



---

MISSISSIPPI  
**EXEMPLAR**  
Units & Lessons  
MATHEMATICS

**Pre-Kindergarten**

Grant funded by:



**MISSISSIPPI DEPARTMENT OF EDUCATION**

P.O. Box 771 | Jackson, MS | 39205-0771  
Tel (601) 359-2586  
www.mde.k12.ms.us  
Twitter: @MissDeptEd

The Mississippi State Board of Education, the Mississippi Department of Education, the Mississippi School for the Arts, the Mississippi School for the Blind, the Mississippi School for the Deaf, and the Mississippi School for Mathematics and Science do not discriminate on the basis of race, sex, color, religion, national origin, age, or disability in the provision of educational programs and services or employment opportunities and benefits. The following office has been designated to handle inquiries and complaints regarding the non-discrimination policies of the above mentioned entities:

**Director, Office of Human Resources**

MISSISSIPPI DEPARTMENT OF EDUCATION

359 North West Street, Suite 203

Jackson, Mississippi 39201

(601) 359-3511

## Lesson 3: More Counting

**Focus Standard(s):** PK.OA.1, PK.OA.2

**Additional Standard(s):** PK.RL.1, PK.CC.2, PK.CC.3, PK.CC.3a, PK.CC.3b, PK.CC.4, PK.CC.4a

**Lesson Activity Materials:**

- Basket
- Food Counters
- Life-size Five Frame made on the floor with tape
- *The Very Hungry Caterpillar* by Eric Carle
- White board/Smartboard to display Five Frame
- Handout 2.1: Food Cut Outs
- Handout 2.2 Five Frame

**Learning Center Materials:**

- Black pipe cleaners
- Coffee filters
- Life Cycle of a Butterfly Chart
- Markers
- Paint brush, dropper, or sponge
- Play-Doh and baking trays/cookie sheets
- Popsicle Sticks and glue sticks
- Water
- *The Very Hungry Caterpillar* Animated Story:  
<http://www.bing.com/videos/search?q=the+very+hungry+caterpillar&view=detail&mid=B1960DAECAE2A8B23271B1960DAECAE2A8B23271&FORM=VIRE>
- Handout 1.2: *The Very Hungry Caterpillar* Story Props

**Lesson Target(s):**

- Students will use number names, zero to five, to represent objects.

- Students will understand the relationship between numbers and the quantities that combine to make them.

**Guiding Question(s):**

- How can I add on more using a Five Frame?
- How can I find how many more make 5?

## Vocabulary

**Academic Vocabulary:**

- Add
- More
- 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


**Direct Instruction Text Vocabulary:**

- Apple
- Caterpillar
- Cocoon
- Oranges
- Pear
- Plum
- Strawberry

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

**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

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 use the Five Frame to demonstrate several combinations of objects.</p> <p><b>Anticipatory Set/Introduction to the Lesson: Experimenting with Adding with Five Frames (Whole Group)</b></p> <p>Review the numbers 0-5 using number cards. Hold up a Five Frame and ask students to tell you what it is and why we use it. If needed, remind students the Five Frame will help them count amounts of five. Distribute Five Frames and counters to students and display a large Five Frame on whiteboard. Ask the students to use their counters to show the following number of objects.</p> <p>T: Show me 3.  T: Show me 5.  T: Show me 1.  T: Show me 0.  T: Show me 4.  T: Show me 2.</p> <p>Verify each of these amounts using the Five Frame on the whiteboard for students.</p> <p><b>Note:</b> (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 between 15-20 minutes. If this time frame is too long for students, the Whole Group activities may be divided into two sessions. (3) Small Group should last approximately 15 minutes. Using the pre-assessment results, design the formation of small groups to reflect student capability and to drive the instruction throughout every lesson.</p>	

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

- Use a laminated Five Frame with the numerals 1-5 already written on it from left to right (one number per box).
- Work one-on-one with teacher or a peer to count
- Provide a model for students to view.

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

- Complete problems with more challenging number combinations.

**Activity 1: Experimenting with Adding with 5-Frames (Whole Group)**

**Note:** Insert movement/physical activity for the students between the Anticipatory Set and Activity 1.

Display a life-size Five Frame on the floor. As a class, count the number of boxes in the Five Frame. Put a manipulative in each box to model each day from *The Very Hungry Caterpillar*.

