"> • use place value models to show tens and ones. 	<ul style="list-style-type: none"> • Play “Let’s Regroup.” • Write “22” on the chalkboard. Have each group count out 22 connecting cubes. “How many ones do you have?” (22) Have them record the number of ones they have. Guide students in regrouping the connecting cubes. Help them understand how to connect groups of 10 cubes. “How many tens are there in 22?” (10) “How many ones?” (2) Continue with other 2-digit numbers. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • use place value models to show tens and ones. 	<ul style="list-style-type: none"> • Play “Pick Two Cards” which is a partner game. • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Short place-value chart (TT14) • Number cards 0-9 (TT2) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2
NUMBER SENSE	<ul style="list-style-type: none"> • count, read, write, and represent numbers to 100. 	<ul style="list-style-type: none"> • Play “Showing Numbers.” • Put students into partners. Pass out the materials. Then ask these questions: <ul style="list-style-type: none"> – “How many tens do you use to show 10?” (1) – “How do you write it using a number?” (10) – “How do you write it using words?” (Ten) • Have partners show it and write it each way. Next ask: <ul style="list-style-type: none"> – “How may ones?” (1) – “How do you write it using a number?” (11) – “How do you write it using words? (Eleven) • Have partners show it and write it each way. Have partners use tens and ones to continue to build numbers within decades in sequence, for example 10-19, 20-29, 30-39, and so on. Have them write the numerals and number as they build each sequence of numbers. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Construction paper for work mat 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.5 4.3 A.1 4.4 C.2 4.5 B.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> identify expanded form for numbers to 100. 	<ul style="list-style-type: none"> Play "Tens and Ones" as a whole group activity. See manual for details. 	<ul style="list-style-type: none"> Number cube pattern (TT12) 	<ul style="list-style-type: none"> Teacher Observation 	4.1 A.2 4.5 B.2 C.6
NUMBER SENSE	<ul style="list-style-type: none"> identify expanded form for numbers to 100. 	<ul style="list-style-type: none"> Play "Make a 2-Digit Number." Put students in partners. Each partner picks a number card. Have students use their cards to make a two-digit number. Ask, "How many tens models do you need to show tens?" "How many ones models do you need?" Have them show the number using tens and ones models. Model putting the number into expanded form. 3 tens and 4 ones would look like $30 + 4$ in expanded form. Ask "How do you write the number in expanded form?" Partners take turns writing the number in expanded form. <p><u>Examples:</u></p> <p style="text-align: center;"> 34 43 $34 = 30 + 4$ $43 = 40 + 3$ </p> <ul style="list-style-type: none"> Have students reverse the digits and repeat. 	<ul style="list-style-type: none"> Place-value models (TT13) Number cards (TT2) Construction paper for work mats 	<ul style="list-style-type: none"> Teacher Observation 	4.1 A.2 4.5 B.2 C.6

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • identify expanded form for numbers to 100. 	<ul style="list-style-type: none"> • Play “What’s the Expanded Form?” This is a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Connecting cubes • Bag or basketball 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.2 C.6
NUMBER SENSE	<ul style="list-style-type: none"> • draw conclusions by using clues. 	<ul style="list-style-type: none"> • Play “What Do You Think?” • Tell the following story: “The class went outside to play. Leaves were falling from the trees. The leaves were red, yellow, and brown. The students jumped in the piles of leaves.” Then ask: “What season do you think it is - Autumn or Spring? Why?” Talk about clues in the story and students’ prior knowledge that led to their conclusions. Tell stories or display pictures that will provide other opportunities for students to demonstrate that conclusions must be inferred based on what is in a picture or a story and what they already know. 	<ul style="list-style-type: none"> • Pictures 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 C.1 4.5 C.4,5
NUMBER SENSE	<ul style="list-style-type: none"> • draw conclusions by using clues. 	<ul style="list-style-type: none"> • Play “Snap and Tap!” Divide the class into partners. • See manual for details. 	<ul style="list-style-type: none"> • Big Book Vol. 1 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 C.1 4.5 C.4,5

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	<p>Students will be able to:</p> <ul style="list-style-type: none"> use logical reasoning to solve problems. 	<ul style="list-style-type: none"> Play a whole class activity called "The Orchestra." First talk with students about orchestras. Read the following problem aloud: "How many musicians are in the orchestra? The number has 8 ones and the ones digit is a number that comes just after 7. What is a 2-digit number with 8 ones?" (18, 28, 38, 48, 58, 68, 78, 88, 98) Which of these numbers has a tens digit that comes just after 7?" (88) Have volunteers explain why 88 is reasonable. Have them create similar problems. 	<ul style="list-style-type: none"> Numbered hundred chart (TT25) Crayons 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.5 A.1,2 B.3,4 C.2</p>
NUMBER SENSE	<ul style="list-style-type: none"> use logical reasoning to solve problems. 	<ul style="list-style-type: none"> Play "Using Clues," which is a group activity. See manual for details. 	<ul style="list-style-type: none"> Numbered hundred chart (TT25) 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.5 A.1,2 B.3,4 C.2</p>

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • compare numbers to 100. 	<ul style="list-style-type: none"> • Do the whole class activity called “Let’s Compare.” • Use a piece of construction paper as a work mat. Use tens and ones models to show 24. Then show 31 below 24. Write the numbers 31 and 24 next to the models. Explain that you want to compare the numbers. Ask: “What digits should you compare first?” (the tens) Draw lines between the tens to show that 31 has more tens. Ask: “Which number is greater?” (31) Write $31 > 24$ on the chalkboard. Remind students that $>$ means “greater than.” Repeat the activity to compare 27 and 29, 51 and 42, and other pairs of numbers up to 100 to find which number is less. Write $27 < 29$ on the board and remind students that $<$ means “less than.” Also compare 1 ten, 15 ones, and 2 tens, 5 ones to establish that $25 = 25$. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Short place value charts (TT14) • Construction paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.2
NUMBER SENSE	<ul style="list-style-type: none"> • compare numbers to 100. 	<ul style="list-style-type: none"> • Play “Go Shopping” a partner game. • See manual for details. 	<ul style="list-style-type: none"> • Classroom items • Price tags (TT27) • Penny cards (TT28) • Dime cards (TT30) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • order numbers to 100. 	<ul style="list-style-type: none"> • Do the group activity, "Find the Missing Numbers." • See manual for details 	<ul style="list-style-type: none"> • Blank hundred chart (26) [with some numbers added] 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.5 4.5 B.1
NUMBER SENSE	<ul style="list-style-type: none"> • order numbers to 100. 	<ul style="list-style-type: none"> • Play "Get in Order." • Prepare number cards for 50-99. Have 10 students stand in line at the front of the classroom. Distribute the number cards from 50-60 in random order. Have the students arrange themselves in order so that the numbers are in order from least to greatest. Repeat the activity with different students and number cards. 	<ul style="list-style-type: none"> • Prepare number cards for 50-99 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.5 4.5 B.1
NUMBER SENSE	<ul style="list-style-type: none"> • skip count to 100 by 2's, 3's, 4's, or 5's. 	<ul style="list-style-type: none"> • Play "Skip Count" on the number line. • Prepare a number line with 0-50. Ask "How do you skip count to 10 by 2's?" (2, 4, 6, 8, 10) Show students how to draw jumps of 2 spaces, beginning with 0 and ending with 10. Write the number pattern under the number line. Have volunteers take turns drawing jumps for 10-20, 20-30, and so on, and continue the number pattern. Use a different number line to show skip counting by 3's, 4's, and 5's. 	<ul style="list-style-type: none"> • Number line (TT6) 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 A.1 4.5 D.2,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	<p>Students will be able to:</p> <ul style="list-style-type: none"> • skip count to 100 by 2's, 3's, 4's, or 5's 	<ul style="list-style-type: none"> • Play "Count Together." • Display a large hundred chart on the chalkboard for student reference throughout the activity. Ask students to form a circle and sit on the floor. The first nine students count 1 through 9. The 10th student says 10 and stands up. Students continue counting until they have counted 10 through 19. The 20th students says 20 and stands up as the other students sit down. The counting continues in this pattern until they reach 100. Repeat the activity, counting by 2's and then by 5's. You can circle every counted number on the chart for students to see. 	<ul style="list-style-type: none"> • Numbered hundred chart (TT25) 	<ul style="list-style-type: none"> • Teacher Observation 	<p>4.3 A.1 4.5 D.2,4</p>
NUMBER SENSE	<ul style="list-style-type: none"> • explore odd and even numbers. 	<ul style="list-style-type: none"> • Play "Even or Odd Names." • Have students write their first and last names on index cards. Ask "How many letters are in your name?" Have them use a different color crayon for every 2 letters. Ask: "How many colors have you used for only one letter?" "Does your name have an even or odd number of letters?" 	<ul style="list-style-type: none"> • Index cards • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	<p>4.3 A.1 4.5 B.1</p>

