



MISSISSIPPI

EXEMPLAR

Units & Lessons

MATHEMATICS

Kindergarten

Grant funded by:



Lesson 8: Taste the Rainbow

Focus Standard(s): K.OA.2

Additional Standard(s): K.OA.1 (embedded); K.OA.3 and K.OA.4 (prerequisites)

Standards for Mathematical Practice: SMP.2, SMP.6, SMP.7

Resources and Materials:

- Bags with 10 Skittles in each
- *Ten Little Monkeys Jumping on the Bed* by Keith Faulkner
- *The Very Hungry Caterpillar*, by Eric Carle
- Handout 8.1: Pair of Hands
- Handout 8.2: Addition and Subtraction Problems
- Video [Friends of 10](#)
- MathFox [Addition Problems](#)
- MathFox [Subtraction Problems](#)

Learning Center Materials:

- Art Paper
- Construction Paper Circles
- Fruit
- Glue
- Markers
- Music
- Paint
- Paint Brushes
- Story Props for *The Very Hungry Caterpillar*
- Student Journals
- Vegetables

Lesson Target(s):

- Students will join two different quantities up to 10, using one-to-one correspondence to show understanding of putting together and adding to. Students will use subtraction to demonstrate their understanding of taking apart or taking away

Guiding Question(s):


- What are some occupations that require workers to add and subtract?
- Why is adding and subtracting important to our world?

Vocabulary**Academic Vocabulary:**

- add
- addition
- altogether
- and
- decrease
- deduct
- difference
- equal
- how many more
- items
- join
- left
- less than
- minus
- more
- plus
- put together
- remain
- subtract

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

<ul style="list-style-type: none"> • subtraction • sum • take away • total 	
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will construct addition and subtraction word problems using Skittles.</p> <p>Anticipatory Set/Introduction to the Lesson (Whole Group): What make 10 Show the Friends of 10 video and play the What Makes 10 Quiet game. Hold up 2 fingers and ask student to hold up the number of fingers I need to make 10. (8 fingers) Repeat using different numbers (SMP.7).</p> <p>Note: Kindergarten students are not expected to have the 10 facts memorized but they will need to learn how to find 10 when given any number 0 – 9.</p> <p>Revisit the texts <i>The Very Hungry Caterpillar</i> and <i>Ten Little Monkeys</i>. Explain that in <i>The Very Hungry Caterpillar</i> items increased or were added on and in <i>Ten Little Monkeys</i> things decreased or were taken away. Encourage students to tell you the mathematical term for adding on and the term for taking away. Students should say addition and subtraction.</p> <p>Note: Teacher Guidance</p> <ol style="list-style-type: none"> 1. Struggling students are placed near the presenter or assistant, who occasionally redirects the students’ attention during whole group and small group activities. 	

2. **Whole Group should last about 15-20 minutes maximum.** If this time frame is too long for students, the Whole Group activities may be divided into two sessions. **Small Group should last about 15 minutes.** Using the pre-assessment results, the teacher will design the formation of small groups to reflect student capability and to drive the instruction throughout every lesson.
3. **Movement:** The teacher will conduct a movement/physical activity with the students between the anticipatory set and activity 1 to make sure students are not sitting still for too long.

For students who are EL, have disabilities, or perform well below grade level:

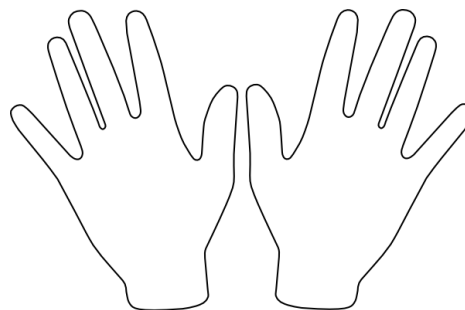
- Allow students to re-watch the video to ensure understanding of content.
- Provide small group instruction, one-on-one assistance, and peer tutoring.
- Provide guidance for student exploration of subtraction word problems.
- Simplify assigned problems for students to solve.

Extensions for students with high interest or working above grade level:

- Offer peer tutoring to classmates.

