

without problems. However, these problems have been identified and efforts are underway to ameliorate these consequences of expansion.

To date, 80 percent of the eligible farmers in the Potomac Headwaters, which I understand is a higher than average percentage for similar USDA programs, have electively enrolled in the Potomac Headwaters Land Treatment Watershed Project, the recommended action plan to protect the Potomac from possible agricultural pollution. I am proud that I have been able to secure funds to support the Federal share of this project.

By enrolling in this project, West Virginia farmers have voluntarily agreed to develop nutrient management plans and install animal waste structures and dead bird composters, and to improve livestock confinement areas and vegetative buffer zones. Implementing these measures will cost the average farmer in the program \$12,000 over 5 years. The average farmer in the Potomac Headwaters has a net annual income of \$15,000 from poultry production.

I believe that most Americans would commend the farmer who voluntarily spends 16 percent of his income over 5 years to protect the waters of the Potomac River. Nevertheless, that is exactly what is happening in West Virginia.

Thanks to the West Virginia farmer, the Potomac Headwaters Land Treatment Watershed Project will achieve benefits for a broad base of interests, extending from my beautiful state to the Chesapeake Bay. It would seem that this is the kind of effort that newspapers and organizations like American Rivers should be recognizing and encouraging.

Mr. President, how many minutes do I have remaining?

The PRESIDING OFFICER. The Senator has 4½ minutes remaining.

Mr. BYRD. I thank the Chair.

Mr. President, I ask unanimous consent that I may proceed for 15 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD. I again thank the Chair.

#### A FAILURE TO PRODUCE BETTER STUDENTS

Mr. BYRD. Mr. President, over the past decade, I have been continually puzzled by our Nation's failure to produce better students despite public concern and despite the billions of Federal dollars which annually are appropriated for various programs intended to aid and improve education. Not long ago, I asked a high ranking administration official during an Appropriations Committee hearing why, in his opinion, we were not doing a better job of educating our Nation's youth in light of the billions of dollars we have been spending over these past several years. The answer I got was not very illuminating.

Mr. President, our children still rank behind those of many other nations of

the world with which we will have to compete for the jobs of the future. Particularly in mathematics, where our kids will have to be especially skilled, the United States ranks 28th in average mathematics performance according to a study of 8th graders published in 1996. Japan ranked third.

A closer look at the current approach to mathematics in our schools reveals something called the "new-new math." Apparently the concept behind this new-new approach to mathematics is to get kids to enjoy mathematics and hope that that "enjoyment" will lead to a better understanding of basic math concepts. Nice thought, but nice thoughts do not always get the job done.

Recently Marianne Jennings, a professor at Arizona State University found that her teenage daughter could not solve a mathematical equation. This was all the more puzzling because her daughter was getting an A in algebra. Curious about the disparity, Jennings took a look at her daughter's Algebra textbook, euphemistically titled, "Secondary Math: An Integrated Approach: Focus on Algebra." Here it is—quite a handsome cover on the book. After reviewing it, Jennings dubbed it "Rain Forest Algebra."

I have recently obtained a copy of the same strange textbook—this is it, as I have already indicated—and I have to go a step further and call it whacko algebra.

This textbook written by a conglomerate of authors lists 5 so-called "algebra authors," but it boasts 20 "other series authors" and 4 "multicultural reviewers." We are talking about algebra now. Why we need multicultural review of an algebra textbook is a question which I would like to hear someone answer, and the fact that there are 4 times as many "other series authors" as "algebra authors" in this book made me suspect that this really was not an algebra textbook at all.

A quick look at the page entitled, "Getting Started" with the sub heading, "What Do You Think," quickly confirmed my suspicions about the quirky fuzziness of this new-new approach to mathematics.

Let me quote from that opening page.

In the twenty-first century, computers will do a lot of the work that people used to do. Even in today's workplace, there is little need for someone to add up daily invoices or compute sales tax. Engineers and scientists already use computer programs to do calculations and solve equations.

What kind of a message is sent by that brilliant opening salvo?

It hardly impresses upon the student the importance of mastering the basics of mathematics or encourages them to dig in and prepare for the difficult work it takes to be a first-rate student in math. Rather it seems to say, "Don't worry about all of this math stuff too much. Computers will do all that work for us in a few years anyway." Can you imagine such a goofy

passage in a Japanese math textbook? I ask what happens if the computer breaks down or if we forget and leave the pocket calculator at home? It appears that we may be on the verge of producing a generation of students who cannot do a simple mathematical equation in their heads, or with a pencil, or even balance a checkbook.