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • use ordinal numbers. 	<ul style="list-style-type: none"> • Play “Give a Clue” by putting students into partners. • Using a number chart to 100, model to help students give clues to their partners. For example: “My number is in the fourth row. It is before the 6th number. You can get to it if you count by 2’s. What is my number?” (34) Have partners take turns making up clues about a number on the hundred chart. The clues should include ordinal numbers. Students should write the number using words. 	<ul style="list-style-type: none"> • Numbered hundred chart (TT25) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.5 4.5 B.1,2,3,4
NUMBER SENSE	<ul style="list-style-type: none"> • use ordinal numbers. 	<ul style="list-style-type: none"> • Play the group activity “Months of the Year.” • Have students write the ordinal numbers to describe the months of the year. Write a partial list of months and their ordinal positions on the board. For example, January - 1st, February - 2nd, etc. Have students complete the list. Have students in each small group quiz one another on the months using ordinal numbers. Have them ask questions like the following: “What is the 8th month?” “Which month is June?” 	<ul style="list-style-type: none"> • Calendar 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.5 4.5 B.1,2,3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play “Go On a Ride” as a group activity. • Facilitate a class discussion about rides you would see at an amusement park. Write a list on the board of rides suggested by the students. Give each ride on the list a price. For example: roller coaster - 10 cents; bumper cars - 5 cents; ferris wheel - 10 cents; log flume - 20 cents; boats - 15 cents. Have students make a list to plan which rides they would like to try. Tell them to find out if they would have enough to try all of the rides on their list if they had 50 cents to spend. 	<ul style="list-style-type: none"> • Paper • Pencil 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.2 4.5 A.2,3
NUMBER SENSE	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play “Tube Sounds” with the whole class. • Have students write answers to these questions: Tell students they will compare the sounds of two musical tube shakers. Have students write: “How will you find out which tube sound is the loudest? How can you decide which tube sound is the softest? What are some things that might affect the sound of the tube?” 	<ul style="list-style-type: none"> • Linguistic 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play “Clapping Sounds.” • Lead the class in clapping patterns with loud and soft sounds. For example, clap loud, loud, loud, soft, soft, loud, loud, loud. Discuss how to tell which sound is louder. Talk about how loud and soft claps are alike and how they are different. Help students prepare for discriminating among the sounds of the tubes by practicing different loud and soft clapping patterns. Then connect to listening for the differences among the sounds of the tubes. 	<ul style="list-style-type: none"> • Auditory/Musical 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4
NUMBER SENSE	<ul style="list-style-type: none"> • provide another opportunity for review and practice. 	<ul style="list-style-type: none"> • Play “What’s My Number?” • One student puts a connecting cube on his or her hundred chart without letting his or her partner see the cube. The student gives a clue about the number. The partner asks “yes” or “no” questions to guess the number. 	<ul style="list-style-type: none"> • Connecting cubes • Numbered hundred chart (TT25) 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 B.1,2,4
NUMBER SENSE	<ul style="list-style-type: none"> • maintain concepts, skills, and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Workbook pages • Counters 	<ul style="list-style-type: none"> • Chapter 3 Assessment Test 	4.5 C.6

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	<p>Students will be able to:</p> <ul style="list-style-type: none"> explore the value of a penny, nickel, dime, and quarter, and use coins to show money amounts. 	<ul style="list-style-type: none"> Play "Spin for Coins" as a whole class activity. Have students spin the spinner, ask: "What coin did you spin?" Have them put that coin on the table. Then have them spin again. Ask: "What coin did you spin now?" Repeat this several times. Then stop and ask: "How much are your coins worth?" Have them count their coins. Repeat the activity. 	<ul style="list-style-type: none"> Spinners, 3 & 4-part (TT10) Coins (TT31) 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.4 4.5 B.1,2</p>
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> explore the value of a penny, nickel, dime, and quarter, and use coins to show money amounts. 	<ul style="list-style-type: none"> Play "Trade You" as a whole group activity. See manual for details. 	<ul style="list-style-type: none"> Magazines Scissors Glue Coins (TT31) 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.4 4.5 B.1,2</p>
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> find the value of a mixed group of coins to 99 cents. 	<ul style="list-style-type: none"> Play the game "Is There Enough Money?" One partner chooses a toy. The other partner spins the spinner 3 times and takes that many coins. That partner decides the value of the coins and records it. The first partner decides if there is enough money to buy the toy. Partners change roles and repeat the activity. 	<ul style="list-style-type: none"> Coins (TT31) Spinner (TT10) Price tags (TT27) Toys labeled up to 50 cents 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.4 4.4 D.3 4.5 B.3</p>

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	Students will be able to: <ul style="list-style-type: none"> • find the value of a mixed group of coins to 99 cents. 	<ul style="list-style-type: none"> • Play “A Bag of Money” as a group activity. • See manual for details. 	<ul style="list-style-type: none"> • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.4 D.3 4.5 B.3
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • identify the value of a half dollar and find the value of a mixed group of coins to 99 cents. 	<ul style="list-style-type: none"> • Play group activity “Do You Have Enough?” • Give each group of students cards with items labeled with prices up to 99 cents and a set of cards (in a different color) with pictures of a collection of coins. Students take turns drawing a card from each group. Ask: “What is the value of your coins?” “Do you have enough money to buy the item?” If there is the same amount of money as the item or more, he or she keeps the card. If not, both cards are returned to the groups. Students take turns until one player has bought the most items. 	<ul style="list-style-type: none"> • Cards with items labeled with prices up to 99 cents • Matching cards with collections of coins 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.4 A.2 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD						
DISCRETE MATHEMATICS (MONEY)	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify the value of a half dollar and find the value of a mixed group of coins to 99 cents. 	<ul style="list-style-type: none"> Play "Don't Look," a partner game. One partner reaches into a bag and pulls out 3 coins without looking. The other partner also pulls out 3 coins. Ask: "What is the value of your coins?" Each partner counts the value of their coins. One partner spins the more/less spinner. The partner who has the value shown on the spinner - more or less than the other player - keeps all the coins. The player who has the largest value of coins when all the coins are gone from the bag is the winner. 	<ul style="list-style-type: none"> Coins in a bag (TT31) 4-part spinner (TT10) with "more" or "less" 	<ul style="list-style-type: none"> Teacher Observation 	<table border="0"> <tr> <td>4.1</td> <td>A.4</td> </tr> <tr> <td>4.4</td> <td>A.2</td> </tr> <tr> <td>4.5</td> <td>B.2</td> </tr> </table>	4.1	A.4	4.4	A.2	4.5	B.2
4.1	A.4										
4.4	A.2										
4.5	B.2										
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> use the fewest number of coins for an amount up to 99 cents. 	<ul style="list-style-type: none"> Play "Fewer or More Coins?" Have one student in each pair spin to get an amount. Then have both students show the amount using coins. Have them compare their combinations of coins to see who used fewer coins. Repeat the activity several times. 	<ul style="list-style-type: none"> 5-part spinner (TT11) (15¢, 25¢, 35¢, 45¢, 55¢) Coins (TT31) 	<ul style="list-style-type: none"> Teacher Observation 	<table border="0"> <tr> <td>4.1</td> <td>A.4,5</td> </tr> <tr> <td>4.5</td> <td>B.1,2</td> </tr> </table>	4.1	A.4,5	4.5	B.1,2		
4.1	A.4,5										
4.5	B.1,2										
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> use the fewest number of coins for an amount up to 99 cents. 	<ul style="list-style-type: none"> Play "Money Kites" as a whole class activity. See manual for details. 	<ul style="list-style-type: none"> Diamond shaped paper Yarn & Glue Rectangular strips of paper Coins (TT31) 	<ul style="list-style-type: none"> Teacher Observation 	<table border="0"> <tr> <td>4.1</td> <td>A.4,5</td> </tr> <tr> <td>4.5</td> <td>B.1,2</td> </tr> </table>	4.1	A.4,5	4.5	B.1,2		
4.1	A.4,5										
4.5	B.1,2										

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
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GRADE 2**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	Students will be able to: <ul style="list-style-type: none"> • explore counting up to make change. 	<ul style="list-style-type: none"> • Play “Cashier” as a partner game. • Follow the directions carefully in the teacher’s manual. 	<ul style="list-style-type: none"> • Price tags (TT27) • Toy items with price labeled coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 A.1,2,5
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • explore counting up to make change. 	<ul style="list-style-type: none"> • Play the whole class game “Change from the Chart.” • See manual for details. 	<ul style="list-style-type: none"> • Numbered hundred chart (TT25) • 2-color counters • Coins (TT31) • Price tags (TT27) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 A.1,2,5

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	Students will be able to: <ul style="list-style-type: none"> • use coins and “act it out” strategy to solve problems. 	<ul style="list-style-type: none"> • Play the game “Chores.” • As a class, make a list on the board of chores students can do. Include what they could get paid for doing these chores. Create problems using these chores. For example: Pam was paid 10¢ for sweeping the floor and 25¢ for feeding the cat for a week. Ask: “How much money did she make?” (35¢) Students act out the problems and chores and get paid. Use coins to find the solutions to the problems. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 A.2 C.3,4
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • use coins and “act it out” strategy to solve problems. 	<ul style="list-style-type: none"> • Play “It’s a Game,” a partner activity. • See manual for details. 	<ul style="list-style-type: none"> • Gameboard (TT34) with start & finish spaces & spaces for actions with coins. • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 A.2 C.3,4
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • identify the value of dollars and cents up to \$5.00. 	<ul style="list-style-type: none"> • Play “Make a Design,” a whole group activity. • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.4 A.2 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD						
DISCRETE MATHEMATICS (MONEY)	Students will be able to: <ul style="list-style-type: none"> • identify the value of dollars and cents up to \$5.00. 	<ul style="list-style-type: none"> • Play the “Spin and Collect Partner” game. • Have students make a recording sheet with a column for each spin and a column for the total. One partner spins the money spinner three times and collects the coins shown on the spinner. That partner records each spin on the recording sheet and shows the running total in the Total column. Partners take turns until one partner reaches a total of \$1.00. If a spin would put the partner over \$1.00, they lose that turn. 	<ul style="list-style-type: none"> • 5-part spinner (TT11) • Penny, nickel, dime, quarter, half dollar • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	<table border="0"> <tr> <td>4.1</td> <td>A.4</td> </tr> <tr> <td>4.4</td> <td>A.2</td> </tr> <tr> <td>4.5</td> <td>B.1</td> </tr> </table>	4.1	A.4	4.4	A.2	4.5	B.1
4.1	A.4										
4.4	A.2										
4.5	B.1										
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • compare the value of a mixed group of dollar bills and coins with a money amount. 	<ul style="list-style-type: none"> • Play “Bags of Money.” • Have one partner choose an item to buy. That partner rolls the money cube 3 times and collects the coins and/or bills shown on the cube. Ask: “Is there enough money to buy the item?” If there is enough, they keep the item. If not, they must return it. Partners take turns playing until one partner has bought 4 items. 	<ul style="list-style-type: none"> • Coins (TT31) • Bills (TT32) (\$1) • Items labeled up to \$5.00 • A number cube (TT12) with picture of each: dollar, half dollar, quarter, dime, nickel, penny 	<ul style="list-style-type: none"> • Teacher Observation 	<table border="0"> <tr> <td>4.1</td> <td>A.1</td> </tr> <tr> <td>4.5</td> <td>A.3,4</td> </tr> <tr> <td></td> <td>B.1,3</td> </tr> </table>	4.1	A.1	4.5	A.3,4		B.1,3
4.1	A.1										
4.5	A.3,4										
	B.1,3										

