

K

Topic 3: Six to Ten

Lessons 1-7

Math Intervention Resources

Reteach

MDIS:

A3: 3-1, 3-2, 3-3, 3-4, 3-5, 3-6

Guided Practice

Understanding the quantities represented by a number is not the same as counting and reciting the number.

Provide children performing below level with opportunities to recognize sets of objects with varying quantities. For example, when they see a set of 2 objects and a set of 9 objects, they should immediately recognize that the set of 9 shows the greater quantity. Repeated counting of objects in varied sets will help reinforce association of the numeral with the quantity.

Provide children performing below level with numerous opportunities to practice representing the numbers 1- 10 with various classroom objects.

Reinforce

Envision Math Games:

Topic Games:

- Counting Fun in the Sun

envision Online Games

- Numbers 6-10

Symbaloo

Building Blocks (Golden CD)

10 Block Materials:

- Number chat cards
- Concentration
- Digit Detectives
- Numbers I Hear
- Numbers I Know
- Circle the Number

Assessments

K

Topic 3: Six to Ten

Lesson 3-1

Counting 6 and 7

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will use objects to represent and count the quantities of 6 and 7.	Counting tells how many are in a set no matter which order the objects are counted. The last number said when counting a set is the total. Counting is cumulative.	six seven	Counters (or Teaching Tool 32) Crayons



Math Background

Research says ... children build an understanding of numbers through ten, including part-part-whole representations. Kindergarteners using a curriculum involving

part-part-whole representations showed improved understanding of basic number concepts, addition and subtraction, problem solving, and place value (Fischer, 1990).

2

Guided Practice

Remind children that they can count objects to tell how many there are.

Error Intervention

If children lose track of the dogs they have counted, **then** have children place a counter on a dog before they color or draw a counter.

Do you understand? *How do you know if there are 6 objects in a group?* [I count each object. If the last number I say is 6, then there are 6 objects.] *What is the last number you say if there are 7 objects in a group?* [7]

Reteaching Give groups of children five-frame workmats (Teaching Tool 7) and 7 small objects such as paper clips, counters, and beads. Model how to show 6 and then 7 on a five-frame workmat. Have some children choose a type of object and make a group of 6 on the workmat. Have others make groups of 7. Have children count their groups by picking up each object as they count.



Common Core

Domain

Counting and Cardinality

Cluster

Count to tell the number of objects.

Standards

K.CC.4.b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. Also **K.CC.5**

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

K

Topic 3: Six to Ten

Lesson 3-2

Reading and Writing 6 and 7

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will recognize and write the numerals that describe the quantities 6 and 7.	There is a unique symbol that goes with each number word.		Counters (or Teaching Tool 32) Number Cards 1–7 (from Teaching Tool 5) Five-Frame Mat (Teaching Tool 7)



Math Background

Point out that the numbers 6 and 7 face in opposite directions: The number 7 faces left and the number 6 faces right. Some children write one or both of these numbers facing in the wrong direction. Help these children by

making tactile numbers so they can “feel” the numbers. For example, “write” the numbers by gluing rice or sand on paper, and have children trace the numbers with their fingers.

2

Guided Practice

Remind children that there is a special symbol for the number 6 and for the number 7.

Error Intervention

If children have difficulty writing the numbers 6 and 7, **then** children can practice tracing over the numbers 6 and 7 on number cards (from Teaching Tool 5). Children can also practice writing 6 and 7 on Teaching Tool 14.

Do you understand? Hold up a number card for 6. *What number is this?* [6] Repeat for 7. Show both number cards. *Which number has curves?* [6] *Which has straight lines?* [7]

Reteaching Give each child a five-frame mat (Teaching Tool 7) and at least 7 tiles. Hold up an index card with either 6 or 7 on it. Children show that number of tiles on their mats. Have pairs of children repeat the activity, taking turns writing 6 or 7 on an index card and making groups of tiles.



Common Core

Domain

Counting and Cardinality

Cluster

Know number names and the count sequence.

