Second Reaction: How Do You Determine *Which One Doesn't Belong*?

Danielson, Christopher. *Which One Doesn't Belong.*
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Which One Doesn't Belong? by Christopher Danielson is unlike most other children's literature with its ability to elicit curiosity in children through mathematics. Danielson captures the interest and intrigue of readers of all ages by providing activities that are thought-provoking and engaging and which create an opportunity for children to interact with mathematics in a positive light. *Which One Doesn't Belong?* draws upon the insights and opinions of each and every reader. The book presents readers with pages filled with various images and shapes and continually asks readers to identify which image does not fit with the others, while also explaining why each shape doesn't belong with the others. There are very few words in the book, which allows emergent readers the ability to grab the book and enjoy the collection of activities presented. Danielson ensures that the mathematics is accessible to all, including young children who may not yet know their shapes or have an emerging understanding of shapes, but not have a grasp of the characteristics of those shapes.

I had the pleasure of sharing this book with my own children, a 4-year-old and a 6-year-old, and with multiple classrooms of kindergarten through fifth grade students. With each group, I invited readers to take a stance or choose a side. Students were instructed to carefully examine the four images on a page and select the one that they believed to be unlike the rest. Students were excited to vote on one image and defend their opinions to their peers. My own children begged and pleaded for just one more page before they were sent off to bed. In a kindergarten classroom, with some of our youngest scholars, students willingly offered up justifications for their statements. A kindergarten student clung to the idea that one shape was

round and not pointy like the others. Immediately the room filled with "ohs" from her classmates who had not thought of the shapes in that manner. It was at the point that the conversation shifted and we began to describe the corners as vertices. Students naturally began comparing the number of vertices of each image. Based on those conversations, another student offered up a new claim and warrant that a different image did not belong because that image had fewer corners than all the others. This brief exchange captures the beauty of this book. We can gain so many ideas from each other and often begin to realize things in a different light.

The field of mathematics education has undergone major shifts with the widespread adoption of college and career-readiness standards. This book builds on the need for mathematical dialogue and the notion that there is more than just one appropriate response or solution. The structure of this sorting activity breathes fresh air into the classic game of finding which one does not belong. The acclaimed children's show *Sesame Street* has engaged viewers for years with "One of These Things is Not Like the Others," whereby it presented the audience with a collection of items. In the *Sesame Street* activity there was often one appropriate response. Danielson's book offers readers with a similar activity, although it opens up the area of mathematics, and each shape can be defended as the one that does not belong. In several classrooms, students clung to the belief that there was one answer and frequently demanded to know who among them was right. Eventually students began to understand that they all were correct. Students enjoyed the opportunities to contribute to the mathematics conversation and realize that they could be "right."

Which One Doesn't Belong? is an example of what mathematics is and where it is headed. Problem solving and collaboration are some of the most important aspects of mathematics instruction. Danielson allows readers to be in a fun and safe space while engaging with math. The smiles and laughter that children displayed were a testament to the need for this form of thinking and experience. This book delivers and promotes alternative approaches of thinking and creates a culture where everyone can be a mathematician.

About the Author

Gabriel Ward has been an educator in Southern California for nearly two decades. He has taught preschool through eighth grade in public, private, and pre-school settings and knows firsthand that education is a truly rewarding and challenging profession. He is passionate about exploring mathematics deeply and is continually learning. In his current role, he serves as a P-8 Math Specialist for Hacienda La Puente Unified School District in Los Angeles County. At each of the schools he supports, he regularly teaches inquiry-based model lessons, facilitates meetings of professional learning communities, and supports administrators and coaches to address academic achievement.