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	<p>Students will be able to:</p> <ul style="list-style-type: none"> compare the value of a mixed group of dollar bills and coins with a money amount. 	<ul style="list-style-type: none"> Play the "Money Game," which is a whole group activity. See manual for details. 	<ul style="list-style-type: none"> Clear bags with a collection of coins (TT31) Bills (TT32) (\$1) up to \$5.00 Items labeled with price tags (TT27) up to \$5.00 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.1 4.5 A.3,4 B.1,3</p>
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> analyze data and make decisions. 	<ul style="list-style-type: none"> Play "Thumbs Up for 99 Cents." Display on the chalkboard a list of variety of classroom objects and their costs (less than 99¢). Have one volunteer be the shopper. Choose several items to buy so that the total is less than 99¢. Have another volunteer be the cashier who adds up the total of items. Have the remainder of the class find the total. Before the cashier tells the shopper if the total is less than 99¢, the class signals with thumbs up or down. 	<ul style="list-style-type: none"> List of variety of classroom objects and their costs (less than 99¢) 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.4 4.4 A.1,2</p>
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> analyze data and make decisions. 	<ul style="list-style-type: none"> Play "All for Less Than a Dollar," which is a whole group activity. See manual for details. 	<ul style="list-style-type: none"> Bag of cards, each showing a picture of an item less than 99¢ and the price 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 A.4 4.4 A.1,2</p>

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
DISCRETE MATHEMATICS (MONEY)	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play “Does It Balance?” • Have students work in pairs. Ask: “Can you balance this ruler on your finger?” One student tries to balance a ruler on his or her index finger, palm facing up. Have the partner place one penny on one side of the ruler. Ask: “What happened to the ruler?” Have the partner put one penny on each side. Ask: “Now what happened to the ruler?” 	<ul style="list-style-type: none"> • Pennies • Rulers 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.2 C.3,4
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play “I Predict It Will Balance!”, which is a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Balance scale • Classroom object 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.2 C.3,4
DISCRETE MATHEMATICS (MONEY)	<ul style="list-style-type: none"> • maintain concepts, skills, and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Workbook Pages • Chart with money tables on it 	<ul style="list-style-type: none"> • Chapter 4 Assessment Test 	4.5 C.6

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • add tens using a hundred chart. 	<ul style="list-style-type: none"> • Play "Spin for Tens." • Have each partner spin the spinner to see how many tens models they will collect. Ask: "What number did you spin?" "How many tens did you collect?" Have each partner write a number to show how many tens they have collected. Partners combine their tens models. Have them use their numbers to write addition problems to match their tens models. 	<ul style="list-style-type: none"> • Spinner (TT10) numbered 1-4 • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 B.4,7
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add tens using a hundred chart. 	<ul style="list-style-type: none"> • Play "Adding Tens" as a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT16) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 B.4,7
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • Add 2-digit numbers without regrouping. 	<ul style="list-style-type: none"> • Play "Add Them Up." • Tell students that they will use what they know about addition facts to help them and larger numbers. Write $32 + 14$. Have pairs use place-value materials to model each addend. Have students combine the ones models, then combine the tens models. 	<ul style="list-style-type: none"> • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 A.3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • Add 2-digit numbers without regrouping. 	<ul style="list-style-type: none"> • Play “Use Your Facts,” a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 A.3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • use place-value models to add 2-digit numbers with regrouping. 	<ul style="list-style-type: none"> • Do “Regrouping With Units and Rods” as a partner activity. • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT16) • Workbook Pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add 2-digit numbers with and without regrouping. 	<ul style="list-style-type: none"> • Play a partner game called “Show Tens and Ones.” • Give each pair of students a workmat and place-value models and complete the activity in the manual. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT16) • Workmat recording sheet 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add 2-digit numbers with and without regrouping. 	<ul style="list-style-type: none"> • Play “Show Tens and Ones.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • distinguish between important and unimportant information. 	<ul style="list-style-type: none"> • Play "Tell a Story," which is a whole class activity. • Make up story problems based on a familiar tale where students have to add 2-digit numbers to get the answer. Guide them to understand why some information is unimportant. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5 4.5 A.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • distinguish between important and unimportant information. 	<ul style="list-style-type: none"> • Do a group activity called "Give the Details." • See manual for details. 	<ul style="list-style-type: none"> • Big Book Vol. 1 • Workbook pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5 4.5 A.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • draw a picture to solve problems. 	<ul style="list-style-type: none"> • Distribute materials. Tell an addition story. Have each student model the problem using place-value models. Then have them draw a picture of the place-value models to show how they got the answer. 	<ul style="list-style-type: none"> • Crayons • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • draw a picture to solve problems. 	<ul style="list-style-type: none"> • Do a whole group activity called "Draw a Picture." • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Pencils • Paper 	<ul style="list-style-type: none"> • Teacher Observation • Workbook Pages 	4.1 A.2 4.5 B.2,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • add 2-digit numbers and check the sums. 	<ul style="list-style-type: none"> • Divide the class into partners. Prepare index cards with 2-digit addition problems. Distribute a stack of cards to each set of pairs. Have one partner choose a card and find the sum. Have the partner reverse the addends and find the sum to check the addition. Students continue until all the cards have been drawn. 	<ul style="list-style-type: none"> • Crayons • Index cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,7,8 4.5 B.2,3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add 2-digit numbers and check the sums. 	<ul style="list-style-type: none"> • Play "Same Sums?", which is a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Paper • Basket 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5,7,8 4.5 B.2,3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • estimate to see if an answer is reasonable. 	<ul style="list-style-type: none"> • Use number lines that count by 10's to estimate 2-digit addition problems by rounding to the nearest ten. 	<ul style="list-style-type: none"> • Number lines (TT6) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.1,2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • estimate to see if an answer is reasonable. 	<ul style="list-style-type: none"> • Play a whole class activity called "Money Estimations." • See manual for details. 	<ul style="list-style-type: none"> • Coins (TT31) • Number lines (TT6) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.1,2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • add money amounts. 	<ul style="list-style-type: none"> • Play “School Supply Purchase” as a partner activity. • See manual for details. 	<ul style="list-style-type: none"> • School supply items 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 B.1,2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add money amounts. 	<ul style="list-style-type: none"> • Do an “Odd and Add” group activity. • Write a restaurant menu on the board. Include items with 2-digit prices. Have students’ groups take turns acting as the server, customer and cashier. 	<ul style="list-style-type: none"> • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 B.1,2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • add three addends. 	<ul style="list-style-type: none"> • Play the “Three Addends with Base Ten Blocks,” which is a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Workmat (TT16) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.5 4.3 D.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Map the school. Give each student a map of the school. Tell them to start at your room and end at the principal’s office. Have students work together to plan a route so that each student’s map shows a different route. 	<ul style="list-style-type: none"> • School map • Crayons 	<ul style="list-style-type: none"> • Teacher Observation • Workbook pages 	4.2 C.1 4.4 D.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Do the “Draw a Tree” whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1 D.1 4.5 C.3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Do “Leaf Rubbings” using crayons and paper. Then have students help to sort them by size, by kind of tree, by shape, and so on. Discuss which group has the most and the least. 	<ul style="list-style-type: none"> • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1 D.1 4.5 C.3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • maintain concepts, skills and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Workbook pages 	<ul style="list-style-type: none"> • Chapter 4 Assessment Test 	4.5 C.6
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • subtract tens using a hundred chart. 	<ul style="list-style-type: none"> • Use models to subtract tens as a partner game. One partner picks a 10 card and shows it face up. One partner makes a 2-digit number by picking one card from the 0-9 deck for the ones digit, and by picking another card from the 5-9 deck for the tens digit. Have one partner use place-value models to model the subtraction problem, using the 2-digit number minus the 10 (20, 30, 40...). Have the other partner write the problem and count backwards by tens to solve. Have partners compare solutions. 	<ul style="list-style-type: none"> • Number cards by 10's (TT4) • Number cards 0-9 (TT2) • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 B.1 4.5 B.2,3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • subtract tens using a hundred chart. 	<ul style="list-style-type: none"> • Do a whole class activity using counters on the hundred chart. • See manual for details. 	<ul style="list-style-type: none"> • Numbered hundred chart (TT25) • Counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 B.1 4.5 B.2,3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • subtract 2-digit numbers without regrouping. 	<ul style="list-style-type: none"> • Use subtraction facts to do a partner game. Provide pairs of students with place-value materials. Using 66-4, ask: "What does 66 look like using place-value materials? How do you show that you are subtracting 4?" To model the subtraction of the problem, have pairs use place-value materials. Remind them to start with the ones. Repeat with other problems. 	<ul style="list-style-type: none"> • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 B.5 4.5 B.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • use place-value models to regroup 2-digit numbers. 	<ul style="list-style-type: none"> • Use models and cards for a 20 minute partner game. Have pairs use number cards and place-value models. One student picks 3 cards and arranges them to form a subtraction problem: Example: 5 6 - 8 The other uses place-value models to model the problem. Pairs discuss whether or not they need to regroup to subtract and then find the difference. Pairs switch roles and repeat. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Number cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • use place-value models to regroup 2-digit numbers. 	<ul style="list-style-type: none"> • Play the whole class activity “To Regroup or Not to Regroup.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • subtract 2-digit numbers with and without regrouping. 	<ul style="list-style-type: none"> • Do a “Group Subtraction” game. • Prepare problems for each group. Have one student pick a card and model the top number. The partners decide whether to regroup and the second student exchanges a ten for ones if needed to subtract. Then students subtract and write the answer. 	<ul style="list-style-type: none"> • Index cards • Place-value workmat (TT16) • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.4 4.5 B.4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • subtract 2-digit numbers with and without regrouping. 	<ul style="list-style-type: none"> • Play “Connecting Cubes Subtraction” with partners. • See manual for details. 	<ul style="list-style-type: none"> • Index cards • Connecting cubes 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.4 4.5 B.4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • follow the steps in a process to solve problems. 	<ul style="list-style-type: none"> • Have students write 3 or 4 sentences telling how to do something such as make a bed for prepare a favorite snack. Have them cut their sentences into strips and cut the strips apart to exchange with partners and reorder each other’s steps. 	<ul style="list-style-type: none"> • Scissors • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 D.1 4.5 B.2,3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	<p>Students will be able to:</p> <ul style="list-style-type: none"> follow the steps in a process to solve problems. 	<ul style="list-style-type: none"> Play "Watch Your Steps" as a group activity. See manual for details. 	<ul style="list-style-type: none"> Leaves, art paper, crayons (or other art supplies) Big Book, Vol. 1 Workbook pages 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.4 D.1 4.5 B.2,3</p>
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> choose the operation to solve a problem. 	<ul style="list-style-type: none"> Provide pairs with related addition and subtraction cards. Have pairs place cards face down in a 4 x 4 grid arrangement and take turns trying to match related fact cards. Students pick up matching cards and turn others back over. Play continues until all cards are matched. 	<ul style="list-style-type: none"> Index cards 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 B.7,8 4.4 D.3 4.5 A.3</p>
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> choose the operation to solve a problem. 	<ul style="list-style-type: none"> Play "Purchasing and Returning" as a whole group activity. See manual for details. 	<ul style="list-style-type: none"> Counters Bags 	<ul style="list-style-type: none"> Teacher Observation Close/Assess 	<p>4.1 B.7,8 4.4 D.3 4.5 A.3</p>
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> use addition to check subtraction. 	<ul style="list-style-type: none"> Provide pairs with spinners. Have pairs take turns spinning to generate a pair of 2-digit numbers. Tell students to write subtraction story problems for each other to solve. Remind students to check subtraction by writing the related addition problem. 	<ul style="list-style-type: none"> 10-part spinners (TT11) 	<ul style="list-style-type: none"> Teacher Observation 	<p>4.1 B.7,8 4.5 B.4</p>

