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Full Details and Transcript

A Teacher's Perspective: How to Use the Practice Guide

Laurie Thompson, M.A.
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Topic	**DEVELOPING EFFECTIVE FRACTIONS INSTRUCTION FOR K-8**
Practice	**FRACTIONS AS NUMBERS**
Highlights	» Laurie Thompson talks about her role as the voice of the teacher on the expert panel.
	» She suggests that teachers look at the guide by turning to the fraction practice associated with their grade level.
	» She highlights features of the guide of interest to teachers, including the visual representations and examples and the roadblocks and practical solutions.
	» Thompson focuses on the guide's emphasis on number lines, and she relates how she became a fan of teaching with number lines as a teacher. She relates an incident in which she was surprised that her students had not grasped some basic concepts about the equivalence of fractions and how she used a number line to help them understand fractions as numbers.
About the Interviewee	Laurie Thompson, M.A., has ten years of experience as an elementary teacher and math resource teacher. Her experience includes teaching first, third, fourth, and fifth grades in Carroll County, Maryland; Loudon County Public Schools, Virginia; and Katy Independent School

District, Texas. As an elementary math resource teacher in Loudon County, Thompson worked with elementary math teachers to team-teach lessons, organize guided instructional centers, and conduct small-group instruction. In this role, she also developed and evaluated mathematics lessons and materials for kindergarten through fifth-grade classrooms. She has served as a mentor and team leader for new teachers and participated in professional learning communities.

Full Transcript

🔊 **00:05** My name is Laurie Thompson, and I was a practitioner on the panel. My role was to be the voice of the teacher. I have ten years of teaching experience in both primary and intermediate, and I was a math coach as well.

🔊 **00:18** If were given this guide as a teacher, I would look right at the recommendations and see that they work from a primary level up to a middle school level. And I would first find which area actually fits the grade level that I am teaching.

🔊 **00:32** So if I were an intermediate teacher, I would probably look at recommendations 2 and 3, which focus on the use of a number line and the computation parts of fractions. I feel like we did a really good job of picking up things that are obvious stumbling blocks for teachers.

🔊 **00:50** There are so many times when it's easy to say, "Yeah, this is great, but how am I actually going to make this work in my room?" When I would look at this guide, I would say the big things that jump out at me as a teacher are that fractions are numbers. Thinking through fractions with number sense is a really big idea that this guide focuses on.

🔊 **01:13** The other thing I think that was huge is just the importance of using the number line. I can't stress enough what an eye-opener it was for me as a teacher to put the number line in front of my kids and have them try to place fractions on the number line. That was one of the most memorable lessons I have taught as a teacher.

🔊 **01:32** I vividly remember the first time I discovered the importance of using a number line with my students. I had already finished teaching my fractions unit. They took their assessments, they all did great, and then one of our next objectives in our curriculum was decimals. So, many teachers often think of that as a completely separate entity. However, that's something that this guide also encourages, is to think of fractions and decimals together and the relationship that those numbers have. Part of the curriculum for us was to compare equivalent fractions and decimals. So I decided, well, I will put up this number line and will plot some decimals on the number line and then I'll throw in some fractions and then they'll go back and put them on there and it will be a great lesson.

🔊 **02:17** I gave them a fraction, three-fourths, and they put it between the three and the four. So we had this extensive discussion about where are we going to put this number, does it make sense to go in between the three and the four. If we have three-fourths of something does that mean we have three wholes? Does it mean we have four wholes? What does the number three-fourths even mean? And this conversation literally took 45 minutes for us to talk this through. And we ended up going with the example of a cake—unfortunately, we often think of food when we think of fractions. But we talked about, if we had three-fourths of a cake, does that mean we had three cakes? Well, no, so we can't put it on the number three. Does it mean we have four cakes? No, we can't put it on the number four. So if we ate three-fourths of a cake, where would we put this? And so we finally ended up with the question, well, is it more than one cake that we have? No, so then we knew we had to be less than one, and that was when it really started to click—oh, three-fourths is not even a whole, one whole. So then we were able to place it on the number line in between the zero and the one.

🔊 **03:32** I believe that the greatest thing you can learn by using a number line is it assesses students' ability to see fractions as numbers and see what fractions' role is in the number system.

🔊 **03:45** Another beneficial piece to the Practice Guide is the figures or examples of children's work that we have used, particularly in recommendation 3, where we are discussing the importance of computation. I think it's a great starting point for teachers to see that you can give them visuals to help them understand the algorithms before you actually move in to just teaching the algorithms. And I think this is beneficial for both students and teachers to see the thinking behind how the algorithms work. Why does one-half plus one-third equal five-sixths. The visuals here really help you as a teacher explain this and have your children truly understand it.