



MISSISSIPPI

# EXEMPLAR

Units & Lessons

MATHEMATICS

Kindergarten

Grant funded by:



## Lesson 1: Getting Bigger

**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, RL.K.1, RL.K.2, RL.K.3

**Standards for Mathematical Practice:** SMP.4, SMP.6

**Resources and Materials:**

- Highlight Tape
- *The Very Hungry Caterpillar*, by Eric Carle
- Handout 1.1: Pre-assessment
- Handout 1.2: Circle Map
- Handout 1.3: 5-Frame
- Handout 1.4: Hungry Caterpillar Fruit
- Video of [The Very Hungry Caterpillar](#), by Eric Carle

**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 whose sum is within 10, using one-to-one correspondence to show understanding of putting together and adding to.

**Guiding Question(s):**

- When would adding help a person?
- When might you need to put groups of things together?

## Vocabulary

**Academic Vocabulary:**

- Add
- Addition
- Equal
- Join
- More
- Plus
- Put Together
- Sum
- Total

**Note:** Expose students to various ways to mathematically express these terms. For example, when discussing the word **add**, include phrases such as **putting together**, **altogether**, and **added to**.

**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

**Direct Instruction Text Vocabulary:**


- Apple
- Caterpillar
- Cocoon
- Oranges
- Pear

**Instructional Strategies for Direct Instruction Text Vocabulary:**

- Introduce words with student-friendly definition and pictures
- Model how to use the words in discussion
- Write/discuss the meaning of word in multiple contexts
- Provide pictures/props to represent words

- Plum
- Strawberry

**Note:** Consider which of these words would fall into Tier 2 for your students when introducing vocabulary.

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><b>Understanding Lesson Purpose and Student Outcomes:</b> Students will see and hear the story, <i>The Very Hungry Caterpillar</i>, to comprehend the mathematical aspects in the text.</p> <p><b>Anticipatory Set/Introduction to the Lesson: Activate Prior Knowledge (Whole Group)</b></p> <p>Activate the students' prior knowledge by asking the following questions:</p> <ul style="list-style-type: none"> <li>• Have you ever seen a caterpillar?</li> <li>• How many legs do you think a caterpillar has?</li> <li>• Have you ever seen a butterfly?</li> <li>• How are a caterpillar and butterfly related?</li> <li>• What do caterpillars eat?</li> </ul> <p><b>Note:</b> Record the students' answers to the last question on a piece of chart paper.</p> <p>Show the cover of the book, <i>The Very Hungry Caterpillar</i>. Name the author and illustrator and encourage students to define the role of each. Allow the students to predict what the book will be about based upon the title and the pictures in the book.</p> <p>Make a poster using <b>Handout 1.2: Circle Map</b>. Record the students' responses on the poster.</p>	

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

- Have students sit close to the teacher and redirect their attention as needed.
- Show a picture on the projector for students who have never seen a caterpillar and/or butterfly.
- Allow student access to the book in to review.
- Provide small group and one-on-one instruction as needed.

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

- Use sensory details to describe a caterpillar and/or butterfly.
- Have students retell the story to each other or to the class.
- Have students make five with the combination of other quantities

**Note 1:** Whole Group should last from 15 to 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.

**Note 2:** 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.

**Activity 1: The Very Hungry Caterpillar (Whole Group)**

Show [\*The Very Hungry Caterpillar\*](#). After the video is over, ask the following prompting questions.

- What did the caterpillar eat Monday?
- What did the caterpillar eat Tuesday?
- What did the caterpillar eat Wednesday?
- What did the caterpillar eat Thursday?
- What did the caterpillar eat Friday?
- What did the caterpillar eat Saturday?
- What did the caterpillar eat Sunday?  
(record student responses in complete sentences)

Example of sentences dictated by students:

- The caterpillar ate 1 apple on Monday.
- The caterpillar ate 2 pears on Tuesday.
- The caterpillar ate 3 plums on Wednesday.
- The caterpillar ate 4 strawberries on Thursday.
- The caterpillar ate 5 oranges on Friday.
- The caterpillar ate 1 piece of chocolate cake, 1 ice cream cone, 1 pickle, 1 slice of Swiss cheese, 1 slice of salami, 1 lollipop, 1 piece of cherry pie, 1 sausage, 1 cupcake, and 1 slice of watermelon Saturday.
- The caterpillar ate 1 nice green leaf on Sunday.