Activity 1 (Teacher-led small group): Solving Subtraction Word Problems Using Skittles

Distribute **Handout 8.1: Pair of Hands** and small bags with ten Skittles. Explain that we will use the Skittles as manipulatives to help us solve addition and subtraction problems.



Display and read aloud the following subtraction word problem substituting names with names of students in the classroom or small group.

- Rodriguez had 7 Skittles. Matthew took 2 of Rodriguez's Skittles. How many Skittles did Rodriguez have left?

Ask students how many Rodriguez started with, which is 7. Encourage students to place one Skittle on each finger or thumb until they reach 7. Have students touch and count to make sure the correct amount is on the paper. Ask students how many Skittles Matthew took from Rodriguez. Students will say, "2." Ask students how many Skittles he or she should put back in their bag. Students will say, "2." After removing the 2 Skittles have students count the remaining Skittles on the hand(s). Ask how many Skittles does Rodriguez has left. Students will say, "5." Write the subtraction problem on the board or chart paper using numbers and symbols only and review the subtraction fact with the student. Create additional word problems using the equations below. Use the names of students in the small group or class. Alternate between subtraction and addition problems. Assist students as needed to help solve problems correctly (SMP.4 & 8). Sample problems are listed below:

- $8-3=$
- $10-4=$
- $4+5=$
- $5+3=$

Activity 2 (Teacher-led small group): Solving Addition and Subtraction Problems

Distribute **Handout 8.2: Addition and Subtraction Problems** and tell students to solve all problems on each page using their Pair of Hands and Skittles.

Learning Centers

Note: Learning Centers are designed to be developmentally appropriate for all students. The teacher and assistant move about to observe and offer support, as needed. Learning centers will operate in conjunction with small group.

- ✓ **Dramatic Play Center/Music/Listening-** Students will make props for the story of the Very Hungry Caterpillar and act out the story. Students will listen to music and pretend to be a butterfly or some other type of insect.

- ✓ **Math Center**- Cut out 5 circles using construction paper of various colors. Count by 5's to 25 writing one number on each circle and then connecting the circles with glue. Students will also count by 10's to 50 and 20's to 100. Students will add an extra circle to make a head for each set of circles to make a caterpillar (SMP.6).
- ✓ **Computer** - Students will play math and reading games. The teacher will choose the website(s).
- ✓ **Reading Center/Writing Center**- Students will read and picture read fiction and non-fiction books. Students will write and illustrate their own stories about addition, subtraction, foods, insects, animals, etc. Students will reference the word wall, available books, charts and pictures in the classroom for assistance with words.
- ✓ **Science Center**- Provide a variety of fruits and vegetable. Throughout the unit, the students will observe the texture of the fruits and the vegetables. Decide which are alike and which are different and record their observations in their journal. Students will also smell the fruits and vegetables. Students will draw the fruit and or vegetable he or she likes best and write a sentence to explain why he or she likes it.
- ✓ **Art Center** – Provide a variety of art materials. Students will paint a picture of their choice or create their own work.

Reflection and Closing:

