Teaching mathematics backwards: Preliminary report.

Several years ago, I met an engineering grad student who had completed all the courses but one needed for a master’s of science at a large California university. Standing between him and his degree was the typical engineering math course.

He had tried many math courses only to fail. You see his brain was severely injured in an on-the-job accident. He had recovered everything but his ability to do arithmetic and he had come to me to try to learn visually. I was not optimistic but then remembered Tom West’s view that math should be taught with the good stuff coming first and with heavy support from technology.

It worked! At the end of a year of hard work, this fellow was still unsure of what 3 squared is, but he knows all about eigenvalues, eigenvectors, etc. He now has his degree and is busily planning how to build things in outer space. (Received September 05, 2004)