Use the book to find the answers. Ask if any of the student's predictions were correct. If so, whose predictions were correct. Discuss the mathematical aspects of the story such as counting, numbers or number relationships with the students.

Prompting Questions:

- How many plums did the illustrator draw? (3)
- How do you know there are 3? (count them)

Have students show 3 by using their fingers, clapping 3 times, and/or drawing 3 plums.

### Activity 2 (Teacher-Led Small Group): Creating Word Problems

Tell students they will use pictures of food from the text *The Very Hungry Caterpillar* to create and solve word problems. Model how to complete this activity on the 5-frame using the example below. Use chart paper or a dry erase board to write an equation. Using highlighter tape, highlight the number 1 and the number 2 on the sentence.

Display this problem: The caterpillar ate 1 apple Monday. The caterpillar ate 2 pears Tuesday. How many pieces of fruit did the caterpillar eat all together?



$$1 \text{ apple} + 2 \text{ pears} = 3 \text{ pieces of fruit}$$

$$1 + 2 = 3$$

Model this with a 5-frame and real fruit or pictures of fruit.

Distribute **Handout 1.3: Five Frame** and the fruit you cut out from **Handout 1.4: Hungry Caterpillar Fruit**.

**Note:** Have enough fruit cut out so that each student has the same number of fruit as in the story – 1 apple, 2 pears, 3 plums, 4 strawberries, and 5 oranges.

Display this problem: The very hungry caterpillar ate 2 pears on Tuesday. The caterpillar ate 3 plums on Wednesday. How many pieces of fruit did the caterpillar eat in all?

T: What numbers are in the sentence. Circle the numbers 2 and 3.

Are we adding or subtracting?

Write  $2 + 3$ .

Use your pictures of fruit to find 2 pears and 3 plums.

Place 2 pears and 3 plums on you 5-frame.

How many pieces of fruit did the caterpillar eat? (5)

Write  $2 + 3 = 5$ .

Use different fruit pictures to show adding to 5 on the 5-frame. Explain that the standard way to show numbers on a five frame is to fill up the row, starting on the left, the same way you read.

Have students place four counters on the five-frame. Ask students what they notice about four. The following are possible responses:

- It is one away from five.
- It is the number after three.
- It is the number before five.

Tell the students to count the blank spaces. Ask students how many blank spaces are on the 5-frame. The students will say, "1."

Teacher will write  $4+1=$ \_\_\_ then ask students to finish the number sentence. Students will say, "5."

Tell students to clear their frames. Then have students place 3 counters on the five-frame from left to right. Ask the students how many more counters will they need to add to make five? Students will say, "2."

**Note:** If necessary, this activity can be extended over two days.

### 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.

- ✓ **Pre-test Center with Adult:** Distribute **Handout 1.1: Pre-assessment**. Read each problem to the students. Allow students to use objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions or equations to solve.
- ✓ **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 of art.

### Reflection and Closing:

Review the lesson. Reflect with students on the essential question of when you might need to put groups of items together.

Read and display a word problem. Write the number sentence represented in the word problem. Have students use the 5-frame to represent the number sentence (SMP.4).



*Example:* The very hungry caterpillar ate 1 apple on Monday. The caterpillar ate 4 strawberries Thursday. How many pieces of fruit did the very hungry caterpillar eat Monday and Thursday?

$$1+4=5$$



### Homework

Students will interview their parents to find out how they use addition at home or work. Students will share their interview findings the next day.

Handout 1.1: Pre-Assessment

Name \_\_\_\_\_ Date \_\_\_\_\_

1. Sabrina has this many bananas.



\_\_\_\_\_

Roule gives her this many more.



\_\_\_\_\_

How many bananas does Sabrina have now? \_\_\_\_\_

2. Sabrina has this many apples.



\_\_\_\_\_

She gives Roule this many apples.



