

Springbrook

201 Valleybrook Drive
Silver Spring, MD 20904, USA
Principal: Mr. Michael Durso

301-622-5700
Fax 301-989-6052 or 301-622-1875

SCHOOL PROFILE: 1997-1998

The School

Springbrook High School is the second largest comprehensive public secondary school in Montgomery County, Maryland, a suburb of our nation's capital. It is accredited by the Maryland State Department of Education and the Middle States Association of Colleges and Schools. The community is socioeconomically diverse, but predominately middle class.

Enrollment 1997-1998

Total number of students	2290
Seniors	470
Juniors	550
Sophomores	620
Freshmen	650

African-American	35.3%
Asian	20.4%
Hispanic	15.9%
White	28.2%

Class of 98 Cumulative Averages

Range	% of Class GPA	% of Class Weighted GPA
4.51 & Above	0%	4%
4.01 - 4.50	0%	7%
3.51 - 4.00	12%	15%
3.01 - 3.50	24%	16%
2.51 - 3.00	22%	18%
2.01 - 2.50	21%	19%
1.51 - 2.00	11%	11%
1.01 - 1.50	6%	6%
1.00 & Below	4%	4%

Scholastic Aptitude Test

Springbrook HS	491	517
Montgomery County	539	553
Maryland	507	507
National	505	511

Class of 97 College Statistics

4 year	57%
2 year	27%
Total	84%

National Merit Scholars

Semifinalists	3
Commended	14

National Achievement

Semifinalists	1
Commended	6

National Hispanic

Finalist	1
Commended	14

Maryland Distinguished Scholars

Finalists	3
Semifinalists	7
Honorable Mention	17

Advanced Placement Test

Total Number of Candidates: 183

Test/Scores	5	4	3	2	1
American History	2	8	12	8	1
Art General	1	1	0	0	0
Biology	3	3	1	0	0
Calculus BC	2	10	10	2	3
Chemistry	2	1	4	5	2
Computer Sci. AB	14	6	4	1	0
English: Lang/Comp	11	16	27	22	1
English: Lit/Comp	1	13	15	11	3
French Language	1	1	4	8	6
German Language	1	0	0	0	0
Government/Politics	0	0	5	3	0
Physics C: Mech	1	2	1	3	0
Psychology	0	1	2	2	1
Spanish Language	4	1	0	0	0
Statistics	4	4	0	1	0

College Board Code

210969

Montgomery County Does Not Rank Students

Honors Courses

Academically challenging courses are available to all qualified students through the Honors Program. Honors work may be taken in grades 9-12 in English, Social Studies, Mathematics, Science, and Foreign Language. All Advanced Placement courses are part of the Honors Program.

Counselors

Carole Y. Boris, Resource Counselor
James E. Blevins
Ollie Gilford
Robert Howard
Sally Keen
Sheri Lowe
Joe Thompson
Paula Wilson

Registrar

Jane Bull
Patricia Grimaldi

Administration

Michael A. Durso, Principal

Carol Dahlberg, Assistant Principal
Charles E. Murkey, Assistant Principal
Darryl L. Williams, Assistant Principal
Carlyn Patterson-Breese, Student Support Specialist

Grading System

Grades are based on evidence of the attainment of the instructional and performance objectives for the course.

A = Outstanding level of performance

B = High level of performance

C = Satisfactory performance

D = Minimal level of performance

E = Unsatisfactory of performance

E2 = Loss of Credit (5 or more unexcused absences)

CR = Credit Earned on Pass/Fail

NC = No Credit on Pass/Fail

I = Incomplete

WD = Withdrawal in accordance with MCPS procedures CM = Certificate of Merit

H = Honors Course

Graduation Requirements

English	4
Social Studies (1 US History, 1 NSL Gov't, 1 World History)	3
Mathematics	4
Science	3
Physical Education	1
Fine Arts	1
Technology Education	1
Health	0.5
Program Completion (a) Foreign Language or (b) Adv. Technology Educ. or (c) Career Dev. Program	2 2 3 - 9
Electives	2.5 - 3.5
Total	22

Community Service, 60 hrs.

Graduates must pass the Maryland State Functional Reading, Writing, Math, and Citizenship Tests.





