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EXEMPLAR

Units & Lessons

MATHEMATICS

Kindergarten

Grant funded by:



Lesson 5: Math is REALLY Yummy

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

Standards for Mathematical Practice: SMP.3, SMP.6, SMP.7

Resources and Materials:

- Chart Paper
- Erasable Markers
- Erasers
- Page Protectors or Smart Pal Sleeves
- *The Very Hungry Caterpillar*, by Eric Carle
- Handout 5.1: 4-Part Foldable
- Handout 5.2: Real World Problem

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 join two different quantities up to 10, using one-to-one correspondence to show understanding of putting together and adding to.
- Students use organizers and strategies to solve addition word problems, including 4-Fold Foldables

Guiding Question(s):

- What are some examples of times when you have had to add?
- Which strategies help you solve addition word problems?


Vocabulary

Academic Vocabulary:

- add
- addition
- altogether
- and
- equal
- items
- join
- more
- plus
- put together
- sum
- total

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

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 use different strategies to solve real-world word problems. Students will use a foldable as a memory cue for use in solving word problems.

Anticipatory Set/Introduction to the Lesson (Whole Group):

Have students who did not present their Word Problem Diagram from the previous lesson present theirs. Read *The Very Hungry Caterpillar* while students act out the story.

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:

- One-on-one assistance, and peer tutoring using concrete items
- Provide word problems with smaller numbers.
- Use numbers only to solve addition problems

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









- Create additional word problems, including those with real-world point of view
- Offer peer tutoring to classmates.
- Solves addition problems with larger numbers.

Activity 1 (Teacher-led small group): Solving Real-World Word Problems

Distribute paper to students and have them fold the paper in half hamburger style, then open the paper up and fold it hotdog style. Demonstrate the four sections created on chart paper. Tell students use the four sections to work a word problem (SMP.7). Display the word problem below and write it in the top left section of the chart paper:

Amy had 3 cookies. Her mom gave her 5 more cookies. How many cookies does Amy have now?

In the top right section have a student draw a 10-frame and represent the story in the 10-frame.

In the lower right section, have another student draw a picture to represent the word problem. Then in the lower left section, have a student write a number sentence to represent the work.

Word Problem:	10-Frame
Number Sentence:	Pictorial Representation:

Have students turn their paper over and use the back side to solve this problem in the same way as they did on the front (SMP.6):
Mikey has 6 marbles. Some of the marbles are green and the rest are purple. How many marbles are purple?
Have students share their work and discuss the different interpretations. Allow students to self-correct and correct each other.

Activity 2 (Teacher-led small group): Creating 4-Fold Foldable for Real-World Word Problems

Note: Prior to the lesson, copy **Handout 5.1: 4-Part Foldable** and **Handout 4.2: Word Problem Diagram**. Put them in Smart Pal Sleeves or page protectors so students can reuse them by writing on them and erasing. Another option is to laminate them.

Distribute **Handout 5.1: 4-Part Foldable**, **Handout 4.2: Word Problem Diagram**, **Handout 5.2: Real World Problems**, an erasable marker and eraser to each student. Put students in pairs and have students solve the same real world problem, but each student will use a different organizer: 4-Part Foldable or Word Problem Diagram. After solving their problem, have them exchange and check each other's work. (SMP.3) Repeat with as many problems as possible.

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 pre-tend 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:

Students will share some times when they have had to add at home or other places.

Prompting Questions:

- ✓ How are the 4-Part Foldable and the Word Problem Diagram alike? Different?
- ✓ How do they help us do work?

Homework

Students will share how to use the 4-Part Foldable with their parents.

Handout 5.1: 4-Part Foldable


<p>Word Problem:</p>	<p>10-Frame</p>
<p>Number Sentence:</p>	<p>Pictorial Representation:</p>


Handout 5.2: Real World Word Problems

Name _____ Date _____

Amy had 8 cookies . Her mom gave her 2 cookies.

How many cookies did Amy have all together? _____

Pat went to the beach. Pat found 6 sea shells. .

Later Pat found 2 more seashells. . How many seashells did Pat find in all? Pat found _____ seashells

Jan got some toys for his birthday. There were 5 games and 4 balls. How many toys did Jan get for his birthday? _____

Dad went to the store. He bought 8 bananas and 2 apples. How many pieces of fruit did Dad buy? _____

For training or questions regarding this unit,
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