

MATHEMATICS LANGUAGE

- The technical language of mathematics attributes very specific meanings to some words with definitions that are different from general usage
- Mathematical symbols come from many different alphabets

Mr. Munn Meets the Student Council

Claire Road School is the district's magnet school that focuses on international studies. There are grades 3-6 in the school where Student Council officers are elected each September.

When the newly elected Student Council members assembled for their first meeting, Mr. Munn asked the newly elected secretary to get a list of everyone's names, grades, and homeroom teachers so he would could easily contact them.

Mr. Munn added, "Please record the minutes of our meeting today, Carley."

Following the meeting, Carley brought Mr. Munn the list he had requested. At the bottom of the page she had written, *Minutes 8:45–9:10.*

Mathematics and General Language Usage

He realized that Carley did not understand “recording the minutes” meant to make a record of the activities of the meeting. Mr. Munn smiled and said, “Thank you.”

Later, sharing what happened with fellow teachers, Munn commented on the number of potential language difficulties for many students.

“For example,” he pointed out, “there are a number of instances when a familiar word has a different definition in mathematics. Tables are flat top pieces of furniture on which to place things rather than lists and related sets of data. You can ski on a snow slope, but not on the slope of a line in algebra class.”

Mathematics and General Language Usage

“And then there is the informal language we use in every day situations, but in mathematics there are specific meanings,” added another teacher.

“I think about the word “similar” when it refers to geometric figures that have to be proportional. But “similar” when it describes activities or houses or other things, these can just be somewhat alike.”

“I always think about how difficult it must be for young students when we talk about bigger numbers,” said the kindergarten teacher. “Does a bigger number mean we have to write it 10 inches tall rather than 2 inches tall?”

The Conversation Continues

“Well, a quarter is worth 25 cents,” noted another colleague, “but each quarter in football is 15 minutes long but only 12 minutes in basketball.”

Ms. Wachenski said, “I would not like to meet a mean guy in the park, but a guy whose mean income is eighty grand would be fine with me.”

“If you are playing cards, would you rather have a pair of aces or just a pear?” interjected another teacher.

“Enough!” laughed Mr. Munn. “I’m convinced that we should have this same conversation with our students. Perhaps we could we include mathematics homonyms and homophones in the language arts lessons.”

Have You Considered...

Language is as important to learning mathematics as it is to learning to read. Identifying words that sound alike but have different spellings and meanings creates one set of issues for students. And when the same word has multiple meanings – often very precise definitions, some students may silently wonder but never ask.

Word walls are helpful but not sufficient. Explicit conversations about the meanings of terms and opportunities to experience the related mathematics are needed.

What mathematics and general usage language have given your students difficulties?

How do you accommodate the students who struggle with mathematics language?