Montgomery County
Public Schools

MICHAEL A. DURSO
Principal

Springbrook High School
201 Valleybrook Drive
Silver Spring, MD 20904
Phone: (301) 989-6046

Springbrook High School

919 UNIVERSITY BOULEVARD, WEST
SILVER SPRING, MARYLAND 20901 (301) 649-8230

PROFILE OF THE CLASS OF 1993-1994

• THE SCHOOL •

Springbrook High School is the second largest comprehensive public secondary school in Montgomery County, Maryland, a suburb of our nation's capitol. It is accredited by the Maryland State Department of Education and the Middle States Association of Colleges and Schools. The community is socioeconomically diverse, but predominantly middle class.

• ENROLLMENT 1993-1994 •

Total number of students:	1932
Seniors:	426
Juniors:	499
Sophomores:	448
Freshman:	514
Special Education:	45

African-American: 32%	Asian: 20%
Hispanic: 13%	White: 35%

• COLLEGE STATISTICS •

4 year	61%
2 year	28.5%
Total	89.5%

• NATIONAL MERIT SCHOLARS •

Finalists	2
Commended	12

• NATIONAL ACHIEVEMENT •

Semi-Finalists	2
Commended	0

• NATIONAL HISPANIC SCHOLAR •

Semifinalists 2

• PRESIDENTIAL SCHOLAR •

Semifinalists 1

• MARYLAND DISTINGUISHED SCHOLAR •

Finalists 4

Semifinalists 6

Honorable mention 13

• SCHOLASTIC APTITUDE TEST •

	Verbal	Math	%
Springbrook	438	500	79
County	465	527	74
Maryland	431	478	66
National	424	478	

ADVANCED PLACEMENT TESTS

Total Number of Candidates: 105

TEST SCORES	5	4	3	2	1
American History	1	6	6	5	1
Biology	0	6	1	5	0
Calculus BC	5	4	9	1	5
Chemistry	0	2	2	4	1
Comp. Sci AB	5	7	5	4	1
English: Lang/Comp	0	9	4	4	0
English: Lit/Comp	2	5	8	3	0
French Language	1	0	4	0	0
Government/Politics	1	6	5	7	1
Physics C: Mech	1	6	5	2	1
Spanish Language	3	3	2	4	0

· COLLEGE BOARD CODE ·

210969

· MONTGOMERY COUNTY ·
DOES NOT RANK STUDENTS

· HONORS COURSES ·

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· COUNSELORS ·

Beatrice R. Bowman, Resource Counselor
James E. Blevins
Carol Y. Boris
Nancy Carlson-Kellogg
Robert Howard
Sally Keen
Carrie Nelson-Njie

· REGISTRAR ·

Jane Bull

· GRADING SYSTEM ·

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CM = Certificate of Merit
H = Honors Course

· GRADUATION REQUIREMENTS ·

English	4
Social Studies	3
(1 US History, .5 Gov't, .5 Contemp. Issues)	
Mathematics	3
Science	2
Physical Education	1.5
Fine Arts	1
Practical Arts	1
Electives	6.5
Total	22

Graduates must pass the Maryland State Functional Reading, Writing, Math, and Citizenship Tests.

· ADMINISTRATION ·

Donald H. Kress, Principal
Charles E. Murkey, Assistant Principal
Rosalva Rosas, Assistant Principal
Sue Shotel, Assistant Principal

Springbrook High School

201 Valleybrook Drive
Silver Spring, Maryland 20904 (301) 989-5710

SCHOOL PROFILE: 1994-1995

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Enrollment 1994-1995

Total number of students: 2011

Seniors:	497
Juniors:	428
Sophomores:	498
Freshmen:	531
Special Education:	57

African-American: 34%	Asian: 19%
Hispanic: 15%	White: 32%

Class of 95 Cumulative Averages

Range	% of Class GPA	% of Class Weighted GPA
4.51 & Above	0%	3%
4.01 - 4.50	0%	9%
3.51 - 4.00	13%	11%
3.01 - 3.50	20%	16%
2.51 - 3.00	24%	20%
2.01 - 2.50	19%	19%
1.51 - 2.00	15%	15%
1.01 - 1.50	6%	6%
1.00 & Below	3%	3%

Class of 94 College Statistics

4 year	64%
2 year	24%
Total	88%

National Merit Scholars

Finalists	3
Commended	21

National Achievement

Semi-Finalists	1
Commended	0

Maryland Distinguished Scholar

Finalists	7
Semifinalists	5
Honorable mention	23

Scholastic Aptitude Test

	Verbal	Math	%
Springbrook	454	518	74%
County	462	530	73%
Maryland	429	479	0%
National	423	479	0%

