



MISSISSIPPI
EXEMPLAR
Units & Lessons
MATHEMATICS

Kindergarten

Grant funded by:



Lesson 7: Subtraction is Quite Handy

Focus Standard(s): K.OA.2

Additional Standard(s): K.OA.1 (embedded); K.OA.3 and K.OA.4 (prerequisites), K.CC.4a, K.CC.4b, RF.K.2a, RL.K.1, RL.K.2, RL.K.3, RL.K.6

Standards for Mathematical Practice: SMP.1, SMP.3, SMP.5, SMP.6

Resources and Materials:


- Counters
- *Ten Little Monkeys Jumping on the Bed* by Keith Faulkner
- *The Very Hungry Caterpillar*, by Eric Carle
- Handout 3.1: Large 10-Frame

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 model subtraction by taking apart using a variety of strategies.

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| Guiding Question(s): | |
| <ul style="list-style-type: none"> • How do we subtract? • When do people use subtraction? | |
| Vocabulary | |
| Academic Vocabulary: | Instructional Strategies for Academic Vocabulary: |
| <ul style="list-style-type: none"> • decrease • deduct • difference • how many more • left • less than • minus • remain • subtract • subtraction • take away | <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words |
| 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 | |
| Understanding Lesson Purpose and Student Outcomes: Students will productively struggle to determine favorable and accurate subtraction strategies to solve word problems. Students will express understanding of subtracting within 10 using acquired strategies. | |

Anticipatory Set/Introduction to the Lesson:

Allow students to share their interview with their parents or other adult about how they use subtraction. Add to the conversation by explaining times when you use subtraction. Read *Ten Little Monkeys Jumping on the Bed* by Keith Faulkner. Review the parts of the book and name the author and the illustrator. Explain that this book is a rhyming book about ten monkeys who were doing something that you should never do, jump up and down on a bed. Ask students to share reasons for not jumping on a bed. Read the book and illicit from students the rhyming words in the story. Ask students what math skill is taught through this story (SMP.7). (subtraction or taking away) Read the book again and put emphasis on the subtraction.

Note: Teacher Guidance

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:

- 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 using manipulatives.

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

- Offer peer tutoring to classmates.
- Create addition and subtraction problems for classmates and create an answer key.

Activity 1 (Teacher-led small group): Solving Subtraction Word Problems Using Think-Pair-Share, Guided Practice and Independent Work

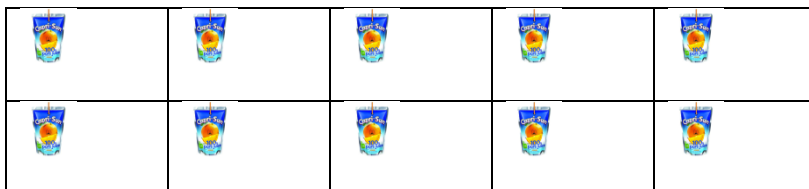
Display and read the following word problem:

There are 10 Capri Suns in a box. Dad drank 6. How many Capri Suns are left?

Allow students to talk to shoulder partner to figure out how to solve the problem. This allows the students to have productive struggle (SMP.1). Have students explain their solution to the problem with a justification. Allow other students to agree or disagree with their peers' answer. Have them share why they agree or do not agree (SMP.3).

Distribute 10-frames and counters. Model how to use the 10-frame to solve subtraction word problems while students use 10-frames and counters (SMP.5).

Place a counter on each space to represent a full box of Capri Suns.



Remove six counters to represent the Capri Suns Dad drank.



Have students determine how many counters were left.

Distribute **Handout 3.2: Large 10-Frame** and counters. Read the following word problem:

- Mom baked 10 brownies. Susie ate some brownies. There were only 3 brownies left in the pan. How many brownies did Susie eat?

Work with individual students as needed to help solve this problem using the ten-frame and counters. Let students volunteer to explain how to solve the problem. Discuss other ways the problem could be solved. Complete additional problems:

- Mom made 10 sushi rolls. Johnny ate 2 rolls. How many rolls are left?
- Coach brought 9 balls out for recess. Justin put 7 balls back after recess. How many balls were left out?
- Teacher has 5 books on her desk. Mika took 3 books to read. How many books are left on teacher's desk?

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:

- ✓ Have students solve the following word problem using the 10-frame. Discuss with students their favorite strategy for solving subtraction problems.

Jenny ordered 10 tacos at Taco Bell. Her sister ate 3. How many tacos does Jenny have left?

Reflect on student's answers and what strategy works best for each individual child.

Homework

Students will share the story of "Ten Little Monkeys" with their parents and explain how it teaches subtraction.

For training or questions regarding this unit,
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