The "Getting Started" portion of the text goes on to extol the virtues of teamwork, to explain how to get to know other students and to ask how teamwork plays a role in conserving natural resources. What, I ask—what in heaven's name does this have to do with algebra? I took algebra instead of Latin when I was in high school. I never had this razzle-dazzle confusing stuff.

Page 5 of this same wondrous tome begins with a heading written in Spanish, English, and Portuguese, a map of South America and an indication of which language is spoken where. Pythagoras would have been scratching his head by this time, and I confess, so was I.

This odd amalgam of math, geography and language masquerading as an algebra textbook goes on to intersperse each chapter with helpful comments and photos of children named Taktuk, Esteban, and Minh. Although I don't know what happened to Dick and Jane, I do understand now why there are four multicultural reviewers for this book. However, I still don't quite grasp the necessity for political correctness in an algebra textbook. Nor do I understand the inclusion of the United Nations Universal Declaration of Human Rights in three languages, a section on the language of Algebra which defines such mathematically significant phrases as, "the lion's share," the "boondocks," and "not worth his salt."

By the time we get around to defining an algebraic expression we are on page 107. But it isn't long before we are off that boring topic to an illuminating testimony by Dave Sanfilippo, a driver with the United Parcel Service. Sanfilippo tells us that he "didn't do well in high school mathematics \* \* \*" but that he is doing well at his job now because he enters " \* \* \* information on a pocket computer \* \* \*"—hardly inspirational stuff for a kid struggling with algebra.

From there we hurry on to lectures on endangered species, a discussion of air pollution, facts about the Dogon people of West Africa, chili recipes and a discussion of varieties of hot peppers—no wonder our pages are having difficulty containing themselves. They are almost in stitches—what role zoos should play in today's society, and the dubious art of making shape images of animals on a bedroom wall, only reaching a discussion of the Pythagorean Theorem on page 502. By this time I was thoroughly dazed and unsure of whether I was looking at a science book, a language book, a sociology book or a geography book. In fact, of

course, that is the crux of the problem. I was looking at all of the above.

This textbook tries to be all things to all students in all subjects and the result is a mush of multiculturalism, environmental and political correctness, and various disjointed discussions on a multitude of topics which certainly is bound to confuse the students trying to learn and the teachers trying to teach from such unfocused nonsense. It is not just nonsense, it is unfocused nonsense, which is even worse.

Mathematics is about rules, memorized procedures and methodical thinking. We do memorize the multiplication tables, don't we? Else how will one know that nine 8s are 72 and that eight 9s are 72. This new-new mush-mush math will never produce quality engineers or mathematicians who can compete for jobs in the global market place. In Palo Alto, CA, public school math students plummeted from the 86th percentile to the 56th in the first year of new-new math teaching. This awful textbook obviously fails to do in 812 pages what comparable Japanese textbooks do so well in 200. The average standardized math score in Japan is 80. In the United States it is 52.

When my staff contacted Marianne Jennings to obtain a copy of this textbook, I did learn one good thing about it. She told my staff that because of public outcry the public schools in her area have discontinued its use and have gone back to traditional math textbooks. Another useful purpose has been served by my personal perusal of this textbook. I now have a partial answer to my question about why we don't produce better students despite all the money that Federal taxpayers shell out.

The lesson here is for parents to follow Marianne Jennings' lead and take a close look at their children's textbooks to be sure that the new-new math and other similar nonsense has not crept into the local school system.

All the Federal dollars we can channel for education cannot counteract the disastrous effect of textbooks like this one. They will produce dumb-dumb students and parents need to get heavily involved to reverse that trend now!

Mr. President, I ask that an article from the May 26 edition of U.S. News and World Report on the same subject be printed in the RECORD at this point.

The title of the article is, "That so-called Pythagoras."

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the U.S. News & World Report, May 26, 1997]

THAT SO-CALLED PYTHAGORAS  
(By John Leo)

"Deep Thoughts" started as Jack Handy's running joke on TV's Saturday Night Live—a series of mock-inspirational messages about life that make no sense at all. Now "Deep Thoughts" are available on greeting cards, including one that pokes fun at the fuzzy new math in the schools. The card says: "Instead of having 'answers' on a math

test, they should just call them 'impressions,' and if you got a different 'impression,' so what, can't we all be brothers?"

Pretty funny. But it's hard for satire to stay ahead of actual events these days, particularly in education. The "New-New Math," as it is sometimes called, has a high-minded goal: Get beyond traditional math drills by helping students understand and enjoy mathematical concepts. But in practice, alas, the New-New Math is yet another educational "Deep Thought."