Advanced Placement Test

Total Number of Candidates: 141

TEST SCORES	5	4	3	2	1
American History	6	11	8	2	0
Biology	2	5	3	2	0
Calculus BC	7	11	19	2	1
Chemistry	0	4	1	0	1
Computer Sci. A	1	0	0	0	0
Computer Sci. AB	8	7	3	1	0
English: Lang/Comp	6	8	10	6	0
English: Lit/Comp	6	21	20	8	0
French Language	0	1	3	0	0
Government/Politics	3	8	4	2	2
Music: Theory	0	0	1	0	0
Physics C: Mech	5	9	8	2	0
Psychology	1	0	0	0	0
Spanish Language	2	0	1	1	0

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H	= Honors Course

Graduation Requirements

English	4
Social Studies	3
(1 US History, .5 NSL Gov't, .5 Contemporary Issues)	
Mathematics	3
Science	2
Physical Education	1.5
Fine Arts	1
Practical Arts	1
Electives	6.5
Total	22

Graduates must pass the Maryland State Functional Reading, Writing, Math and Citizenship Tests.

Springbrook High School

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Enrollment 1995-1996

Total number of students: 2036

Seniors:	390
Juniors:	464
Sophomores:	484
Freshmen:	622
Special Education:	76

African-American: 34%	Asian: 20%
Hispanic: 14%	White: 32%

Class of 96 Cumulative Averages

<u>Range</u>	<u>% of Class GPA</u>	<u>% of Class Weighted GPA</u>
4.51 & Above	0%	5%
4.01 - 4.50	0%	9%
3.51 - 4.00	13%	12%
3.01 - 3.50	23%	15%
2.51 - 3.00	18%	15%
2.01 - 2.50	20%	19%
1.51 - 2.00	15%	16%
1.01 - 1.50	8%	8%
1.00 & Below	3%	3%

Class of 95 College Statistics

4 year	61%
2 year	27%
Total	88%

National Merit Scholars

Finalists	2
Commended	14

National Achievement

Finalists	3
Semifinalists	4
Commended	7

National Hispanic

Semifinalist	1
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Maryland Distinguished Scholar

Finalists	1
Semifinalists	4
Honorable Mention	12

Scholastic Aptitude Test

	Verbal	Math	%
Springbrook	437	499	71%
County	466	528	73%
Maryland	430	479	0%
National	428	482	0%

Advanced Placement Test

Total Number of Candidates: 164

Test Scores	5	4	3	2	1
American History	5	12	6	11	0
Biology	0	2	9	4	0
Calculus BC	5	9	8	1	1
Chemistry	0	1	2	4	6
Computer Sci. AB	7	3	6	1	1
English: Lang/Comp	5	11	21	8	1
English: Lit/Comp	6	16	17	19	1
French Language	0	0	3	3	1
Government/Politics	2	5	6	3	0
Physics C: Mech	3	4	3	0	0
Psychology	0	0	2	7	2
Spanish Language	3	4	6	0	0

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Graduation Requirements

English	4
Social Studies	3
(1 US History, .5 NSL Gov't, .5 Contemporary Issues)	
Mathematics	3
Science	2
Physical Education	1.5
Fine Arts	1
Practical Arts	1
Electives	6.5
Total	22

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Enrollment 1996-1997

Total number of students: 2179

Seniors:	449
Juniors:	468
Sophomores:	525
Freshmen:	649
Special Education:	90

African-American: 36%	Asian: 20%
Hispanic: 14.3%	White: 29.5%

Class of 97 Cumulative Averages

Range	% of Class GPA	% of Class Weighted GPA
4.51 & Above	0%	3%
4.01 - 4.50	0%	9%
3.51 - 4.00	14%	14%
3.01 - 3.50	24%	20%
2.51 - 3.00	26%	20%
2.01 - 2.50	16%	16%
1.51 - 2.00	12%	11%
1.01 - 1.50	5%	5%
1.00 & Below	2%	0%

Class of 96 College Statistics

4 year	53%
2 year	32%
Total	85%

National Merit Scholars

Commended	8
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National Achievement

Semifinalist	1
Commended	7

National Hispanic

Commended	1
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Maryland Distinguished Scholar

Finalists	2
Semifinalists	3
Honorable Mention	15

Scholastic Aptitude Test

	Verbal	Math
Springbrook	510	520
County	538	504
Maryland	507	504
National	505	508

Advanced Placement Test

Total Number of Candidates: 162

Test Scores	5	4	3	2	1
American History	5	8	7	6	0
Biology	0	5	3	4	0
Calculus BC	10	4	5	1	3
Chemistry	0	0	2	6	5
Computer Sci. AB	12	3	5	1	1
English: Lang/Comp	2	8	23	18	3
English: Lit/Comp	3	15	16	13	2
French Language	1	2	1	1	4
Government/Politics	1	3	4	3	0
Physics C: Mech	5	4	2	0	0
Psychology	1	2	2	4	2
Spanish Language	3	3	4	1	0