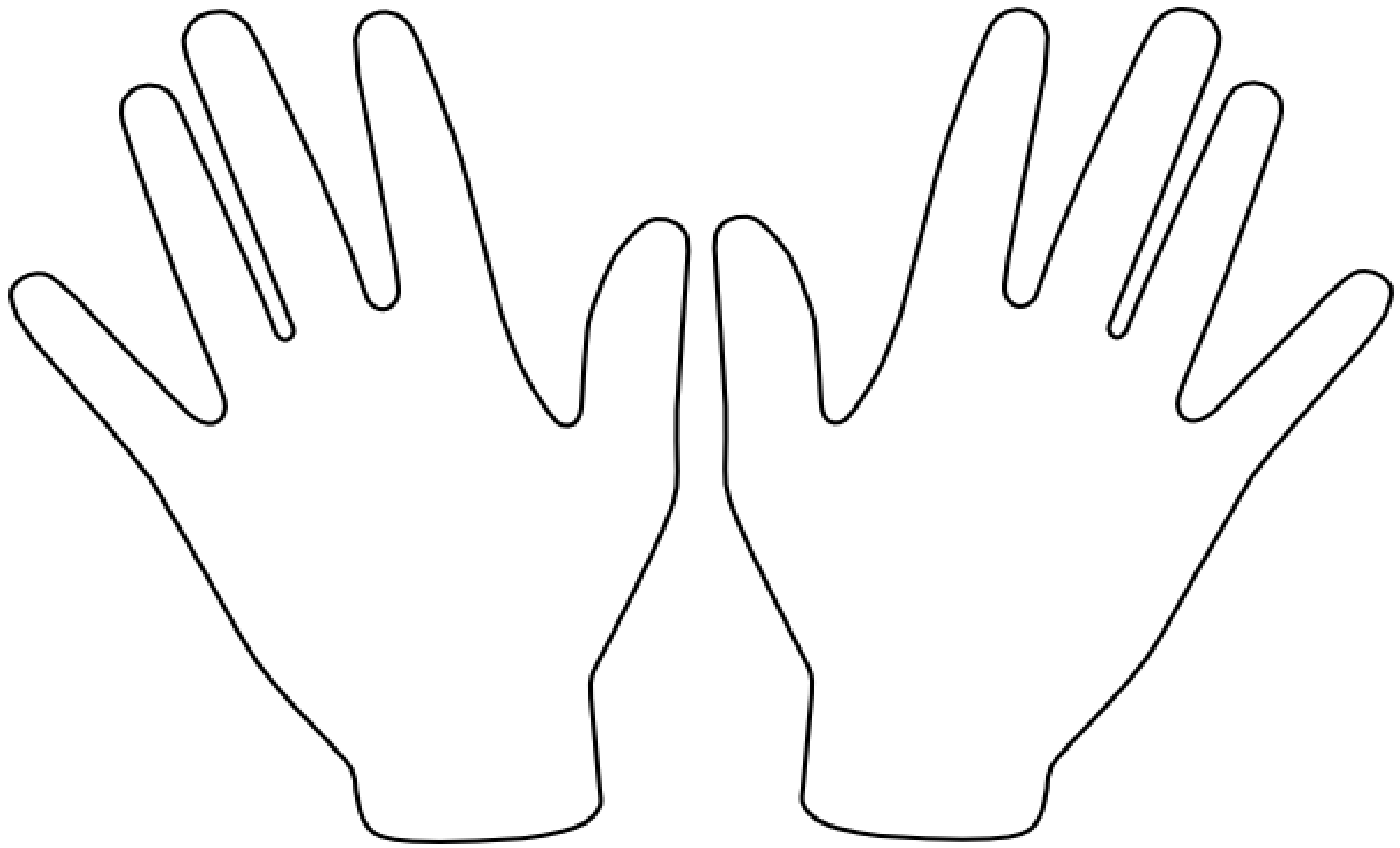
Write the following math problems on the board.

- $5 + 5 = \underline{\quad}$
- $8 - 2 = \underline{\quad}$
- ✓ Have students create a word problem for each math problem and to choose a strategy to solve the problems by drawing a pictorial representation of the math problems, using a 10-frame, using manipulatives or fingers.

