

# Adding Mixed Numbers



## Standards-Focused Classroom Series

The *Standards-Focused Classroom* series was created to provide educators with actual classroom examples of lessons that target 21st century learning standards.

### Pre-viewing Discussion Prompt

1. How do you encourage your students to reflect on and describe their understanding of word problems and their solutions?

### Lesson Evaluation

Rate the lesson's effectiveness (1 = not effective; 5 = very effective), and use your results to facilitate discussion and reflection.

1. Student learning targets were clearly communicated.  
1 2 3 4 5
2. Instructional activities led students toward meeting the objectives.  
1 2 3 4 5
3. Students were actively engaged.  
1 2 3 4 5
4. Teacher differentiated instruction.  
1 2 3 4 5
5. Assessments effectively monitored student progress.  
1 2 3 4 5

## About this Segment

In Joseph Wood's 4th grade class at Maria C. Colón Sanchez Elementary School in Hartford, Connecticut, students work in groups to represent a word problem involving mixed numbers with number sentences and fraction models. They then solve the problem and explain their solutions in writing.

### Post-viewing Discussion Prompts

1. If you were the instructional coach observing this classroom, what 2-3 strengths in this lesson could you help the teacher identify?
2. What evidence of critical thinking and problem solving did the students demonstrate?
3. What constructive feedback could you give this teacher?

### Reflection Questions

After watching the video, participants can answer the following questions to reflect on new learning:

1. How did Mr. Wood integrate writing into his math lesson? How effective did it seem in helping students strengthen their math and language arts skills?
2. Mr. Wood uses a KWCI chart in this lesson. How does it help students identify potential difficulties and solutions in story problems?
3. In this class, students collaborate in small groups to solve problems and share their thinking about solutions. How does this approach give all students the opportunity to master the concepts?

## Teacher Lesson Plan

<b>Teacher:</b> Joseph Wood	<b>School Name:</b> Maria C. Colon Sanchez Elementary	<b>Location:</b> Hartford, Connecticut
<b>Grade Level:</b> 4	<b>Content Area:</b> Math	<b>Lesson Duration:</b> 60 min., part 1 of 1
<b>Lesson Date:</b> May 16, 2014		
<b>Summary/ Overview</b>	Students review a KWCI chart before solving word problems involving mixed numbers by working in groups. Students explain their solutions in writing and create posters that they present to their peers.	
<b>Skill-Based Objectives &amp; Deliverables</b>	<ul style="list-style-type: none"> <li>• Students will be able to add and subtract mixed numbers and simplify their answers within a given context.</li> <li>• Students will be able to use number sentences and visual representations to solve word problems involving mixed numbers.</li> </ul>	
<b>Standard(s) Addressed</b>	<ul style="list-style-type: none"> <li>• Add mixed numbers with like denominators.</li> <li>• Solve word problems involving addition of fractions referring to the same whole.</li> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason quantitatively.</li> <li>• Attend to precision.</li> </ul>	
<b>Materials &amp; Resources</b>	KWCI chart, poster paper, markers, overhead projector	
<b>Differentiating the Instruction</b>	Student groups will be ability-based, and differentiation will occur during the lesson by allowing students to work on the investigation on their own entry points. Students will be given different problems based on ability.	
<b>Procedures</b>	<ol style="list-style-type: none"> <li>1. <u>Introduction</u>: Review the investigation problem and items on the KWCI chart that students generated during the previous class.</li> <li>2. <u>Collaborative Work</u>: Students will be placed in pre-selected groups based on MAP data and pretest scores on standards. The students will first discuss the investigation and their ideas for solving with their partners. Students will then write a number sentence, visual representation, and written explanation for the investigation on their poster paper.</li> <li>3. <u>Student Presentations</u>: Students will then share their learning from their investigations with the class, focusing on efficient strategies and multiple ways of reaching the same solution.</li> <li>4. <u>Review</u>: The lesson will close with a brief review of the learning targets and students sharing some ways that they could be assessed on their investigations.</li> </ol>	
<b>Assessment</b>	Students will demonstrate learning through their discussion and responses, both within their groups and with the teacher. They will further demonstrate learning through their questioning/critique of each other within their own group, and their work on the investigation on their chart paper (number sentence and visual representations).	

### Resources from School Improvement Network

4th grade: Mental strategies for math problems. *Edivate*. <https://pd360.com/-resources/videos/5362>

4th grade: Adding and subtracting fractions. *Edivate*. <https://pd360.com/-resources/videos/5417>

### Resource for Classroom Practice

AdaptedMind (n.d.). Fractions, mixed numbers, and decimals practice, problems and worksheets. Retrieved December 4, 2014, from <http://www.adaptedmind.com/categorylist.php?categoryId=12>