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Graduation Requirements

English	4
Social Studies	3
(1 US History, 1 NSL Gov't, 1 World History)	
Mathematics	3
Science	3
Physical Education	1
Fine Arts	1
Technology Education	1
Health	0.5
Program Completion	
a. Foreign Language or	2
b. Adv. Technology Educ. or	2
c. Career Dev. Program	3-9
Electives	2.5-3.5

Total **22**

Community Service 45 hrs.

Graduates must pass the Maryland State Functional Reading, Writing, Math, and Citizenship Tests.

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National Achievement

Semifinalist	1
Commended	6

National Hispanic

Finalist	1
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Maryland Distinguished Scholars

Finalists	3
Semifinalists	7
Honorable Mention	17

Advanced Placement Test

Total Number of Candidates: 183

Test Scores	5	4	3	2	1
American History	2	8	12	8	1
Art General	1	1	0	0	0
Biology	3	3	1	0	0
Calculus BC	2	10	10	2	3
Chemistry	2	1	4	5	2
Computer Sci. AB	14	6	4	1	0
English: Lang/Comp	11	16	27	22	1
English: Lit/Comp	1	13	15	11	3
French Language	1	1	4	8	6
German Language	1	0	0	0	0
Government/Politics	0	0	5	3	0
Physics C: Mech	1	2	1	3	0
Psychology	0	1	2	2	1
Spanish Language	4	1	0	0	0
Statistics	4	4	0	1	0

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- CM = Certificate of Merit
- H = Honors Course

Graduation Requirements

English	4
Social Studies	3
(1 US History, 1 NSL Gov't, 1 World History)	
Mathematics	4
Science	3
Physical Education	1
Fine Arts	1
Technology Education	1
Health	0.5
Program Completion	
a. Foreign Language or	2
b. Adv. Technology Educ. or	2
c. Career Dev. Program	3-9
Electives	2.5-3.5
Total	22
Community Service	60 hrs.

Graduates must pass the Maryland State Functional Reading, Writing, Math, and Citizenship Tests.

Program title: Computer Science

Computer science at Springbrook High School started as a curriculum area in the fall of 1984. The first courses taught were: Introduction to Computers where the BASIC programming language was stressed; Computer Applications, a course centered on word processing, spreadsheets, and data bases; and Pascal, another computer language that embraced a more modern programming paradigm. This program was taught on a set of fifteen Apple //e computers, and involved about 200 students.

Computer science at Springbrook High School today includes nine courses that stress the use of computers as a problem solving tool both by the use and creation of software. This array of classes includes courses for those still computer illiterate by the time they reach Springbrook to independent research into those fields of computer science still emerging. The current program that serves around 1000 semester enrollees utilizes two computer labs full time with some overflow into an adjacent computer lab. Within Montgomery County, Springbrook has more students enrolled in more computer science courses than any other high school.

The emphasis though in computer science at Springbrook High School has been on quality not quantity. The classes in which computer applications have been taught have enjoyed the efforts of two teachers each of whom was awarded "Teacher of the Year" in their field. At the same time, the students in the classes in which programming is the emphasis have enjoyed remarkable success. For instance, over nearly a decade the Advanced Placement in Computer Science classes have scored so well on the nation wide test that approximately 95% have earned college credit, with almost 50% achieving the highest ranking possible.

Many students graduating with the framework of knowledge that they have received have used their advantageous background to vault themselves to success. For example, in the summer of 1994 a letter was received from the University of Maryland informing the Computer Science Department at Springbrook that a recent graduate was judged the number one undergraduate student in computer science in the Washington metropolitan area by the Association of Computing Machinery and had been awarded a \$10,000 a year scholarship renewable until her graduation.

In the 1994-1995 school year the Computer Science Department at Springbrook High School was involved in an even broader task. With a renovation that resulted in an effectively completely new building, the opportunity was provided for the infusion of the computer as a learning and productivity tool across the whole of life at Springbrook High School. Beginning last year the staff rallied to the occasion and began training that embraced a core of concepts and software products. The school now boasts a computer on the desk of every teacher and one computer in the school for every four students. Training is ongoing and a flurry of new uses for the computer in instruction is developing as so many computers are put into the competent hands of the staff of Springbrook High School.

