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Units & Lessons

MATHEMATICS

Pre-Kindergarten

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Lesson 6: Putting Together and Taking Apart

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

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

Lesson Activity Materials:

- Cups
- Food Counters
- Hula Hoops
- Magnets
- *The Very Hungry Caterpillar* by Eric Carle
- White board/Smartboard
- Handout 2.1: Food Cut Outs
- Handout 6.1: Combination Mat
- *The Very Hungry Caterpillar* Animated Reading: <https://www.youtube.com/watch?v=RqMM793Kpys>

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:

- Students will understand the relationship between numbers and the parts that combine to make it.

Guiding Question:

- How can I show a number, using different combinations of the same objects?

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>Understanding Lesson Purpose and Student Outcomes: Students will understand the relationship between numbers and the quantities that combine to make them.</p> <p>Anticipatory Set/Introduction to the Lesson: Retell Story (Whole Group) Watch The Very Hungry Caterpillar Animated Reading.</p> <p>Group the students. Have the students retell the story by using food counters to sequentially order what the caterpillar ate.</p> <p>Note: (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> <div style="border: 1px solid black; padding: 10px; background-color: #f0f0f0;"> <p>For students who are EL, have disabilities, or perform well below grade level:</p> <ul style="list-style-type: none"> • Students use the anchor chart from Lesson 5 to sequentially order the food. • Use hula hoops and fruit cut outs to work with groups of 2 or 3 to make combinations. <p>Extensions for students with high interest or working above grade level:</p> <ul style="list-style-type: none"> • Students record numerals to show number combinations. </div>	

Activity 1: Putting Together and Taking Apart (Teacher-led Small Group)

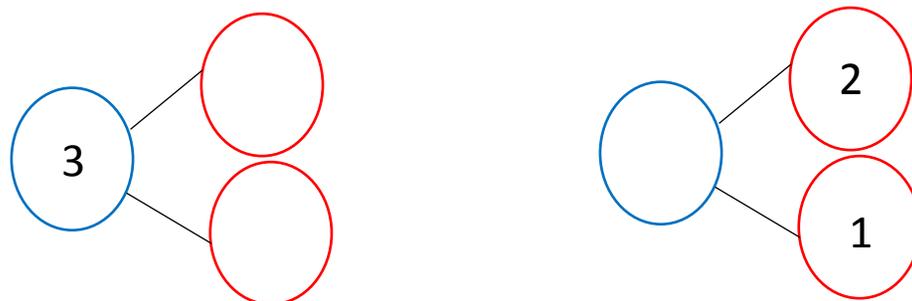
Place 3 hula hoops on the floor. Give each student a fruit cut out.

T: The caterpillar ate 3 plums on Wednesday. How can we show 3?

Select students to act as plums and stand in the whole number circle (the biggest circle). Point while students count the number of students in the circle.

Pose the following or similar questions:

T: What would happen if these two plums moved to this little circle? And if this plum moved to the other little circle?



Ask students to count the number of plums in each circle. Then, move the students back to the big circle and recount.

T: Help me find other combinations to create the same number.

Repeat with different students (fruits) and a different whole number. Use other combinations, e.g. 2 pears and 2 strawberries.

Distribute **Handout 6.1: Combination Mat** and 5 counters. Orally and visually, give the students a number (0 – 5) to decompose. Have students begin by placing counters in the big circle. Create the same visual on the board using magnets for counters.

Allow students to explore and come up with their own combinations while teacher observes, guides and supports. Continue asking for another way until all combinations have been recorded.

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:

During snack time, students will create a number combination to put together and/or take apart using a Combination Mat and real-world objects such as goldfish, crackers, cookies, etc. Students may share their work with the class. Teacher and students will review the skills of the day and discuss.