Standards

K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Also **K.CC.4**, **K.CC.5**

Mathematical Practices

- ✓ Make sense of problems and persevere in solving them.
- ✓ Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- ✓ Use appropriate tools strategically.
- ✓ Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

K

Topic 3: Six to Ten

Lesson 3-3

Counting 8 and 9

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will use objects to represent and count the quantities of 8 and 9.	Counting tells how many are in a set or group no matter which order the objects are counted. The last number said when counting a set is the total. Counting is cumulative.	eight nine	Counters (or Teaching Tool 32) Five-Frame Mat (Teaching Tool 7) Ten-Frame Mat (Teaching Tool 8) Crayons



Math Background

Research says ... children learn that number is a complex and multifaceted concept. A rich understanding of number, a relational understanding, involves many different ideas, relationships, and skills. Children

come to school with many ideas about number. These ideas should be built upon as we work with children and help them develop new relationships (John A. Van de Walle, 2004).

2

Guided Practice

Remind children that they can count objects to tell how many there are.

Error Intervention

If children do not show the correct number of counters, **then** children can count them aloud before coloring in the ten-frames. Remind children that the last number they say tells how many counters there are. Then have children count their colored counters aloud to confirm 8 and 9.

Do you understand? *How can you use counters to show a group of 8 objects?* [Count out 8 counters.] *How can you find out if there are 9 objects in a group?* [I count each object. If the last number I say is 9, then there are 9 objects in the group.]

Reteaching Model counting to 8 by putting connecting cubes in a box while counting them. Then have a volunteer count the 8 cubes again as he or she takes them out of the box. Have partners repeat the activity with 8 cubes and then with 9 cubes.



Common Core

Domain

Counting and Cardinality

Cluster

Count to tell the number of objects.

Standards

K.CC.4.b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. Also **K.CC.5**

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
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Topic 3: Six to Ten

Lesson 3-4

Reading and Writing 8 and 9

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will recognize and write numerals that describe the quantities 8 and 9.	There is a unique symbol that goes with each number word.		(per child) Counters (or Teaching Tool 32) Number Cards for 1–9 (Teaching Tool 5)



Math Background

Children should recognize the similarity of numbers. For example, 8 and 9 both have curves. To work around the poor small muscle control, children should be allowed to form

the numerals on the chalkboard by writing them large, using large muscles which are better controlled at this age.

2

Guided Practice

Remind children that there is a special symbol for the number 8 and the number 9.

Error Intervention

If children get confused reading the numbers 8 and 9, **then** show them pairs of numbers with 8 as one of the numbers each time. Have them choose the number 8. (For example: Show number cards for 8 and 2, 8 and 4, and 8 and 9. Each time have children identify the 8.) Then repeat with practice in identifying 9.

Do you understand? Show children 8 counters. *Which number card can you hold up to show how many?* Have children hold up the number card for 8 (from Teaching Tool 5). Repeat with 9 counters and the number card for 9.

Reteaching Make sets of cards for 8 and 9 by cutting numbers from sandpaper and gluing them onto index cards. Place the cards in a bag. Have children find the 8s by reaching into the bag and finger-tracing the cards until they find an 8. When an 8 is found, have the child write 8 on the board and draw 8 Xs to show how many. Repeat for 9.



Common Core

Domain

Counting and Cardinality

Cluster

Know number names and the count sequence.

Standards

K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Also **K.CC.4**, **K.CC.5**

Mathematical Practices

- Make sense of problems and persevere in solving them.
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K

Topic 3: Six to Ten

Lesson 3-5

Counting 10

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Use objects to represent and count the quantity 10.	Counting tells how many are in a set no matter which order the objects are counted. The last number said when counting a set is the total. Counting is cumulative.	ten	(per child) Counters (or Teaching Tool 32) Crayons Ten-Frame Mat (Teaching Tool 8)

2 Guided Practice

Remind children that they can count objects to tell how many there are.

