

TEXAS ADOPTS TEXTBOOK REJECTED BY NATION

November 1997

Chris Patterson

Director of Education Policy

On November 7th, the Texas State Board of Education authorized school districts to purchase a textbook with state monies that has been ridiculed from coast to coast in the national news media, denounced in the United States Congressional Record, and blamed for abysmal math scores in California. How could this happen?

"RAINFOREST ALGEBRA - NATIONAL CONTROVERSY"

Focus on Algebra, An Integrated Approach, published by Scott Foresman Addison Wesley, has been dubbed "Rainforest Algebra" around the nation. Criticism of "Rainforest" has appeared in such publications as the *Wall Street Journal*, *Time Magazine*, *U.S. News and World Report* and *Education Week*. Senator Robert Byrd (D-W.VA) took to the Senate floor this past summer to express his concern about America's obsession with "wacky math" as exemplified by "Rainforest Algebra." The problem with "Rainforest" can be simply deduced from the headlines it has generated, including "Everything But Algebra," "MTV Math Doesn't Add Up," "That So-called Pythagorus," "New Math is Creating Dummies," and "This is Math?" Although "Rainforest" has appealing artwork, tempting chili recipes, exhilarating poetry, piercing political insights on environmental issues and fascinating myths of baffling African astronomy fabricated by European anthropologists, this textbook contains little algebra. Not only is algebra scant, but the very first page of the text advises students that creative thinking and teamwork are more important skills than calculation and computation. No algebra expression can be found in the book until page 107.

ALGEBRA FOR NONE

"Rainforest" is currently the most notorious example of textbooks and teaching practices associated with new, new, new, new math promulgated by the National Council of Teachers of Mathematics. NCTM standards emphasize discovery of math concepts over learning math facts, focus on processes rather than correct solutions, promote use of electronic calculators over mental computation, and advocate group work over individual learning. NCTM algebra standards are being used as the basis of a national movement spearheaded by the U.S. Department of Education to teach all students algebra by eighth grade. Some identify this effort "algebra for all," although others tout this as "algebra for none." Many reputable mathematicians and academicians, including such notables as E.D. Hirsch, Jr. (Core Knowledge Foundation), Michael McKeown (Mathematically Correct), Lynne Cheney (American Enterprise Institute), Chester Finn (Fordham Foundation), and the late Albert Shanker (American Federation of Teachers) have attributed declining math achievement to this "Fuzzy" and "Whole Math" approach to math instruction. Proponents of "Rainforest" math are unable to produce any research to prove that this type of instruction helps students learn math. In fact, research shows that math scores decline in schools that teach "whole math." It is reported that math scores in California have sunk to the bottom of the nation since the state began using "Rainforest" curriculum in 1991. As math scores have fallen, the number of college students requiring remediation for algebra has climbed to exceed 50 percent in California.

HOW COULD THIS HAPPEN IN TEXAS?

Why did the State Board of Education have to place "Rainforest" on the list of acceptable books that the districts may purchase with state monies? Will "Rainforest Algebra" damage algebra instruction in Texas' schools, as well as the self-esteem of students who learn their school has issued them a textbook that "creates dummies?" What *is* the problem?

One problem is that Texas law (Senate Bill 1, the state's revised education code) strictly defines the process for state textbook adoption and rigidly limits the reasons for which a textbook may be rejected. If a textbook meets both curriculum standards, as well as structural qualifications, and is error-free, the books *must* be placed on the approved list for school district selection. The commissioner appoints a panel to develop this list of textbook recommendations and brings the list forward to the State Board of Education for approval. The State Board must vote to adopt these books regardless of the books content. Even if the commissioner of education and the Board of Education had serious objections to the content of a book, both are prevented from removing a book from the approved list if it meets requirements. So Texas is bound by law and constrained by its new curriculum standards (Texas Essential Knowledge and Skills or TEKS) to adopt the most lambasted and ridiculed math textbook in the nation. This absurdity should provoke questions both about the state process for textbook adoption, as well as the academic rigor of Texas' new curriculum standards for algebra.

EMBRACING ALGEBRA FOR NONE

Another problem, and the most critical, is that Texas has a poor track record for algebra instruction. It appears that few students take algebra in Texas public schools and even fewer students pass the state end of year algebra test. How few? Because the Texas Education Agency does not specifically report this information, an unsophisticated construction of TEA data seems to indicate that approximately 50 percent of students in the 1995-1996 school year took algebra in grades 9 through 12 while approximately 70 percent failed to pass the end of year algebra test. With 15 percent of all students in the state passing the algebra exam, it is not surprising that the Commissioner of Education described algebra scores as "dismal" this past spring. Recognizing that students need more and better algebra instruction, it seems logical that Texas should raise academic expectations and improve algebra instruction with academically rigorous textbooks. Adoption of "Rainforest Algebra" appears to contradict this logic by indicating that Texas may be set upon the national course of "teaching more students by teaching less algebra".

WHY IS ALGEBRA SO IMPORTANT?

Algebra has long been considered the **gatekeeper** for high-paying jobs and higher education. Because algebra is so important to our youth, Texas should teach more students better algebra skills. Texas should not sacrifice better for more. The adoption of "Rainforest Algebra" should serve as a clarion call for the Texas Legislature to raise curriculum standards for algebra and to provide the State Board of Education with authorization to reject textbooks with weak content. This controversial adoption should serve to remind Texans that school districts are responsible for selecting books from the state's approved textbook list. Texans should volunteer for their school district's textbook selection committee and notify their school boards that students deserve better than "Rainforest".