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GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • use addition to check subtraction. 	<ul style="list-style-type: none"> • Play “What’s the Relationship?”, a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT16) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.7,8 4.5 B.4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • estimate to see if an answer is reasonable. 	<ul style="list-style-type: none"> • Have students write 2-digit subtraction problems. Tell students to exchange their papers and solve each other’s problems, using estimation to check if the answer is reasonable. Make number lines that count by 10’s for those who wish to use them. 	<ul style="list-style-type: none"> • Number lines (TT6) • Counters 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.2,3 4.5 B.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • estimate to see if an answer is reasonable. 	<ul style="list-style-type: none"> • Play “Estimating Amounts” as a whole class activity. • See Manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 C.2,3 4.5 B.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • subtract money amounts. 	<ul style="list-style-type: none"> • Play “Snack Bar Subtraction.” • Place a snack menu with prices on the board. Have students make up word problems using subtraction. Have volunteers read and solve the problems. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 B.2,3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • subtract money amounts. 	<ul style="list-style-type: none"> • Play “Buy a Snack” as a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Grocery store flyers • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.5 B.2,3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play “What Will You Buy?” • Give students a grocery ad and tell them to spend up to 99¢, making different collections of items. Have students make a list of the items they would like to buy. Ask: “How did you decide what items to buy? How did you group the items? What snack could you create with 99¢?” 	<ul style="list-style-type: none"> • Grocer store ads 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.4 A.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play “What Does It Cost?” • See manual for directions. 	<ul style="list-style-type: none"> • Coins (TT31) • List of objects that cost less than 99¢ 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.4 4.4 A.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Do a whole class activity called “Forecasts.” Cut out of the newspaper the 5-day forecast for the weather for your city. Ask: “What is a forecast?” Each day, compare the forecast with the actual weather. Ask: “Is there a pattern you see in the forecast? Is the weather the same as or different than the forecast?” 	<ul style="list-style-type: none"> • Newspaper • Workbook pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Have students draw an outdoor weather scene and label it with the day of the week. Post these pictures along with the weather chart. 	<ul style="list-style-type: none"> • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • to maintain concepts, skills, and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Workbook Pages 	<ul style="list-style-type: none"> • Chapter 6 Assessment Test 	4.5 C.6
MEASUREMENT	<ul style="list-style-type: none"> • tell time to the hour and half hour. 	<ul style="list-style-type: none"> • On large sheets of paper hanging on the wall, construct a clock face. The middle of the clock should be about shoulder high for your students. Have one student volunteer to be the clock hands and stand in front of the clock face. Call out a time to the hour and have the student use his or her arms to show the time. All the other students write the time as it would appear on a digital clock. Rotate volunteers to be clock hands. 	<ul style="list-style-type: none"> • Large sheets of butcher paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • tell time to the hour and half hour. 	<ul style="list-style-type: none"> • Play "To the Hour" as a group activity. • See manual for details. 	<ul style="list-style-type: none"> • Demonstration clock with only the hour hand 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • tell time to 5 minute intervals. 	<ul style="list-style-type: none"> • Have students spin to get a time. Have them show the time on their clock face. Then have them show the time 5 minutes later. Have them repeat the activity several times. 	<ul style="list-style-type: none"> • Analog clock face (TT35) • 5-part spinner (TT11) labeled 1:10, 2:30, 3:05, 6:50, 5:15 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • tell time to 5 minute intervals. 	<ul style="list-style-type: none"> • Do the “Make a Clock” activity as a whole group. • See manual for details. 	<ul style="list-style-type: none"> • 1 1/4 grid paper (TT21) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • tell time to the quarter hour. 	<ul style="list-style-type: none"> • Create stick cards that have an analog clock with the time shown on the card and matching digital clock times shown on sticks. Students try to match up all of the sticks with cards. 	<ul style="list-style-type: none"> • Cards, craft sticks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • tell time to the quarter hour. 	<ul style="list-style-type: none"> • Play “It’s a Quarter” as a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Paper plates • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • tell time to the hour, half hour, 5 minutes, and quarter hour. 	<ul style="list-style-type: none"> • Have students create time riddles such as: The time on my clock is between 3:00 and 6:00. The minute hand is on the 9, the hour hand is between the 3 and the 4. Aks: "What time is it?" 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 D.1,3,4 4.5 B.2
MEASUREMENT	<ul style="list-style-type: none"> • tell time to the hour, half hour, 5 minutes, and quarter hour. 	<ul style="list-style-type: none"> • Play "Order the Times," a group activity. • See manual for details. 	<ul style="list-style-type: none"> • Index cards with an assortment of analog clock times and digital clock times • Yarn 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 D.1,3,4 4.5 B.2
MEASUREMENT	<ul style="list-style-type: none"> • use sequence of events to solve problems. 	<ul style="list-style-type: none"> • Do a group activity "What is Order?" • Write a story listing some events in order using various times. Have students read the story and try to remember the order of the events. Guide students to look for clues and signal words (first, next, last, finally). Help them create a list of low chart to illustrate the sequence. 		<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1,2
MEASUREMENT	<ul style="list-style-type: none"> • use sequence of events to solve problems. 	<ul style="list-style-type: none"> • Have a "Puppet Show" as a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Big Book Vol. 1 • Workbook Pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.5 A.1,2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • use a clock and “act it out” strategy to solve problems. 	<ul style="list-style-type: none"> • Have students act out a song such as “Hickory Dickory Dock” and show the times on the demonstration clock. Have students make up their own verses, showing different times on their clocks. 	<ul style="list-style-type: none"> • Student clocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 B.2
MEASUREMENT	<ul style="list-style-type: none"> • use a clock and “act it out” strategy to solve problems. 	<ul style="list-style-type: none"> • Do “Time to Read” activity with partner. • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 B.2
MEASUREMENT	<ul style="list-style-type: none"> • tell elapsed time in hours 	<ul style="list-style-type: none"> • Give students an amount of time passed in hours, such as 3 hours. Students create as many different “start” and “end” times as they can, such as Start - 4:00; End -7:00. 	<ul style="list-style-type: none"> • Clock card blanks (TT37) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.2,4 4.5 B.4
MEASUREMENT	<ul style="list-style-type: none"> • tell elapsed time in hours 	<ul style="list-style-type: none"> • Play “What Happened?”, a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Clock card with times (TT36) • Clocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.2,4 4.5 B.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • read a calendar to identify days of the week and months of the year. 	<ul style="list-style-type: none"> • Review the months of the year by having students write them on large cards. Have students choose a month and draw a picture that shows something they do during that month. Have students display their pictures with the month cards. 	<ul style="list-style-type: none"> • Large cards • Crayons • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 C.5
MEASUREMENT	<ul style="list-style-type: none"> • read a calendar to identify days of the week and months of the year. 	<ul style="list-style-type: none"> • Play “Favorite Months” as a whole class activity. • See manual for details. 	<ul style="list-style-type: none"> • Calendar (TT38) • Crayons • Yearly calendar • Workbook pages 	<ul style="list-style-type: none"> • Workbook pages 	4.2 D.3 4.5 C.5
MEASUREMENT	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Do “The Puppet Show” as a whole group activity. • Start by asking “Which acts would you like to have in a puppet show?” Write the act and time needed for the act on the board in different colors. Give each student a picture of a clock face. Have students color in the time on the clock face needed for each act using the color from the list. 	<ul style="list-style-type: none"> • Analog clock face (TT35) • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.2 4.5 B.3
MEASUREMENT	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play “Puppet Show Times,” which is a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Index cards • Demonstration clocks • Workbook pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.2 4.5 B.3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • analyze time concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play “Shadow Tag” and “Shadows” which are two group activities. • See manual for details. 	<ul style="list-style-type: none"> • Flashlight • White paper • Small items such as a box of crayons and a bottle of glue 	<ul style="list-style-type: none"> • Workbook Pages 	4.2 D.3 4.5 C.3
MEASUREMENT	<ul style="list-style-type: none"> • explore measurement concepts and complete a daily schedule. 	<ul style="list-style-type: none"> • Have each student make up a schedule of events for Field Day, including the times each event begins and ends. Then have students trade schedules and have each student make up 5 questions about that schedule, asking how long some events last. Then trade again to a new person and answer the questions. 	<ul style="list-style-type: none"> • Blank schedule papers • Pencils 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,2 4.4 A.1 4.5 B.3,4
MEASUREMENT	<ul style="list-style-type: none"> • maintain concept skills and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 7 Assessment Test 	4.5 C.6