Basic skills are pushed to the margin by theory and the idea that students should not be passive receivers of rules but self-discoverers, gently guided by teachers, who are co-learners, not authority figures with lessons to impart. Correct answers aren't terribly important. Detractors call it "whole math," because students frequently end up guessing at answers, just as children exposed to the "whole language" fad in English classes end up guessing at words they can't pronounce. "Although the Wicked Whole-Language Witch is dying, the Whole-Math Witch isn't even ill," said Wayne Bishop, professor of mathematics at California State University-Los Angeles.

Mathematically Correct, a San Diego-based group which strongly opposes whole math, recently posted a list of commandments on its Web site, including "Honor the correct answer more than the guess," "Give good grades only for good work," and "Avoid vague objectives."

Bologna sandwich? Those vague objectives include meandering exercises that have little to do with math, such as illustrating data collection by having second-graders draw pictures of their lunch, then cut the pictures out and put them in paper bags. Worse, the New-New Math comes with the usual stew of ed-school obsessions about feelings, self-esteem, dumbing down, and an all-around politically correct agenda.

Marianne Jennings, a professor at Arizona State University, found that her teenage daughter was getting an A in algebra but had no idea how to solve an equation. So Jennings acquired a copy of her daughter's textbook. The real title is Secondary Math: an "Integrated Approach: Focus on Algebra," but Jennings calls it "Rain Forest Algebra."

It includes Maya Angelou's poetry, pictures of President Clinton and Mali wood carvings, lectures on what environmental sinners we all are and photos of students with names such as Tatuk and Esteban "who offer my daughter thoughts on life." It also contains praise for the wife of Pythagoras, father of the Pythagorean theorem, and asks students such mathematical brain teasers as "What role should zoos play in our society?" However, equations don't show up until Page 165, and the first solution of a linear equation, which comes on Page 218, is reached by guessing and checking.

Jennings points out that Focus on Algebra is 812 pages long, compared with 200 for the average math textbook in Japan. "This would explain why the average standardized score is 80 in Japan and 52 here," she says. Marks do seem to head south when New-New Math appears. In well-off Palo Alto, Calif., public-school math students dropped from the 86th percentile nationally to the 58th in the first year of New-New teaching, then went back up the next year to the 77th percentile when the schools moderated their approach.

The New-New Math has become a carrier for the aggressive multiculturalism spreading inexorably through the schools. Literature from the National Council of Teachers of Mathematics, which is promoting whole math, is filled with suggestions on how to push multiculturalism in arithmetic and math classes.

New-New Math is also vaguely allied with an alleged new field of study called ethnomathematics. Most of us may think that math is an abstract and universal discipline that has little to do with ethnicity. But a lot of ethnomathematicians, who are busy holding conferences and writing books, say that all peoples have a natural culturebound mathematics. Western math, in this view, isn't universal but an expression of white male culture imposed on non-whites. Much of this is the usual ranting about "Eurocentrism." Ethnomathematics, a book of collected essays, starts by reminding us that "Geographically, Europe does not exist, since it is only a peninsula on the vast Eurasian continent. . . ." Before long, there is a reference to "the so-called Pythagorean theorem." Much of the literature claims that nonliterate peoples indicated their grasp of math in many ways, from quilt patterns to an ancient African bone cut with marks that may have been used for counting.

It's all rather stunning nonsense, but this is where multiculturalism is right now. Unless you are headed for an engineering school working with Yoruba calculators, or unless you wish to balance your checkbook the ancient Navajo way, it's probably safe to ignore the whole thing.

Mr. BYRD. Mr. President, I yield the floor. I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. ENZI). The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. ABRAHAM. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### THE 1997 STANLEY CUP CHAMPION DETROIT RED WINGS

Mr. ABRAHAM. Mr. President, I rise today to pay tribute to the 1997 Stanley Cup Champion Detroit Red Wings. Following Saturday night's 2 to 1 victory in game four of the NHL finals, completing the Wings series sweep of the Philadelphia Flyers, the sports world has taken notice of what those of us from Michigan have known for years, that Detroit is the home of the best hockey team, and the greatest hockey fans, on the planet. After a long 42-year absence, the Stanley Cup has returned home to Hockeytown USA.

Sometimes in sports certain teams capture fans' imaginations in a way that embodies the spirit of an entire city. The 1984 Tigers were so good they dominated the game of baseball from the first pitch of opening day through the last out of the World Series. The 1989 Pistons, with their gritty, tough style of defensive play were the ultimate blue collar champions. So it is also the case of this year.

The 1997 Red Wings have inspired Detroit in a similar manner. These players have experienced recent disappointment. They came so close to the title the previous two seasons, eliminated in the finals by New Jersey in 1995 and in the semifinals by Colorado in 1996, only to be denied. However, where lesser teams would have crumbled under the