\_\_\_\_\_

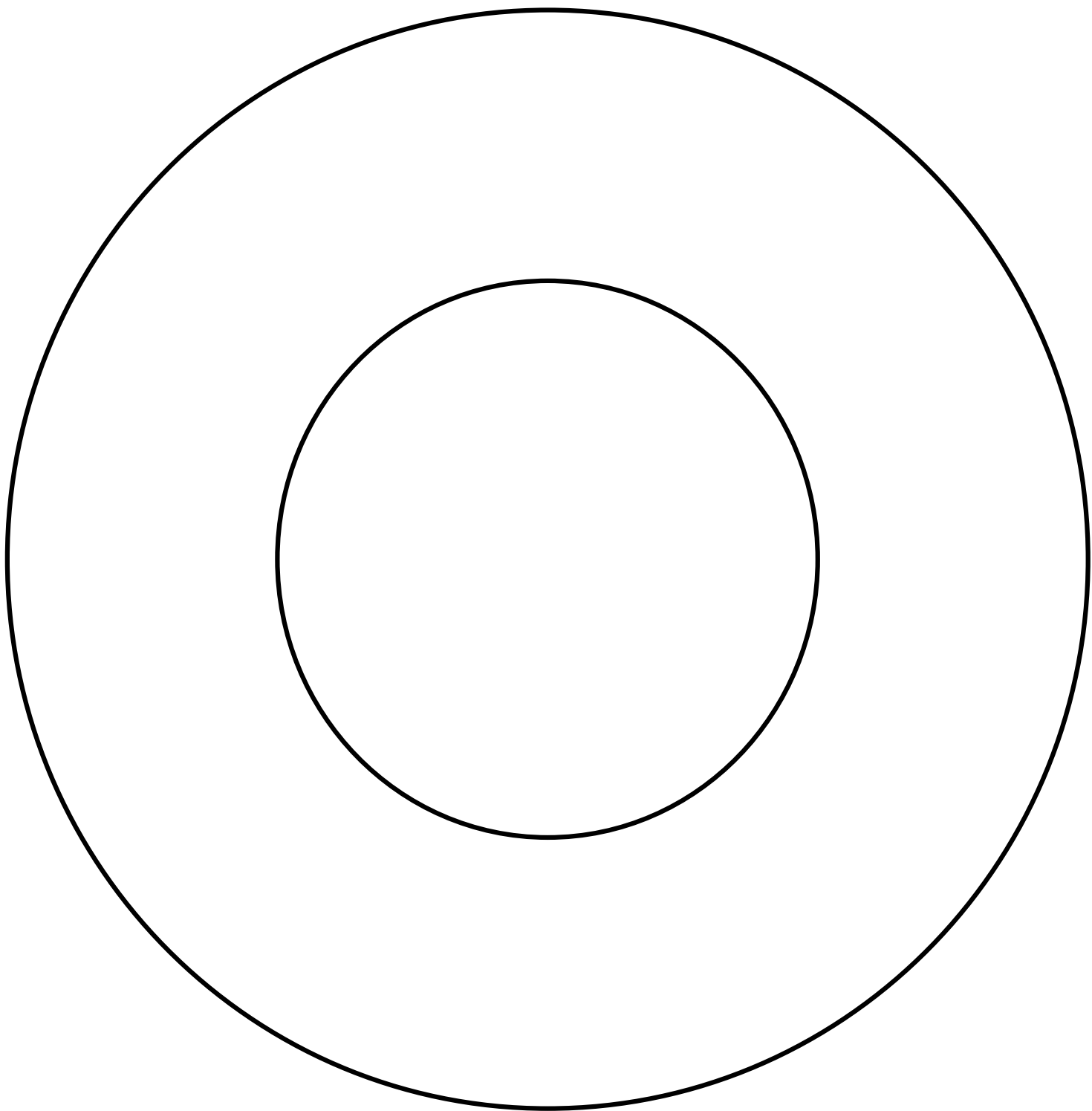
How many apples does Sabrina have left? \_\_\_\_\_

Draw pictures to show these problems:

Lisa ate 6 chips. She ate 4 more. How many chips did Lisa eat all together?

Jay got 7 stickers in class today. He gave 3 to Dan. How many stickers does Jay have now?

**Handout 1.2 Circle Map**



# Five Frame

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Handout 1.4: Hungry Caterpillar Fruit



For training or questions regarding this unit,  
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