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> • read and interpret pictographs. 	<ul style="list-style-type: none"> • Play a “Pattern Partner” activity. • One partner makes a repeating pattern using 3 different pattern block shapes. The other partner duplicates the pattern. This partner uses the shapes from the pattern data to create a pictograph. 	<ul style="list-style-type: none"> • Pattern blocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.2,4 4.4 A.2
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • read and interpret pictographs. 	<ul style="list-style-type: none"> • Play a whole class activity entitled “Juice” and one entitled “Pets,” using graphing with pictures. • See manual for details. 	<ul style="list-style-type: none"> • Index cards • Paper cups • Tape • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.2,4 4.4 A.2
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • use tally marks to take a survey and complete a chart. 	<ul style="list-style-type: none"> • Have pairs of students create a table for data. Have one partner spin the spinner 15 times. Have the other partner record each spin using tally marks. Ask: “Which color came up the most? Which color came up the least?” Record data with tally marks. 	<ul style="list-style-type: none"> • 3 & 4 part spinners (TT10) 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.1,2 B.1,2 4.5 B.2
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • use tally marks to take a survey and complete a chart. 	<ul style="list-style-type: none"> • Play “The Pond” and “Travel” games, a partner and group activity. • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.4 A.1,2 B.1,2 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> • make and interpret bar graphs. 	<ul style="list-style-type: none"> • Give students a piece of large square graph paper. Have students create a bar graph using the letters from their first and last names as the data. Ask questions like: "Which name is longest? Which has the most vowels?" 	<ul style="list-style-type: none"> • Inch graph paper (TT18) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1 4.4 A.2
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • interpret and draw conclusions using Venn diagrams. 	<ul style="list-style-type: none"> • Let groups of 4 to 8 students work to construct a diagram related to something about themselves, such as: "Do you like pizza or tacos?" Or, "Do you like cats or dogs?" Make one of yourself first to model it, then have them make a list of questions that could be answered using the diagram. 	<ul style="list-style-type: none"> • Drawing paper • Crayons or Markers 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.2 4.5 B.1
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • interpret and draw conclusions using Venn diagrams. 	<ul style="list-style-type: none"> • Do the group activities entitled "Painting or Models" and "Let's Find Out." • See manual for details. 	<ul style="list-style-type: none"> • Yarn • Index cards • Self-stick notes • Big Book Vol. 2 • Workbook Pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.4 A.2 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> • make a table to solve problems. 	<ul style="list-style-type: none"> • Have students choose a book from the library. Have them create a tally mark chart with 5 sight words such as “is, to, the, it, and.” Have students pick one page from the book and tally the number of times each word appears on a page. Transfer the information to a chart. Have them write one question that could be answered from reading the chart. 	<ul style="list-style-type: none"> • Library books • Chart paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.1,2 4.5 A.1
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • make a table to solve problems. 	<ul style="list-style-type: none"> • Play both group activities entitled “Recycle” and “Save Money.” • See manual for details. 	<ul style="list-style-type: none"> • Recycling Table • 5 baggies with “Monday-Friday” on them • Coins (TT31) 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.1,2 4.5 A.1
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • represent data in different ways. 	<ul style="list-style-type: none"> • Show students a bar graph with the bars only, no title or labels. Have them decide what this graph should represent. Have them add the title and labels. Have them make a chart and a pictograph, showing this same information. 	<ul style="list-style-type: none"> • Graph paper • Markers or Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.1,2 4.5 A.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> • represent data in different ways. 	<ul style="list-style-type: none"> • Play the group game “Graphing Pattern” and the partner game “Graphing Spins.” • See manual for details. 	<ul style="list-style-type: none"> • Bags with a variety of pattern block pieces • Crayons • 4-part spinner (red, blue, green, yellow) (TT10) • Inch graph paper (TT18) 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 A.1,2 4.5 A.1
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • identify range and mode in a set of data. 	<ul style="list-style-type: none"> • Give students newspapers from last week. Have them look up the temperature for their city for the last 5 days. Have them list the set of data. Have them find the range and mode of this set of data. 	<ul style="list-style-type: none"> • Newspaper from the last week 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.4 A.1 4.5 C.4
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • identify range and mode in a set of data. 	<ul style="list-style-type: none"> • Play the two group activities entitled “Hand Spans” and “How Much Water?” • See manual for details. 	<ul style="list-style-type: none"> • Counters 	<ul style="list-style-type: none"> • Teacher Observation 	
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Start a classroom discussion on favorite activities. Then make a list on the board. Tell students they will choose some of the activities to paint a mural. 	<ul style="list-style-type: none"> • Paint • Paper • Workbook Pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.4 A.2 4.5 A.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> analyze data and make decisions. 	<ul style="list-style-type: none"> Guide students to describe graphs they think could be used to show information about class activities from the mural. 		<ul style="list-style-type: none"> Teacher Observation 	4.4 A.2 4.5 A.4
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> apply data concepts to investigate science concepts. 	<ul style="list-style-type: none"> Have students choose a topic about which to survey classmates. For example: A favorite animal or book. Have them work together to organize data and display it in a bar graph. Help them explain the meaning of the bars. Talk with them about how to translate the data from a list to pictures or bars. 	<ul style="list-style-type: none"> Paper Crayons Pencils 	<ul style="list-style-type: none"> Teacher Observation 	4.4 A.2 4.5 A.5 B.1,4 C.3,4
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> apply data concepts to investigate science concepts. 	<ul style="list-style-type: none"> Play the partner game entitled "What Color Will You Pick?" See manual for details. 	<ul style="list-style-type: none"> Connecting cubes 	<ul style="list-style-type: none"> Teacher Observation 	4.4 A.2 4.5 A.5 B.1,4 C.3,4
COLLECTION & USE OF DATA	<ul style="list-style-type: none"> to answer questions by reading a graph. 	<ul style="list-style-type: none"> Do a class survey of which season students like the best. Have students use the results to create a bar graph. Have them work in pairs to create 2 different questions (one addition/one subtraction) about the graph. Have partners trade papers with other partners and work together to answer each other's questions. 	<ul style="list-style-type: none"> Paper Pencil Crayons 	<ul style="list-style-type: none"> Workbook Pages 	4.4 A.1,2 4.5 B.1,3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
COLLECTION & USE OF DATA	Students will be able to: <ul style="list-style-type: none"> • to maintain concepts, skills, and strategies the students have learned. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 8 Assessment Test 	4.5 A.1,2 D.6
MEASUREMENT	<ul style="list-style-type: none"> • measure length in inches. 	<ul style="list-style-type: none"> • Divide the class into small groups. Give each group several pencils of different lengths. Have students take turns measuring each pencil to the nearest inch. Have them compare their answers. If answers vary within the group, review how to place and read a ruler. 	<ul style="list-style-type: none"> • Pencils • Inch ruler (TT39) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,4
MEASUREMENT	<ul style="list-style-type: none"> • measure length in inches. 	<ul style="list-style-type: none"> • Play the two whole group activities entitled "Measure It" and "Use a Ruler." • See manual for details. 	<ul style="list-style-type: none"> • Classroom object 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,4
MEASUREMENT	<ul style="list-style-type: none"> • estimate and measure length and height. 	<ul style="list-style-type: none"> • Have students in each small group try to toss a bean bag a distance of one foot. Then each student measures how far he or she tossed the bean bag. The student with the toss closest to 1 foot wins a point. Then try it with a 2 foot toss. Repeat by tossing it 3 foot. 	<ul style="list-style-type: none"> • Bean bags 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3,4 4.5 B.2

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MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • estimate and measure length and height. 	<ul style="list-style-type: none"> • Play “Measuring Models”, a whole group class activity. • See manual for details. 	<ul style="list-style-type: none"> • Inch ruler (TT39) • Quart containers • Beans 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3,4 4.5 B.2
MEASUREMENT	<ul style="list-style-type: none"> • compare the capacity of cups, pints, and quarts. 	<ul style="list-style-type: none"> • Divide the class into small groups. Have one student in each group fill a quart container with beans. The student then fills pint containers with beans from the quart container. Another student keeps track of the number of pint containers it fills. Another student can count the number of cup containers the pint containers fill. 	<ul style="list-style-type: none"> • Cups • Pint & quart containers • Beans 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.4 D.3 4.5 B.3,4
MEASUREMENT	<ul style="list-style-type: none"> • compare the capacity of cups, pints, and quarts. 	<ul style="list-style-type: none"> • Play the two whole group activities entitled “Fill Them Up” and “Full of Beans!” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.4 D.3 4.5 B.3,4
MEASUREMENT	<ul style="list-style-type: none"> • measure weight in pounds. 	<ul style="list-style-type: none"> • Have students use ads to find foods that are sold by the pound. Tell students that “pound” is abbreviated “lb.” Have them make a list of the foods they find and the price per pound. 	<ul style="list-style-type: none"> • Food ads from newspapers 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 C.4

