



PREFACE

“Mathematics is a verb! In Ute we do not have just one word to describe mathematics—rather, we name it as we use it. When we count, build, design, cook, hunt, or fish, we are doing mathematics.”

—Fabian Jenks, a Northern Ute elder from Fort Duchesne, Utah

For most people, the word *mathematics* is a noun. But as the above quote (Barta and Shockey 2006) shows, not everyone would agree. For many people in many different cultures, mathematics is not simply something they learn in school. It is instead something they *do* as an intrinsic part of their everyday lives.

Math Is a Verb: Activities and Lessons from Cultures Around the World is a guide for teachers who would like to enhance their mathematics instruction by integrating it with examples and activities of cultures throughout the world. This book provides culturally situated examples, each linked to Common Core objectives, that show how mathematics is so much more than an arbitrary story problem residing in a text, or an exercise in a worksheet with little or no context. Mathematics is a process shaped and influenced by its use and by the culture of those using it. In many parts of the world, mathematics is named by how people use it; it is through its application that we see how culture influences mathematics and, reciprocally, how mathematics affects culture.

Traditionally, mathematics has been described as a universal language, and to a degree this is true. However, it may be more useful to think of mathematics as a language composed of a variety of dialects we use as we think, communicate, and evaluate data to solve the unique problems faced in each of our communities. Of course, people in every community add, subtract, multiply, and divide, but exactly *how* we do this varies broadly because of the influence of culture on naming, thinking, and doing.

When we embrace a more multicultural understanding of mathematics, we see how the mathematics of today has evolved from many cultures' contributions from across the planet and throughout time. Mathematics is not a subject that is fixed, rigid, and fully developed; it is instead a process that in many ways continues to evolve and that possesses life, animation, and applicability as it remains responsive to those who name it and use it. This perspective alone suggests that children can learn mathematics more effectively if they are taught in ways that provide relevance and meaning, while also respecting and validating the communities and cultures the children represent.

In this book, we have provided teachers with representative mathematical examples from a variety of cultural communities throughout the world, making a particular effort to include cultures not typically seen in other multicultural mathematics books. The mathematical connections made here are to groups at varying socioeconomic levels, as well as ones from both industrialized and nonindustrialized countries, and from both indigenous and nonindigenous societies. We do this to encourage teachers to further investigate their own understanding of culture and its influence on how they teach an increasingly diverse student population.

Our goal is not merely to ensure that students realize the global nature of mathematics. We also hope that more students in our increasingly diverse classrooms will become inspired when they see their own culture and mathematical heritage showcased. We realize that one book can barely scratch the surface of culturally applied mathematical examples from around the world. While we consider our examples distinctively unique, they represent only a smattering of the countless rich and varied examples of peoples across the planet knowing, doing, and using mathematics. We hope that as teachers study how others learn and apply mathematics within the local contexts and cultures described in this book, they will realize that they too can create personalized math lessons specifically developed for those they teach.

Acknowledgments

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