John Anliwa 202 331 9215

Dale Lestme 703 591 3221

THE WHITE HOUSE
WASHINGTON

Alfred River Berkeley II

al12144

237-72-8055

President, NASDAQ
stock Market Inc.

202 728-8282 0

410 243-7859

THE WHITE HOUSE
WASHINGTON

Mrs D. A. C.

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unghat

from pm 5400 CEO's
access

Cybernetic - m. l. d. 4
w. l.

Kevin Costner

- 9/12/94

- 237-72-8055

Alfred Rives Berkeley III

Presid MASA. S. H. M. Inc.

202 728-8282
after

THE WHITE HOUSE
WASHINGTON

June Shih

4156 - 5709

**PRESIDENT WILLIAM J. CLINTON
VISIT WITH STUDENTS AT SPRINGBROOK HIGH SCHOOL
SILVER SPRING, MARYLAND
MARCH 16, 1998**

Talking Points

Acknowledgments: Principal Durso, Gov. Glendenning

We are now less than 700 days away from a new century and a new millennium. Young people know better than the older people the exciting possibilities of this new age. I came to Springbrook High School today for a special meeting about one of the most important things we can do to prepare our young people for the 21st century: Improving math and science education across America. And I want to call on you to do your part by taking the most challenging math and science classes your school has to offer.

Why is math and science so important? Well, look around you. More than ever before, these disciplines are revolutionizing the way all of us live, work and play. In 1993, when I became President, and all the seniors here started high school, the World Wide Web barely existed. There were just fifty web sites. Today, millions of Americans and millions of organizations have web pages -- from the White House to your school newspaper *Blueprint*, to my cat Socks. 1.5 million new pages are created every day -- that's 65,000 every hour. Today, every one of you here is just a click of a mouse away from some of the finest libraries in the world. Some day, you'll be able to reach every book ever written, every symphony ever composed, every painting ever painted.

Our scientists are every day making important breakthroughs in the treatment of cancer, spinal cord injuries and other serious diseases. In the 1980s, it took nine years for scientists to identify the gene causing cystic fibrosis. Last year, it took just nine days to find the gene for Parkinson's disease. We're on our way to developing gene chips that will help us prevent illnesses in people before they happen.

There is more computer power in a Ford Taurus than in the Apollo capsule Neil Armstrong took the moon. In fact, the mechanic who fixes that Ford Taurus must be as handy with a hard drive as he is with a monkey wrench. The fastest growing and best-paying jobs are those that require advanced knowledge of math, science and computers. Some 25,000 high-tech jobs in this area alone go begging because companies cannot find people with the training to fill them.

I know preparing for a high tech future is a priority here at Springbrook High School. You have more computers and more students taking computer science than any other school in the county. I hope more schools across the country follow your lead.

This Information Age is also an Education Age -- an age where a college education isn't just an advantage, but a necessity. In this century, we made high school universal. In the

next century, we must make the 13th and 14th years of education available to all Americans. We are well on our way to making that vision a reality. With the Hope Scholarships, tuition tax deductions, expanded work study, simplified student loans, and Pell grants, every American can now afford higher education. Today, it doesn't matter how much your parents make, each and every one of you can go to college. The only thing standing between you and college is you.

We have the world's best system of higher education. But we all know we can do better in kindergarten through 12th grade. Earlier this month, we all got a wake-up call about the state of math and science education in America: American high school seniors ranked near the bottom in an international math and science study. That is why I called so many educators and business leaders here today. We've all pledged to do our part to improve math and science education in America. But you must do your part. You must take your math and science classes seriously -- and take the toughest classes out there.

More than ever, math and science, along with a college education, are the key to opportunity in America. But studying math and science isn't just about being able to make millions when you grow up. Your generation must make sure that America continues to lead the world in science and technology, to keep finding new ways to use science to improve people's lives, to conquering even more frontiers of knowledge. And even if you have no plans for a career in math and science, even if you have no intention of doing another geometric proof when you grow up, what you learn in these classes will strengthen your problem-solving skills for a lifetime. Most importantly, a basic knowledge of science and technology can help you make sense of, take advantage of, master all the challenges of the future.

I understand that the Springbrook motto is "We expect. We believe. We achieve." Well I know that if you each of you expects the best and believes in yourselves, then you will indeed achieve your most cherished dreams. Thank you.