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MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • measure weight in pounds. 	<ul style="list-style-type: none"> • Play the whole group activity "Use a Balance Scale." • Balance various classroom objects and discuss how it is used to compare weight. 	<ul style="list-style-type: none"> • Balance scale • Small objects 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 C.4
MEASUREMENT	<ul style="list-style-type: none"> • measure perimeter. 	<ul style="list-style-type: none"> • Have students color as many boxes that use 12 squares as they can on their grid paper. Have them find the perimeter of each box. Ask: "Which has the greatest perimeter?" 	<ul style="list-style-type: none"> • Centimeter graph paper (TT22) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 E.1 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • measure perimeter. 	<ul style="list-style-type: none"> • Do a partner activity called "Find the Perimeter." • Have each pair use a ruler to find the perimeter of different items in the classroom. 	<ul style="list-style-type: none"> • Inch ruler (TT39) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 E.1 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • explore area. 	<ul style="list-style-type: none"> • Have students cover the front cover of their math book with square pattern blocks to find the area. Have them trace around a square pattern block to find the area of an index card. Have them trace around a square pattern block to find the area of a piece of notebook paper. 	<ul style="list-style-type: none"> • Square pattern blocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 E.2 4.5 C.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • explore area. 	<ul style="list-style-type: none"> • Play the two whole group activities entitled “Count the Squares” and “Color Squares.” • See manual for details. 	<ul style="list-style-type: none"> • Centimeter graph paper (TT22) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 E.2 4.5 C.4
MEASUREMENT	<ul style="list-style-type: none"> • use maps to solve problems. 	<ul style="list-style-type: none"> • Give each pair of students a map and have each student make a list of questions which could be answered using the information on the map. Have partners exchange papers and answer each other’s questions. 	<ul style="list-style-type: none"> • Maps 	<ul style="list-style-type: none"> • Teacher Observation 	4.4 D.2
MEASUREMENT	<ul style="list-style-type: none"> • use maps to solve problems 	<ul style="list-style-type: none"> • Play the two whole group activities entitled “All Around the Room!” and “How Far Are You?” • See manual for details. 	<ul style="list-style-type: none"> • Big Book Vol. 2 • Inch ruler (TT39) 	<ul style="list-style-type: none"> • Workbook Pages 	4.4 D.2
MEASUREMENT	<ul style="list-style-type: none"> • solve problems by estimating length, then measuring to check. 	<ul style="list-style-type: none"> • Have students make a complex path following the lines of grid paper. Tell them to have the path cross itself several times. Have them use arrows to show the direction of the path. Have them trade papers with a partner and count grid lines to find the length of the path. 	<ul style="list-style-type: none"> • Centimeter graph paper (TT22) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.4 4.5 B.3

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MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • solve problems by estimating length, then measuring to check. 	<ul style="list-style-type: none"> • Do the partner activity entitled “Measure It.” • See manual for details. 	<ul style="list-style-type: none"> • Yarn • Path made zig zags & curves • Inch ruler (TT39) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.4 4.5 B.3
MEASUREMENT	<ul style="list-style-type: none"> • measure length in centimeters. 	<ul style="list-style-type: none"> • Have students make a list of some classroom objects. Have them estimate the length of each object in centimeters. Have them then measure the length in centimeters. 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 A.1
MEASUREMENT	<ul style="list-style-type: none"> • measure length in centimeters. 	<ul style="list-style-type: none"> • Do the partner activity entitled “Measuring Centimeters.” • See manual for details. 	<ul style="list-style-type: none"> • Centimeter ruler (TT40) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3 4.5 A.1
MEASUREMENT	<ul style="list-style-type: none"> • measure mass in grams and kilograms. 	<ul style="list-style-type: none"> • Show students several packages of food with sticky notes covering the masses. Have them estimate which is the lightest to the heaviest package. Let students revise their estimates by picking up packages. Have them check their estimates by looking under the sticky notes. 	<ul style="list-style-type: none"> • Balance scale • Packages of food with gram masses on them • Sticky notes 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1,3,4 4.5 B.3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • measure capacity in liters. 	<ul style="list-style-type: none"> • Have students cut out pictures of containers in catalogs or newspaper ads. Put the headings “More Than a Liter” and “Less Than a Liter” on the bulletin board. Have them put pictures of containers on the bulletin board under the correct heading. 	<ul style="list-style-type: none"> • Catalogs or newspaper ads • Scissors 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1 4.4 A.1
MEASUREMENT	<ul style="list-style-type: none"> • measure capacity in liters. 	<ul style="list-style-type: none"> • Do group activities entitled “Which Is the Liter?” and “Liters of Beans.” • See manual for details. 	<ul style="list-style-type: none"> • Liter sized containers • Different sized containers • Beans 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1 4.4 A.1
MEASUREMENT	<ul style="list-style-type: none"> • measure temperature in degrees Fahrenheit or degrees Celsius. 	<ul style="list-style-type: none"> • Have students draw pictures of what they would do on a hot day and a cold day. Have them include a thermometer for each day that shows the temperature. Post some of the pictures on the bulletin board. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 C.4
MEASUREMENT	<ul style="list-style-type: none"> • measure temperature in degrees Fahrenheit or degrees Celsius. 	<ul style="list-style-type: none"> • Do the whole group activities entitled “How Many Degrees?” and “What’s the Temperature?” • See manual for details. 	<ul style="list-style-type: none"> • Cups of water • Thermometers 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.1 4.5 C.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • choose appropriate measurement tools. 	<ul style="list-style-type: none"> • Prepare a set of cards. Write one of these words on each card: “inch, foot, centimeter, pound, cup, kilometer, pint, quart, liter, degrees Fahrenheit, degrees Celsius.” Have each student pick a card and explain to the small group what measurement tool they would use to measure something using this unit. Have them take turns until every card has been used. 	<ul style="list-style-type: none"> • Index cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 B.1
MEASUREMENT	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play “At the Zoo.” • Show students a box like a shoe box and tell them you will be using it to make a zoo diorama. Have them help you make a list of what things should be in the diorama. Together, measure the length (how long it is) and the width (how wide it is) of the box and label the parts. Draw a picture of what the class diorama will look like when its done. 	<ul style="list-style-type: none"> • Shoe box • Inch ruler (TT39) • Magazines • Different sized boxes • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages • Teacher Observation 	4.2 D.3 4.4 A.1,2 4.5 B.1,2
MEASUREMENT	<ul style="list-style-type: none"> • apply measurement to investigate science concepts. 	<ul style="list-style-type: none"> • Have students make a “fossil” of their foot by stepping onto a piece of clay. Discuss fossils and how they help scientists learn about our past. Mix up the clay “fossils” and have students try to identify which one belongs to whom as they focus on the size of the “fossil.” 	<ul style="list-style-type: none"> • Clay 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 C.3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
MEASUREMENT	Students will be able to: <ul style="list-style-type: none"> • apply measurement to investigate science concepts. 	<ul style="list-style-type: none"> • Play two whole group activities “Following the Footprints” and “Big Foot.” • See manual for details. 	<ul style="list-style-type: none"> • Scissors • Workbook pages 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 D.3 4.5 C.3,4
MEASUREMENT	<ul style="list-style-type: none"> • explore solid shapes and related measurement concepts. 	<ul style="list-style-type: none"> • Use connecting cubes to help find the volume of different shapes. Discuss ways of easily determining this. 	<ul style="list-style-type: none"> • Workbook pages • Connecting cubes 	<ul style="list-style-type: none"> • Workbook Pages 	4.2 E.2 4.5 A.3
MEASUREMENT	<ul style="list-style-type: none"> • to maintain concepts, skills, and strategies the students have learned up to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 9 Assessment Test 	4.5 C.6
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify solid figures and their attributes. 	<ul style="list-style-type: none"> • Have students find pictures of shapes in a magazine. Then put the pictures on the bulletin board. Make a label for each shape. Have students take turns putting each label with the shape on the bulletin board. 	<ul style="list-style-type: none"> • Magazines 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.2 4.5 B.1
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify solid figures and their attributes. 	<ul style="list-style-type: none"> • Play the partner game called “Find the Shapes.” • See manual for details. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.2 4.5 B.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
SPATIAL SENSE & GEOMETRY	Students will be able to: <ul style="list-style-type: none"> • identify solid figures and their attributes 	<ul style="list-style-type: none"> • Have students trace around the faces of each object. Have them work together to label each plane figure they made. Put some of their tracings on the bulletin board so they can see the names of the shapes. 	<ul style="list-style-type: none"> • Models of cubes, prisms, spheres, cones, cylinders 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1,2 4.5 B.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify solid figures and their attributes 	<ul style="list-style-type: none"> • Play a partner game called "Shape Riddle." • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1,2 4.5 B.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • explore quadrilaterals and pentagons. 	<ul style="list-style-type: none"> • Have students draw pictures using all of these figures: square, rectangle, parallelogram, quadrilateral, pentagon. Have the students color all of the squares red, all of the rectangles blue, all of the parallelograms green, and all of the pentagons yellow. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.2 4.5 A.4 B.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • explore quadrilaterals and pentagons. 	<ul style="list-style-type: none"> • Do a whole group activity called "What is This Figure?" • See manual for details. 		<ul style="list-style-type: none"> • Close/Assess 	4.2 B.2 4.5 A.4 B.2

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SPATIAL SENSE & GEOMETRY	Students will be able to: <ul style="list-style-type: none"> • explore putting plane figures together to make other plan figures. 	<ul style="list-style-type: none"> • Using pattern blocks, have students put 2 triangles together. Ask: “What plane figure do the 2 triangles make?” (Quadrilateral or Parallelogram). Next, have them put 2 squares together. Ask: “What plane figure do 2 squares make?” (A rectangle) Have them put a triangle on top of a trapezoid. Ask: “What plane figure does the triangle and trapezoid make?” (A triangle) 	<ul style="list-style-type: none"> • Pattern blocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.4 B.2 4.5 B.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • explore putting plane figures together to make other plan figures. 	<ul style="list-style-type: none"> • Play the whole group activity entitled “Draw a Shape.” • See manual for details. 	<ul style="list-style-type: none"> • Centimeter dot paper (TT24) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.4 B.2 4.5 B.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • make decisions to solve problems. 	<ul style="list-style-type: none"> • Have students cut out pictures from magazines showing various shapes and display them on a bulletin board. Allow them to take turns telling clues about one picture to the remaining class members until someone guesses the correct picture. 	<ul style="list-style-type: none"> • Magazine • Scissors 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.4 B.2,3,4
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • make decisions to solve problems. 	<ul style="list-style-type: none"> • Play two whole class activities entitled “Draw a Picture” and “What is the Shape?” • See manual for details. 	<ul style="list-style-type: none"> • Drawing materials • Big Book Vol. 2 • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.5 A.4 B.2,3,4