**Note:** Randomly select students to help solve the addition problem, referencing the picture graph in the previous lesson.

Have students work in pairs to represent addition problems with use of manipulatives, counters, Five Frames, and pictorial representations. Give one food cut out from **Handout 2.2: Food Cut Outs** to each student.

Read the following sentences and have students will step into the Five Frame to illustrate the sentences. Refer to the text *The Very Hungry Caterpillar* for assistance as needed.

T: The caterpillar ate 1 apple Monday.

T: The caterpillar ate 2 pears Tuesday.

T: The caterpillar ate 3 plums Wednesday.

T: The caterpillar ate 4 strawberries Thursday.

T: The caterpillar ate 5 oranges Friday.

T: The caterpillar ate 1 nice green leaf Sunday.

Ask the students what the caterpillar ate Monday.

Possible responses include:

- ... an apple
- ... some apples
- ... one
- ... a pear

**Note:** Be prepared to correct wrong responses by referring the students to the story and the picture graph, which shows how many of each food item the caterpillar ate.

Use a Five Frame to demonstrate placing an apple cut out or counter in the first box.

Ask the students to count the number of empty boxes. Then facilitate the following discussion.

T: How many pieces of fruit is needed to make five.

S: 4

T: On which day did the caterpillar eat 4 pieces of fruit?

S: Thursday

T: What did the caterpillar eat Thursday?

S: 4 strawberries

Display the addition problem on the Five Frame using the sentences the students dictated in the previous lesson.

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

Have students step into the Five Frame on the floor to illustrate the addition problem. Continue with different reading problems.

### Learning Centers

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

- ✓ **Writing Center** – Ask students to write and/or draw about their favorite foods. Have students reference the Word Wall, available books, charts and pictures in the classroom.
- ✓ **Dramatic Play Center** - Distribute **Handout 1.2: *The Very Hungry Caterpillar Story Props*** for students to make props for *The Very Hungry Caterpillar* and act out the story.
- ✓ **Math Center** - Using Play-Doh, have students make the items the caterpillar ate each day, count them and make the number for the amount.

- ✓ **Computer/Listening Center** – Provide technology for students to listen to *The Very Hungry Caterpillar* on CD, DVD, or online with [The Very Hungry Caterpillar Animated Story](#). If listening to the story on CD, the student will use the text to follow with the reader.
- ✓ **Reading Center** – Allow students to select fiction and non-fiction books about butterflies and other insects to read and view.
- ✓ **Science Center** - Display a chart of the life cycle of a butterfly. Have students draw or create their own version of the butterfly life cycle using various art materials and writing utensils.
- ✓ **Art Center** – Have students make coffee filter butterflies. First, students color a coffee filter with washable markers creating beautiful patterns of colors. Then, students will wet the coffee filters using a wet paint brush, sponge, or medicine dropper and hang to dry. After the filters are dry, fold them like an accordion. Twist a pipe cleaner around the middle of the filter to make a caterpillar body and twist the pipe cleaner around clockwise at least twice to make antennae.

**Reflection and Closing:**

Display the following student dictated responses:

- The caterpillar ate 1 apple Monday.
- The caterpillar ate 2 pears Tuesday.
- The caterpillar ate 3 plums Wednesday.
- The caterpillar ate 4 strawberries Thursday.
- The caterpillar ate 5 oranges Friday.

Instruct students to choose combinations of two fruits that will make 5.

Possible student responses include:

- 1 and 4
- 4 and 1
- 2 and 3
- 3 and 2
- 5 and 0
- 0 and 5

Circulate and ask students to justify their combinations on the Five Frame.

**Note:** While 5 and 0 do combine to make 5, the directions asked students to combine two fruits. Encourage students who present this solution to find a different combination.



Reflect on how well the students answered the following essential questions by examining evidence of student learning.

- How can I add more using a 5 Frame?
- How can I find how many more make 5?

### Homework

Not developmentally appropriate for pre-kindergarten.

For training or questions regarding this unit,  
please contact one of the following:

Wendy Clemons  
Professional Development Director  
[Wclemons@mdek12.org](mailto:Wclemons@mdek12.org)

Elise Brown  
Math Professional Development Coordinator  
[elise.brown@mdek12.org](mailto:elise.brown@mdek12.org)

Kristina Livingston  
Professional Development Coordinator, Lead  
[klivingston@mdek12.org](mailto:klivingston@mdek12.org)