Mathematics is a notoriously disliked subject, a frequent punch line of jokes in popular culture. There are many reasons for math’s unpopularity, and chief among them is that school mathematics seldom gives students opportunities to engage with the richness of this potentially fascinating subject. As a result, the mathematics education pipeline in the United States is more often a filter than a pump, siphoning students out rather than bringing them along. Children have libraries to help them fall in love with literature, but where do they get a chance to fall in love with math?

Gresalfi explores work across three different projects that take the following as its central question: what would math look like if it didn’t have to look like school? Across all three projects, she discusses the role of design, iteration, and play in supporting students’ engagement with mathematics.

Melissa Sommerfeld Gresalfi is an Associate Professor of Mathematics Education and the Learning Sciences at Vanderbilt University. Her research on the design of learning environments has focused on transforming learning spaces to center student mathematical engagement on sense-making, decision-making, and problem solving. Her projects focus on the role of play and design in supporting learning through videogames, informal learning, textile design, and computational thinking.