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SPATIAL SENSE & GEOMETRY	Students will be able to: <ul style="list-style-type: none"> • use the “Act It Out” strategy and pattern blocks to solve problems. 	<ul style="list-style-type: none"> • Have students make a pattern using triangular and square pattern blocks and colors. Have them color all but the last two shapes in the pattern. Have them trade papers with a partner and have the partner describe the pattern. 	<ul style="list-style-type: none"> • Pattern blocks • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1 4.3 A.1 4.5 B.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • use the “Act It Out” strategy and pattern blocks to solve problems. 	<ul style="list-style-type: none"> • Play “Make New Figures” a partner game. • See manual for details. 	<ul style="list-style-type: none"> • Centimeter dot paper (TT24) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1 4.3 A.1 4.5 B.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify congruent figures. 	<ul style="list-style-type: none"> • Have students make a picture that includes at least 2 congruent figures. Have them trade papers with a partner. The partner finds the congruent figures in the picture. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1 4.5 B.2,3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify congruent figures. 	<ul style="list-style-type: none"> • Play the partner game entitled “Three Plane Figures.” • See manual for details. 	<ul style="list-style-type: none"> • Centimeter dot paper (TT24) 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.1 4.5 B.2,3

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SPATIAL SENSE & GEOMETRY	Students will be able to: <ul style="list-style-type: none"> • identify plane figures that have a line of symmetry. 	<ul style="list-style-type: none"> • Have students find pictures in magazines that have symmetry. Have them cut the pictures along one line of symmetry. Put all of the pieces together into one group and mix them up. Then have them mix them up. 	<ul style="list-style-type: none"> • Magazine • Scissors 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.3 4.5 B.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • identify plane figures that have a line of symmetry. 	<ul style="list-style-type: none"> • Play two whole group activities called “Find Symmetry” and “Symmetrical Shapes.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.3 4.5 B.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • analyze data and make decision. 	<ul style="list-style-type: none"> • Have students bring in a collection of empty grocery items from home such as cereal boxes, orange juice cans, paper towel rolls. Have them create a structure using these objects. Have them then identify the solids used and tell about the structure. 	<ul style="list-style-type: none"> • Glue • Empty grocery items from home 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1,2 4.4 A.2 4.5 A.2
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • analyze data and make decision. 	<ul style="list-style-type: none"> • Play the whole group activity entitled “Make a Castle.” • See manual for details. 	<ul style="list-style-type: none"> • Geometric shapes out of construction paper • Glue • Butcher paper • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.2 B.1,2 4.4 A.2 4.5 A.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
SPATIAL SENSE & GEOMETRY	Students will be able to: <ul style="list-style-type: none"> • apply geometry concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Have students create structures using the pattern block pieces by stacking them or standing them up to make their playground structure more “three dimensional.” 		<ul style="list-style-type: none"> • Teacher Observation 	4.2 A.2,4 4.5 A.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • to explore slides, flips, and turns. 	<ul style="list-style-type: none"> • Give students various pictures of objects, showing in one picture how an item slides, in another how it flips, and also how it turns. Then have the students try to demonstrate using their own pictures in the three positions. 	<ul style="list-style-type: none"> • Crayons • Paper • Workbook pages 	<ul style="list-style-type: none"> • Teacher Observation • Workbook pages 	4.2 A.4 4.5 B.3
SPATIAL SENSE & GEOMETRY	<ul style="list-style-type: none"> • to maintain, concepts, skills, and strategies the students have learned to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 10 Assessment Test 	4.5 C.6
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • identify and write the unit fraction for one half, one fourth, and one eighth of a whole. 	<ul style="list-style-type: none"> • Give students 4 different strips of colored paper, each the same length. Tell them that the green one represents a whole. Have them cut the brown paper strip into 2 equal pieces. Explain that these are halves. Have them cut the orange one into 4 equal parts - called fourths. Have them cut the purple one into eighths. Discuss how each strip still equals a whole. 	<ul style="list-style-type: none"> • Strips of 4 colors of paper • Scissors 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify and write the unit fraction for one half, one fourth, and one eighth of a whole. 	<ul style="list-style-type: none"> Do a partner activity entitled "Equal Parts." See manual for details. 	<ul style="list-style-type: none"> Centimeter graph paper (TT22) Crayons 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> identify and write the unit fraction for one third, one sixth, and one eighth of a whole. 	<ul style="list-style-type: none"> Have students draw a shape and divide it into 3 equal parts. Color one part red. Explain that they just colored $\frac{1}{3}$ of the shape. Show them how to say and write $\frac{1}{3}$. Continue the activity with $\frac{1}{6}$ and $\frac{1}{8}$. 	<ul style="list-style-type: none"> Paper Crayons 	<ul style="list-style-type: none"> Teacher Observation 	4.5 B.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> identify and write the unit fraction for one third, one sixth, and one eighth of a whole. 	<ul style="list-style-type: none"> Play two group activities entitled "Folding for Fractions" and "Making Equal Parts." See manual for details. 	<ul style="list-style-type: none"> Paper plates Scissors Crayons 	<ul style="list-style-type: none"> Teacher Observation 	4.5 B.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> identify and write non-unit fractions. 	<ul style="list-style-type: none"> Have students draw lines to divide one plate in 4, another plate into 6, and a third into 8 equal parts. Then have them use glitter to decorate one or more parts of each plate. Have them write the fraction for the part(s) of the plate that are decorated. 	<ul style="list-style-type: none"> Paper plates Glitter Glue 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • identify and write non-unit fractions. 	<ul style="list-style-type: none"> • Do the two group activities entitled “Fractions Parts” and “Parts of the Plate.” • See manual for details. 	<ul style="list-style-type: none"> • Crayons • Scissors • Paper plates 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • compare unit fractions. 	<ul style="list-style-type: none"> • Have students pick 2 fraction cards and have them draw pictures to compare them. 	<ul style="list-style-type: none"> • Fraction cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • compare unit fractions. 	<ul style="list-style-type: none"> • Do the two whole group activities entitled “Comparing Fractions Strips” and “Which is Greater?” • See manual for details. 	<ul style="list-style-type: none"> • Colored chalk • Paper fraction strips for $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{6}$, $\frac{1}{8}$ and $\frac{1}{12}$ 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • see visual models to identify and compare fractions. 	<ul style="list-style-type: none"> • Tell students the made up version of the beginning of a story such as “Meg had \$3. She went to the toy store.” Then ask: “What do you predict will happen next?” Share predictions. Repeat with other story beginnings. 	<ul style="list-style-type: none"> • Storybook writing or drawing materials • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.5 A.3 B.3
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • see visual models to identify and compare fractions. 	<ul style="list-style-type: none"> • Play the whole group activity entitled “Fish Fractions.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.3 B.3

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	<p>Students will be able to:</p> <ul style="list-style-type: none"> draw a picture to solve problems about fractions. 	<ul style="list-style-type: none"> Give each student a card. Have them draw lines to divide the card into fourths. Ask: "How many equal parts does the card show?" Then tell them to draw a picture on only one part of the card. Ask: "What fraction of the card has a picture on it?" 	<ul style="list-style-type: none"> Cards divided into fourths Crayons 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> draw a picture to solve problems about fractions. 	<ul style="list-style-type: none"> Do a partner activity called "Fold to Show." See manual for details. 	<ul style="list-style-type: none"> Paper 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> identify and show fractions of a group. 	<ul style="list-style-type: none"> Have students write fractions riddles like the following: "I have 8 cubes. I am going to share them equally with 3 people. How many cubes will each one get?" Have students trade riddles and solve each other's riddles. 	<ul style="list-style-type: none"> Paper Pencil 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1 B.1,2,3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> identify and show fractions of a group. 	<ul style="list-style-type: none"> Play "Fractions of a Rectangle." See manual for details. 	<ul style="list-style-type: none"> Centimeter graph paper (TT22) Crayons 	<ul style="list-style-type: none"> Teacher Observation 	4.5 A.1 B.1,2,3,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> recognize the most likely and least likely outcomes. 	<ul style="list-style-type: none"> Have students make a list of situations that will probably never happen, like seeing a green cat with wings. Share lists. Display creative ideas. 		<ul style="list-style-type: none"> Teacher Observation 	4.5 B.2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> recognize the most likely and least likely outcomes. 	<ul style="list-style-type: none"> Play "Keep a Tally" and "Picking Colors." See manual for details. 	<ul style="list-style-type: none"> Number cubes (TT12) Red & blue counters Bag 	<ul style="list-style-type: none"> Teacher Observation 	4.5 B.2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> make a prediction from sample data. 	<ul style="list-style-type: none"> Have students make a list of the following predictions: <ul style="list-style-type: none"> Things that will happen in the next hour; Things that will happen before bedtime; Things that will never happen. Share lists and compare. 	<ul style="list-style-type: none"> Paper Pencil 	<ul style="list-style-type: none"> Teacher Observation 	4.4 A.1,2 B.1,2 4.5 B.2
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> make a prediction from sample data. 	<ul style="list-style-type: none"> Play "Make a Spinner." See manual for details. 	<ul style="list-style-type: none"> 3 & 4 part spinners (TT10) Gameboard Counters Crayons 	<ul style="list-style-type: none"> Close/Assess 	4.4 A.1,2 B.1,2 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
GENERAL NATURE & USE OF MATHEMATICS	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Have students draw a picture of a water scene where the water is clean and living things are surviving. 	<ul style="list-style-type: none"> • Paper 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Play "Float or Sink?", a whole group activity. • See manual for details. 	<ul style="list-style-type: none"> • Collection of objects • Large container of water 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 C.3,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • recognize and name fractional parts of groups. 	<ul style="list-style-type: none"> • Play a game using various pattern blocks of different shapes and colors. Have each student make 2 different fractions using their blocks. For example: "I have 8 blocks; $\frac{3}{8}$ are red and $\frac{6}{8}$ are 4 sided." 	<ul style="list-style-type: none"> • Pattern blocks • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.5 B.1,2,4
GENERAL NATURE & USE OF MATHEMATICS	<ul style="list-style-type: none"> • to maintain concepts, skills, and strategies the students have learned up to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 11 Assessment Test 	4.5 C.6

