

TEACH KIDS ABOUT Numbers All Around Us



See how one math specialist connects numbers to students' lives, step by step.
By Hannah Trierweiler Hudson

Clocks. Calendars. Price tags. Telephones. We are surrounded by numbers. But do students ever really notice? And if they do, do they make the connection to what they are learning in math class?

Recognizing the role numbers play in our everyday lives is crucial to students' math understanding now and down the road. That's why Bob Krech, a curriculum specialist in New Jersey's West

Windsor-Plainsboro district, likes to teach a lesson he calls "Numbers All Around Us." This lesson uses real-world examples to show that numbers help us answer many questions, including "How much?" "How fast?" and "Where do I go?"

We visited one of the elementary schools where Krech works as he was sharing "Numbers All Around Us" with a group of second graders. Here's how to teach the lesson in your own classroom.

Numbers All Around Us



Step 1 Take photos of various numbers around your neighborhood. For example, you might include road signs, house addresses, and numbers on food packages. Print these out to share with students. There should be enough photos for everyone in the class.



Step 2 Begin the lesson by talking about numbers. Ask students, "Why do we have numbers? What are they for? What do numbers tell us?" Share some of your photos and discuss the purposes of the numbers in them. (For example, a speed limit sign tells us how fast to go.)



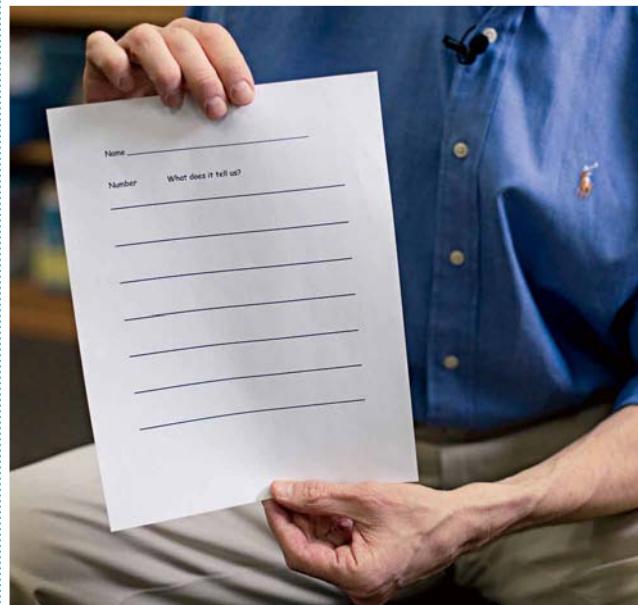
Step 5 Allow students 10–15 minutes to work together. Each group should have no more than four to five students. This activity lends itself well to groups with students of varying ability, as students with advanced skills can aid others in expressing their thinking.



Step 6 Help facilitate discussion. If a student is having trouble articulating the purpose of his or her number, break it into steps. For example, "What is this a picture of?" (A ruler.) "When do we use rulers?" (To measure things.) "So what do the numbers tell us?" (How long.)



Step 3 Introduce the idea that numbers answer questions. If a student volunteers that numbers are in prices, for example, you might ask, "What question do the numbers in prices answer?" (How much does it cost?) Record these questions on notecards for later use.



Step 4 Give each student a photo and a recording sheet. Explain that you'd like students to write the purpose of their numbers on the sheet, and then share their thoughts with a small group. Students should record the purpose of every group member's number.



Step 7 Differentiate where appropriate. For example, more advanced students might write the question each number answers (e.g., "How much does it weigh?"), while less advanced students record the number's purpose in more general terms (e.g., "weight").



Step 8 Gather again as a group. Tell students, "I'm going to tack up these cards. These are some of your ideas about how numbers are used. Let's sort the pictures of the numbers by the way those numbers are used. I have some blank cards in case I need to make new ones."

Numbers All Around Us



Step 9 Invite each student to share about his or her picture and then add it to the board. As the student is describing his or her number, you might need to help him or her restate the purpose in order to fit the most appropriate category on the board.



Step 10 Encourage students to comment on one another's work. If students agree with where their classmate has posted a picture, they can give some kind of signal, such as a thumbs up. If they disagree, they should raise their hand and explain why.



Step 11 In conclusion, talk about the questions numbers answer. Reiterate how numbers make our lives easier. If you'd like, title the board "Numbers All Around Us" and add to it in future lessons. □