INVESTIGATING LINEAR MEASUREMENT

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How high? How much space? How long? How soon? How heavy? How much does it hold? How fast? Think about how many situations throughout your day that have something to do with measurement. Measurement is a key real-world application of mathematics that pervades our daily activities. It is used in everyday contexts to carry out human activities, such as business, construction, transportation, scientific research, and artistic expression. The application potential of measurement lends itself to making links across other mathematics strands, such as number sense and numeration, geometry and spatial sense, patterning and algebra, data management, as well as other subject areas, such as social studies, science, art, and music.

In this issue, the Research Summary and problems (with multiple solutions) focus on strategies for determining linear measurements using non-standard and standard units. The problems are designed for use within a three-part, problem-solving lesson. Consider solving these linear measurement problems yourself first, before examining the solutions we offer you. When we engage in solving mathematics problems, we are deepening our conceptual understanding of the mathematics we teach. As well, we are prompted to rethink our choices for learning materials and teaching strategies, in order to develop our students' understanding of mathematics.

LINKS TO LITERATURE AND MANIPULATIVES

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Has this ever happened to you? You are doing a read aloud with a picture book, like *I Wanna Iguana* by Karen Kaufman Orloff for students to analyse examples of persuasive writing. You get to the page where Alex's mother writes the following letter: "Dear Alex, Iguanas can grow to be over six feet long. You won't have enough space in your whole room, much less on your dresser (with or without your trophies)." Herein lies one of the challenges in using children's picture books that are published in the United States; they use imperial rather than metric units of measure. A solution? Preview the text and substitute the measurement words, like using "about two metres" for six feet. Then students could think about whether their classroom is more or less than two metres wide or long. How can we measure two metres with a metre stick? Look for more ideas for using children's literature and manipulatives in this issue.