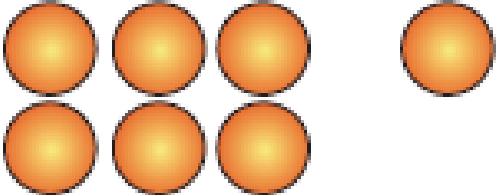
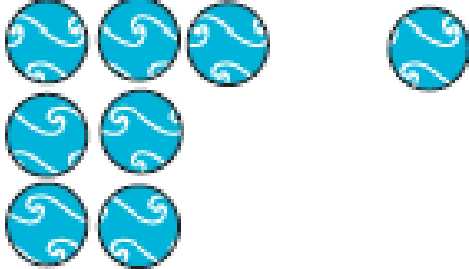
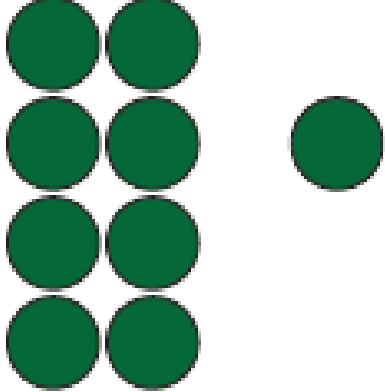
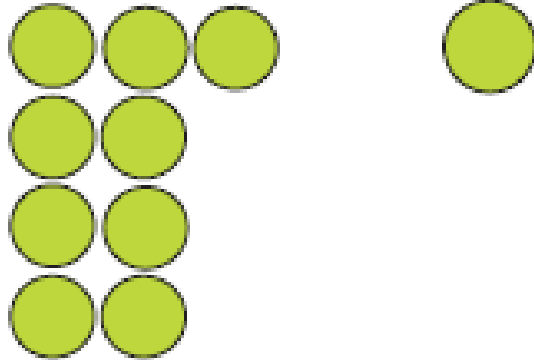
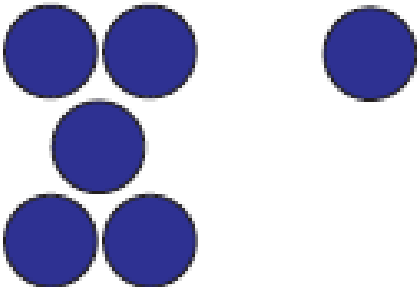
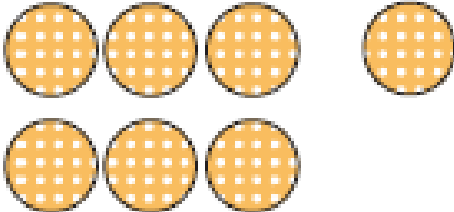
Homework

Students create and solve either a subtraction or addition word problem. Students will draw a pictorial representation of the problem.

Handout 8.1: Pair of Hands

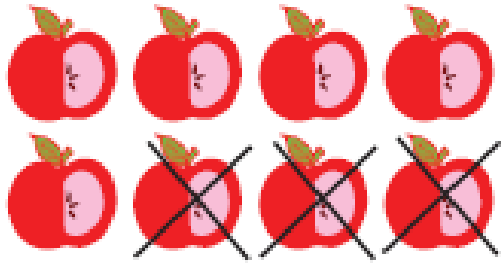


Addition

 <p>1. $6 + 1 =$</p>	 <p>2. $7 + 1 =$</p>
 <p>3. $8 + 1 =$</p>	 <p>4. $9 + 1 =$</p>
 <p>5. $5 + 1 =$</p>	 <p>6. $6 + 1 =$</p>

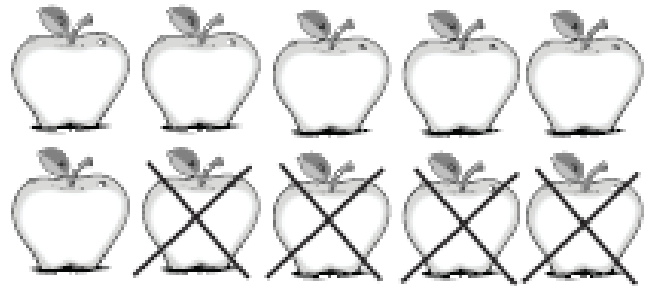
Subtraction

1.



$$8 - 3 =$$

2.



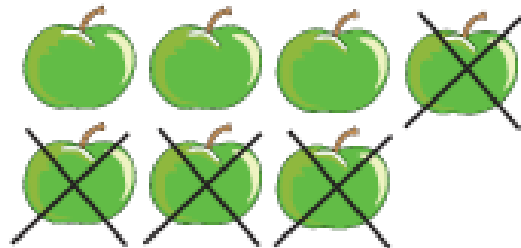
$$10 - 4 =$$

3.



$$4 - 1 =$$

4.



$$7 - 4 =$$

5.



$$2 - 2 =$$

6.



$$3 - 2 =$$

For training or questions regarding this unit,
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