Error Intervention

If children lose track of the birds as they count them,
then have them place a counter on each bird before they color each counter.

Do you understand? *How do you know if there are 10 objects in a group?* [I count each object. If the last number I say is 10, then there are 10 objects.] *How can you use a ten-frame to show 10 objects with counters?* [Sample answer: Cover each box of the ten-frame with a counter.]

Reteaching Model counting to 10 by using both hands. Then have children count their own fingers by putting up one at a time. Continue counting to 10 using objects in the classroom, such as books on a bookshelf, chairs, and so on. Point to each item as the class counts aloud along with you.



Common Core

Domain

Counting and Cardinality

Cluster

Count to tell the number of objects.

Standards

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Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
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K

Topic 3: Six to Ten

Lesson 3-6

Reading and Writing 10

Quick and Easy Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will recognize and write the numeral that describes the quantity of 10.	There is a unique symbol that goes with each number word.		{per child} Counters (or Teaching Tool 32) Number Cards 1–10 (from Teaching Tool 5)



Math Background

In this lesson children write a two-digit number for the first time. When children write a two-digit number, remind them to keep the two

digits close together. Remind them that 10 is one number, not two separate numbers.

2

Guided Practice

Remind children that there is a special symbol for the number 10.

Error Intervention

If children think that they should write 10 in each exercise, **then** remind them that they should count the objects first and then write the matching number.

Do you understand? Hold up the number card for 10. *How can you show this number using counters?* [Show 10 counters.] *Why are the 1 and 0 close to each other when you write 10?* [Because 10 has 2 parts, but it is still one number]

Reteaching Write 10 on the board. Discuss that when you write 10, you write a 1 and then a 0 next to it. Have children finger-trace 10 in the air. Give each child a number card for 10 and have children trace over the number. Then have children write 10 on a sheet of paper and draw 10 objects around the number to illustrate it.



Common Core

Domain

Counting and Cardinality

Cluster

Know number names and the count sequence.

Standards

K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Also **K.CC.4**, **K.CC.5**

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
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Topic 3: Six to Ten

Lesson 3-7

Problem Solving: Look for a Pattern

**Quick
and Easy**

Lesson Overview

Objective	Essential Understanding	Vocabulary	Materials
Children will solve problems by identifying growing patterns and predicting what comes next.	In a growing pattern, there is a predictable and countable change from one part to the next.	growing pattern	Connecting cubes



PROFESSIONAL
DEVELOPMENT

Math Background

In a repeating pattern, each part of the pattern repeats. In a growing pattern, each part of the pattern changes, but in a countable and predictable way. Using

growing patterns to predict what comes next requires children to look at the entire pattern and determine how it changes from one element to the next.

2

Guided Practice

Remind children that they must find out how the pattern grows from one part to the next to solve the problem. Help them identify how the numbers of butterflies change from one row to the next. *How many butterflies are in row 1? row 2? row 3? row 4?* [1, 2, 3, 4] *How does this pattern grow?* [One butterfly is added to the next row every time.]

Error Intervention

If children have difficulty describing growing patterns, **then** give them cubes of one color and build a 1, 2, 3, 4 pattern with them, keeping each of the parts separate.

Do you understand? Display 6 counters with 1 in the top row, 2 in the second, 3 in the third. *How can you tell what the fourth row in this pattern will be?* [I can see how the pattern changes from one row to the next. One counter is added to each new row, so the fourth row will have 4 counters.]

Reteaching Start a growing pattern by connecting a yellow and blue cube in the top row. For the second and third rows, continue connecting yellow and blue cubes, one at a time to each side in each row. To help children see the pattern, place a string down the center to separate the yellow and blue cubes. Have children count the cubes by color to see how they grow in number. Then have volunteers take turns extending the pattern.



Common Core

Domain

Counting and Cardinality

Cluster

Count to tell the number of objects.

Standards

K.CC.4.b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. Also **K.CC.4.a**, **K.CC.4.c**

Mathematical Practices

- Make sense of problems and persevere in solving them.
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- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.