

ASK don't TELL

Edric Cane CommonSenseMath.org.

As teachers, we want students to know. So we routinely tell them what we want them to know or allow the textbook to tell them. Students get accustomed to being told what they should know. We expect them, and they expect, to memorize what they are told. This gradually builds up knowledge as a mass of memorized facts, rules and procedures that clog the brain.

A very simple and powerful strategy turns that on its head. It can be applied at all levels of math instruction: **ASK students instead of TELLING them.**

Teachers ask me to help explain to students why a large denominator does not mean a large fraction. This understanding is absolutely basic to any understanding of fractions. Let's apply the ASK don't TELL strategy.

$\frac{1}{2}$ One half. In how many parts do I divide the pizza? (2)
2

$\frac{1}{4}$ One fourth. In how many parts do I divide the pizza? (4)
4

What about $\frac{1}{8}$? In how many parts do I divide the pizza to get eighths?

So is $\frac{1}{8}$ larger or smaller than $\frac{1}{4}$? (1/8 is smaller.)

$\frac{1}{8}$ is smaller than $\frac{1}{4}$ but 8 is larger than 4. Can you tell me why?

(Because I cut the pizza in 8 slices instead of just 4.)

Students learn from their own answers. The knowledge is not a memorized rule, it is a practical experience. It belongs to the students. They learn something about fractions, and they also learn that knowing math is not about memorizing but about understanding. They soon learn to expect and enjoy that kind of knowledge. They learn to like math.