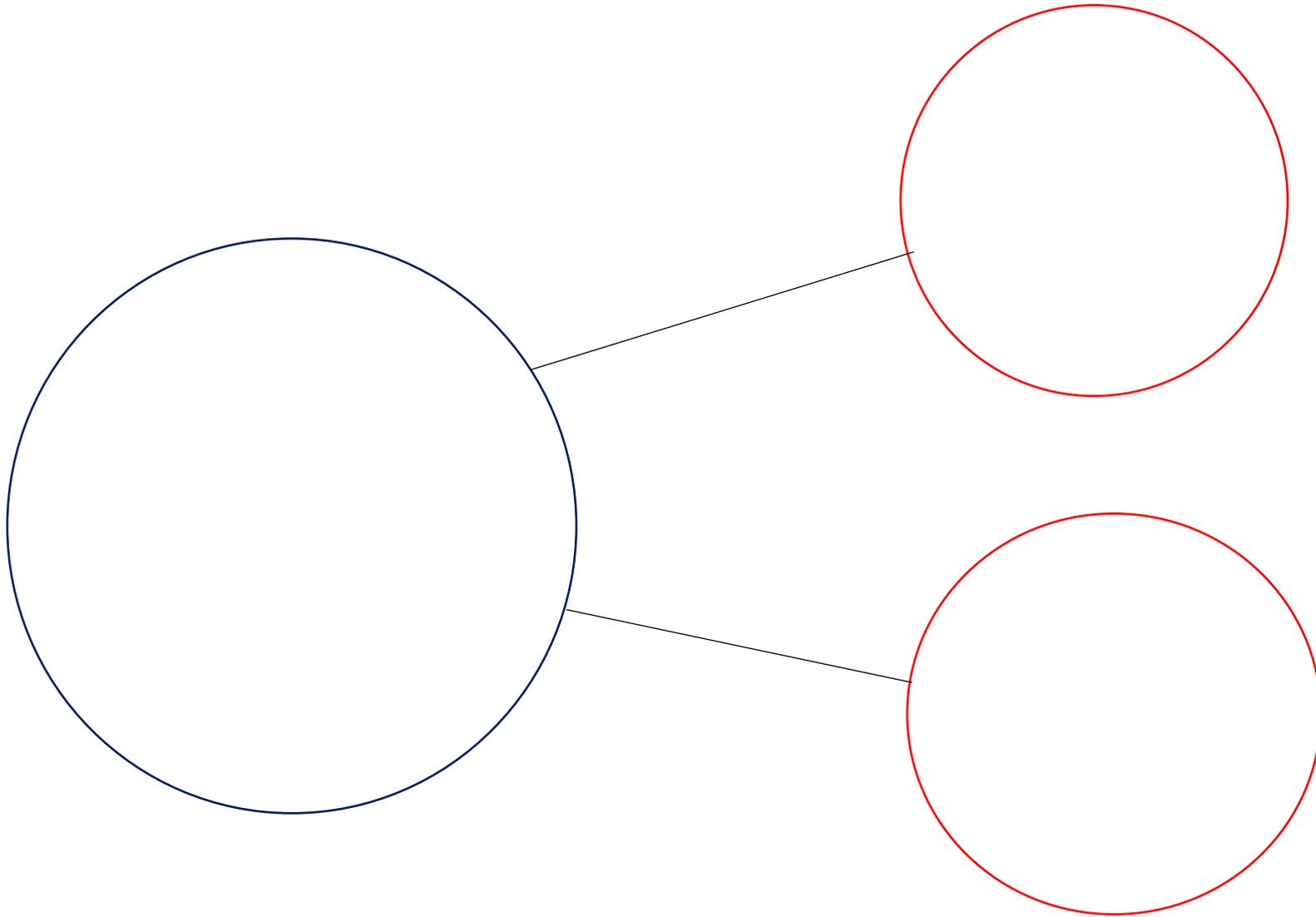
Reflect on how well the students answered the following essential questions by examining evidence of student learning.

- How can I show a number, using different combinations of the same objects?
- How can number combinations help me to show more?

Homework

Homework is not developmentally appropriate for pre-kindergarten.

Handout 6.1: Combination Mat



For training or questions regarding this unit,
please contact:

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