

## Lesson Plan: Mathematics

**Grade Level:** Third Grade

**Standard:** 3.G.2: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

**Learning Objective:** Students will partition wholes into equal parts and understand how to name partitions by the number of equal parts.

### Description of the lesson:

- Teacher unpacks story problem: “ \_\_\_ children want to share \_\_\_ oranges so that everyone gets the same amount. How much orange can each child have?” (Number options below= 2,5 4,5 4,10)
- Students solve story problem individually using invented strategies.
- While students solve problem, teacher circulates around the room, selecting students to share strategies during the Define and Clarify share out, and asks guiding questions when appropriate.
- When the students are finished, call them back to the front of the room and ask the two selected students to come to the chart where their strategies will be written partially.
- Teacher asks student one to explain their strategy to the class. (Leave out answer)
- Ask class what they wonder, notice, and appreciate about this students’ strategy.
- Teacher asks class to turn and talk and explain what this student did first, next, and last to solve this problem as they did.
- Have volunteer students explain how the strategy was solved and what we call the answer and why.
- Teacher asks student two to explain their strategy to the class. (Leave out answer)
- Ask students to turn and talk to the person next to them and tell them how they would complete this strategy and why.
- Select student to volunteer and share how this strategy is solved.
- Make sure to highlight fraction name language.
- Ask students to turn and talk and explain what they learned about partitioning and naming fractions from these strategies?
- Select one to two students to share their learnings and write key takeaways on bottom of chart.
- Students complete an exit ticket using 4 share 13 for the same story problem.

### Launch-Explore-Summarize

#### Engage students in problem solving to deepen their conceptual understanding or their strategies/ algorithmic thinking

**Learning Objective:** Students will partition wholes into equal parts and understand how to name partitions by the number of equal parts.

**MP 1:** Look for and express regularity and repeated reasoning while looking at structure.

	<p style="text-align: center;"><b>Introduction</b></p> <ul style="list-style-type: none"> <li>● Motivating/connecting lesson to prior learning</li> <li>● Communicating Learning Objective to students</li> </ul>	<p>Tell students that today they will continue to work with fractions.</p> <p>Tell students that in today’s lesson they will be practicing partitioning wholes into equal parts and naming partitions.</p>
<p><b>B1</b></p>	<p style="text-align: center;"><b>Launch</b></p> <ul style="list-style-type: none"> <li>● Teacher presents the problem(s) and clarifies goals and expectations for the lesson</li> </ul>	<p>Pose the story problem:</p> <p>“ ___ children want to share ___ oranges so that everyone gets the same amount. How much orange can each child have?” (Number options below= 2,5 4,5 4,10)</p> <p>Unpack the story problem with class- Ask students what the key details of the problem are and highlight. Ensure that students comprehend the story and its connection to mathematics.</p>
<p><b>B2</b></p>	<p style="text-align: center;"><b>Explore</b></p> <ul style="list-style-type: none"> <li>● Students work individually or in small groups to solve problem(s)</li> <li>● Teacher circulates and uses questioning to support students’ thinking</li> </ul>	<p>Students will work individually to solve the story problem. While students work, monitor students and ask guiding questions as necessary:</p> <ul style="list-style-type: none"> <li>● If you and I want to share five oranges, how could we split them evenly?</li> <li>● Would we just throw away the extra orange?</li> <li>● Are all of the oranges split evenly?</li> <li>● Are the oranges shared equally between each person?</li> </ul> <p>Teacher also makes anecdotal notes and pre-selects students to share their strategies during Summarize.</p>

		Select students based on highlighting partitioning wholes into unit fractions and naming fractions.
<b>B3</b>	<p><b>Summarize (Part 1) – Student Presentations</b></p> <ul style="list-style-type: none"> <li>• Students present the ways they solve the problem(s)</li> <li>• Teacher guides students to discuss big ideas</li> </ul>	<b>See Below for Define and Clarify Plan</b>
<b>B4</b>	<p><b>Summarize (Part 2) – Whole Class Discussion</b></p> <ul style="list-style-type: none"> <li>• Use student ideas to focus and summarize key mathematical concepts, relationships, strategies, algorithms</li> </ul>	<b>See Below for Define and Clarify Plan</b>
	<b>Assessment</b>	Students complete an exit ticket using 4 share 13 with the same story problem.
	<b>Closure</b>	Tell students to turn and talk to the person next to them and tell them what they learned about fractions today. Call on a few students to share their learning and write key takeaways on bottom of strategic share out chart.

### **Summarize: Define and Clarify**

**Standard:** 3.G.2: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

**LO:** Students will partition wholes into equal parts and understand how to name partitions by the number of equal parts.

**MP 1:** Look for and express regularity and repeated reasoning while looking at structure.

**What new tool, representation, symbol, or vocabulary/concept are we targeting in our discussion? Is this new to the students or are they using it in a new way?**

How to partition wholes into equal shares between sharers. Students are practicing how to write/say fractions in **word** form. Students will use non-anticipatory, emergent anticipatory, and anticipatory strategies to distribute shares between sharers (partitive division). Vocabulary being practiced in this lesson includes “partition, equal parts, wholes, one half, halves, one fourth, fourths, quarters.”

**What problem or task are we working on? How will I support meaning making? What partial understandings might arise?**

How to distribute shares equally for the numbers: 2 share 5, 4 share 5, and 4 share 10. Encourage students to use flexible strategies and to accurately name unit fractions. Connect it to real-world application and previous lessons.

Strategically select two students for strategy share out: Determine which students’ work will highlight naming unit fractions and partitioning fractions to extend the classes’ current understandings.

Teacher to support meaning making during strategy share out because after the student shares their strategy, the class will turn and talk and decide what the next step is, how to name the fraction, and how to use this strategy to solve a different problem.

Partial understandings that may arise are students who are still using the Non-Anticipatory stages and not considering the number of sharers when beginning to distribute shares.

(chart adapted from Kazemi & Hintz)