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VALUING MATHEMATICAL ROUTINES FOR SUPPORTING DIVERSE LEARNERS' MEANINGFUL ENGAGEMENT WITH MATHEMATICAL IDEAS AND MATHEMATICAL COMMUNICATION

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Abstract: *In this paper I highlight the importance of using a variety of short-duration mathematical routines, such as notice-wonder, which one doesn't belong, number talks, pattern talks, and quick builds to develop elementary and early secondary students' numerical reasoning, algebraic reasoning, and spatial thinking. These routines provide a foundation skillset for more advanced mathematical reasoning, including the abilities to justify, communicate clearly and effectively, and appreciate that problems can have more than one solution. I will illustrate several examples that connect a mathematical routine with a rich meaningful problem drawn from number sense and patterning and algebra. Most importantly, though, I argue that routines are essential in building a healthy mathematics classroom culture and meaningful relationships.*

Keywords: *routines, communication, spatial thinking, algebraic reasoning*

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