Transcript – A Visual Way to Look at Improved Instruction

Here is a visual way of looking at how all of these components fit together. These are six different concepts that are normally taught separately from each other: percent, unit rate, proportions, decimal representation, rate of change, and equivalent ratios.

In some mathematics classrooms, these concepts are typically taught separately and in isolation, and as a result, students may not see important connections between these concepts. By sequencing the content strategically and presenting the content in the context of learning progressions, teachers can plan their instruction and teach with the end assessment in mind. This does not mean to teach to a test but to teach and make connections between the content. Remember, when all of these different concepts are taught, the ultimate goal is for students to have an understanding of rational numbers, how they are represented, and how they are applied.

Rate of change isn't usually discussed when students learn about percent, but the two concepts are very connected through the idea of equivalent ratios. Learning progressions can help make those important connections between current and previous content. When teachers are aware of the connections between concepts, they can structure their curriculum to help make these connections to help students learn.

Last, as a result of all of these concepts being integrated and connected, teachers must be aware that errors and misconceptions related to one concept may stem from another concept. For example, a misconception or error held when working with unit rate may stem from something lacking in equivalent ratios. We must be able to identify where the error originates and be able to correct it for all of the concepts that it is connected with.