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • read, write and represent hundreds to 1,000. 	<ul style="list-style-type: none"> • Play a partner game. Prepare index cards with numbers in hundreds from 100 to 1,000. Have one partner pick a card. Have the other partner use hundreds and a place-value workmat to model the number. Pairs continue this way until all the cards have been picked. Have them arrange the index cards in order from 100 to 1,000. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmats (TT17) • Index cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.1
NUMBER SENSE	<ul style="list-style-type: none"> • read, write and represent hundreds to 1,000. 	<ul style="list-style-type: none"> • Play a whole group activity entitled "Model Numbers." • See manual for details. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.1
NUMBER SENSE	<ul style="list-style-type: none"> • write numbers as hundreds, tens, and ones. 	<ul style="list-style-type: none"> • Play a partner game. Have one partner spin for a 0-9 number while the other partner models the number ones models and records the number in the place-value chart in the ones column. Have partners continue as above, spinning, modeling, and recording for two or more numbers - one for the tens and other for the hundreds place, forming a 3-digit number. 	<ul style="list-style-type: none"> • 10-part spinner (TT11) • Short place-value charts (TT14) • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.4 D.3
NUMBER SENSE	<ul style="list-style-type: none"> • write numbers as hundreds, tens, and ones. 	<ul style="list-style-type: none"> • Play the group activity called "Understanding Place Value." • See manual for details. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT17) 	<ul style="list-style-type: none"> • Teacher Observation 	

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • identify the place-value of a digit. 	<ul style="list-style-type: none"> • Have one student show a 3-digit number. Using ones, tens, and hundreds models, have a partner say the number and write it. Then have the partners switch roles and repeat the activity. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.3 4.5 B.2,3
NUMBER SENSE	<ul style="list-style-type: none"> • identify the place-value of a digit. 	<ul style="list-style-type: none"> • Play “Spin 3-Digit Numbers” as a partner activity. • See manual for details. 	<ul style="list-style-type: none"> • 10-part spinner (TT11) • Place-value models (TT13) • Place-value workmats (TT17) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.3 4.5 B.2,3
NUMBER SENSE	<ul style="list-style-type: none"> • count forward and backward by 100, starting from any number. 	<ul style="list-style-type: none"> • Demonstrate how to draw pictures of place-value models for multiples of 100. Have pairs work together to draw picture cards for each hundred from 100 - 1,000. Have them write the numbers and names for the numbers on the back of the tagboard. Encourage students to say each number name aloud. 	<ul style="list-style-type: none"> • Tagboard • Markers • Word cards 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.4
NUMBER SENSE	<ul style="list-style-type: none"> • count forward and backward by 100, starting from any number. 	<ul style="list-style-type: none"> • Play the two whole group activities entitled “Bean Bag Toss” and “More or Less.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • use place-value charts to read and write numbers. 	<ul style="list-style-type: none"> • Have pairs take turns spinning 3 times to generate 3-digit numbers. One partner spins and the other records the number in the place-value chart. They work together to write the word name and then switch roles. Have students repeat 10 times. 	<ul style="list-style-type: none"> • 10-part spinner (TT11) (0-9) • Short place-value charts (TT14) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.4 D.3
NUMBER SENSE	<ul style="list-style-type: none"> • use place-value charts to read and write numbers. 	<ul style="list-style-type: none"> • Play the whole group activity entitled “Write Ones, Tens, and Hundreds.” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.4 D.3
NUMBER SENSE	<ul style="list-style-type: none"> • write expanded form for numbers. 	<ul style="list-style-type: none"> • Give students a 3-digit number. Have them build the number using place-value materials. Ask volunteers to say aloud how many hundreds, tens and ones. Call on students to write the number on the board in expanded form and read the number aloud. 	<ul style="list-style-type: none"> • Place-value models (TT13) • Place-value workmat (TT17) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.1,4
NUMBER SENSE	<ul style="list-style-type: none"> • write expanded form for numbers. 	<ul style="list-style-type: none"> • Play a partner activity entitled “Model Place Value.” • See manual for details. 	<ul style="list-style-type: none"> • Sentence strips • Markers 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2 4.5 B.1,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • find clues to solve word problems. 	<ul style="list-style-type: none"> • Read aloud a storybook or let students silently read a book on their own. Ask them to name a character who has a problem in the story and tell what that problem is. Ask: "What did the character do to try to solve the problem? What happened as a result?" 	<ul style="list-style-type: none"> • Storybooks 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 A.2,5 B.4
NUMBER SENSE	<ul style="list-style-type: none"> • find clues to solve word problems. 	<ul style="list-style-type: none"> • Play two whole group activities entitled "Color Patterns" and "Pictures of Cubes." • See manual for details. 	<ul style="list-style-type: none"> • Connecting cubes • Big Book Vol. 2 • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.5 A.2,5 B.4
NUMBER SENSE	<ul style="list-style-type: none"> • find and extend patterns. 	<ul style="list-style-type: none"> • Have partners take turns drawing patterns with different color crayons. One partner draws a pattern and the other gives the rule. Partners switch roles and repeat. Have pairs of volunteers share their work. 	<ul style="list-style-type: none"> • Crayons 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 A.1 4.5 B.2,4
NUMBER SENSE	<ul style="list-style-type: none"> • find and extend patterns. 	<ul style="list-style-type: none"> • Play the partner activity entitled "Continue a Pattern." • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.3 A.1 4.5 B.2,4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • use place value to compare numbers. 	<ul style="list-style-type: none"> • Have students work in groups of three. Two of the three students spin 3 times to generate a 3-digit number. They then record each and model their numbers using $<$, $>$, or $=$. Have students rotate roles and repeat the activity. 	<ul style="list-style-type: none"> • Place-value models (TT13) • 10-part spinner (TT11) (0-9) • Symbols (TT33) ($<$, $>$, $=$) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.1,3
NUMBER SENSE	<ul style="list-style-type: none"> • use place value to compare numbers. 	<ul style="list-style-type: none"> • Play the partner activity entitled, "Make the Greatest Number." • See manual for details. 	<ul style="list-style-type: none"> • Number cubes (TT12) • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.1,3
NUMBER SENSE	<ul style="list-style-type: none"> • use place value to order numbers. 	<ul style="list-style-type: none"> • Prepare sets of cards with sequences of three 3-digit numbers for each student. Have them model each number and put them in order from least to greatest. When all students are finished, have them take turns describing their models. Have them tell the middle number and describe the numbers that are just before and just after. 	<ul style="list-style-type: none"> • Index cards • Markers • Place-value markers (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.4
NUMBER SENSE	<ul style="list-style-type: none"> • use place value to order numbers. 	<ul style="list-style-type: none"> • Play two whole group activities entitled "Missing Numbers" and "Before or After?" • See manual for details. 	<ul style="list-style-type: none"> • Partially completed chart for numbers 200-300 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.5 B.4

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • describe and extend number patterns. 	<ul style="list-style-type: none"> • Distribute blank hundred charts. Guide them to complete the first column by writing 100-900. Show students the 1st row: 100, 110, 120, 130, 140, and so on. Have students complete the charts. 	<ul style="list-style-type: none"> • Blank hundred chart (TT26) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.3 A.1
NUMBER SENSE	<ul style="list-style-type: none"> • describe and extend number patterns. 	<ul style="list-style-type: none"> • Play two whole class activities entitled “Make 3-Digit Numbers” and “Number Patterns.” • See manual for details. 	<ul style="list-style-type: none"> • 10-part spinner (TT11) (0-9) • Place-value models (TT13) 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 A.2,5 4.3 A.1
NUMBER SENSE	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play a partner activity by having each student use shells or beads to decorate a picture frame in a pattern. Have them describe their pattern to the rest of the class. 	<ul style="list-style-type: none"> • Shells • Buttons • Glue • Tagboard 	<ul style="list-style-type: none"> • Teacher Observation 	4.3 A.1 4.4 A.2 4.5 B.2
NUMBER SENSE	<ul style="list-style-type: none"> • analyze data and make decisions. 	<ul style="list-style-type: none"> • Play the whole group activity “Wallpaper Patterns.” • See manual for details. 	<ul style="list-style-type: none"> • Sponge shapes • Art paper • Paint • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.3 A.1 4.4 A.2 4.5 B.2

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SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
NUMBER SENSE	Students will be able to: <ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Have partners use different materials to design new telephones. Have them experiment to find which materials and designs give the best telephone sound. Give partners time to report about their findings to the class. 	<ul style="list-style-type: none"> • Cups • Small boxes • Tubes • Spoons • Wire • Twine • Paper clips • Paper cups 	<ul style="list-style-type: none"> • Teacher Observation 	4.5 B.2 C.3,4
NUMBER SENSE	<ul style="list-style-type: none"> • apply math concepts to investigate science concepts. 	<ul style="list-style-type: none"> • Have students play the whole group activities “Telephone” and “Can You Hear Me?” • See manual for details. 		<ul style="list-style-type: none"> • Teacher Observation 	4.5 B.2 C.3,4
NUMBER SENSE	<ul style="list-style-type: none"> • arrange three digits to make different numbers. 	<ul style="list-style-type: none"> • Pass out six different cards with six different numbers on them, one on each card. Have students create as many different 3-digit numbers as they can. List them and share. 	<ul style="list-style-type: none"> • Index cards with numbers on them • Workbook pages 	<ul style="list-style-type: none"> • Workbook Pages 	4.1 A.5 4.5 B.2
NUMBER SENSE	<ul style="list-style-type: none"> • maintain concepts, skills, and strategies the students have learned up to this point. 	<ul style="list-style-type: none"> • Use different strategies to solve problems by doing a whole class activity. • See manual for details. 		<ul style="list-style-type: none"> • Chapter 12 Assessment Test 	4.5 C.6
NUMBER SENSE	<ul style="list-style-type: none"> • explore the meaning of multiplication by modeling 	<ul style="list-style-type: none"> • In groups, students see how many equal groups can be made from 12 blocks. Share results. 	<ul style="list-style-type: none"> • Blocks 	<ul style="list-style-type: none"> • Teacher Observation 	4.1 B.2 4.5 A.2,3