Karen E. Skelton

03/16/98 07:19:39 AM

Record Type: Record

To: Mickey Ibarra/WHO/EOP

cc: Michael Cohen/OPD/EOP, Maria Echaveste/WHO/EOP, Craig T. Smith/WHO/EOP

Subject: Re: bilingual politics 

The poll results are certainly likely to change, which is why we should stay away from predicting what they'll be.

I think we all agree that we need to be on the offensive: saying what we're for and not just what we're against. I'm hoping Cohen has some of the "what we're for language."

Thanks.

**PRESIDENT WILLIAM J. CLINTON
REMARKS AT TIMSS ROUNDTABLE
SPRINGBROOK HIGH SCHOOL
SILVER SPRING, MARYLAND
MARCH 16, 1998**

Earlier this month, America received a wake-up call: Our high school seniors rank near the bottom in math and science achievement when compared to their peers around the world. At a time when math and science skills are the key to opportunity in our new global economy, the TIMSS results are unacceptable. They must be America's call to action. I've brought some of America's top educators, advocates and business leaders here today to talk about how we can mobilize our people to raise standards, demand accountability and strengthen math and science education in our country.

A little over forty years ago, America had another wake up call. The Soviets had just launched Sputnik and beat us into space. President Eisenhower said that if we were going to conquer the heavens, then we would need to strengthen math and science education. Because we answered his call, we've landed on the moon, roved the surface of Mars, and launched the countless satellites that have revolutionized the way we live, work, and play here on Earth. The young people Eisenhower inspired are now fueling our new economy -- through their work at NASA, at NIH, in high-tech labs in Silicon Valley, in Wall Street board rooms, in classrooms across the country.

Now we must strengthen math and science education again so that a new generation can unlock the opportunities of the 21st Century. We know that for our time, we need a revolution of high standards, strict accountability and rising expectations in schools across this country. We know this revolution works: A report released today by the University of Minnesota has found that charter schools are meeting and sometimes even surpassing their promises to raise academic achievement. Now we must spread these lessons throughout our educational system.

In my balanced budget, I've proposed a comprehensive strategy to make our schools the best in the world. We must have high, national standards of academic achievement and national tests in fourth grade reading and eighth grade math to ensure every child masters the basics. We must strengthen math instruction in our middle schools. We must have smaller classes in the early grades so that teachers can give students the attention they deserve. We must hire more well-prepared and nationally-certified teachers. We must modernize our schools for the 21st century. We must support more charter schools, encourage public school choice, end social promotion and demand greater accountability from students and teachers, principals and parents. And we must bring more mentors to middle schools to inspire students to begin preparing for college early. I'm very pleased that this education strategy is already moving forward in states across the country -- that our nation's governors and state legislatures are boosting their commitment to education during an era of budget surpluses and good times for America.

I will be working very hard with Congress to make sure my plan becomes a reality. I urge the Senate to take the first step by passing my proposal to modernize schools this week. In

this era of fiscal discipline, we must recognize that government alone cannot do the job. We must mobilize all Americans -- government, schools, businesses, teachers, parents and students themselves -- in a concerted effort to improve math and science education.

States can make sure that every math and science teacher is qualified to do the job. We must insist that math and science teachers have majored in their subjects in college. Today, nearly one out of every five science teachers, more than a quarter of all math teachers, and more than half of all physics teachers have neither majored nor minored in the subjects they teach. The typical elementary and middle school teacher has taken just three undergraduate math courses. We can do better. So, I call on states to require new math and science teachers to pass high-level competency tests in their subjects before getting licensed. These requirements must be vigorously enforced. School districts must not continue hiring people who do not meet these standards.

Students must challenge themselves and take the most advanced math and science classes they can. Among college bound seniors, half have not have not taken physics or trigonometry; three-quarters have not taken calculus. Around the world, middle school students are learning algebra and geometry. Here at home, just a quarter of all students take algebra before high school. Our children must not glide through school without gaining these important skills -- skills that can help them throughout a lifetime.

Business must help us get out the message to our young people that what you study and how well you do in school does matter when you apply for jobs. And today, I want to announce that later this year, I will convene a group of business leaders to discuss ways to raise student performance in our country.

Universities can strengthen their programs in math and science teaching so that more students will consider teaching as a career and that our newest teachers will be more prepared than ever for the classrooms of the 21st century.

And most important of all, parents must take active roles in their children's education. Encourage and insist on teachers and students who do their best to meet the highest standards of academic excellence.

Thank you. Now I'm eager to hear your thoughts and ideas.

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I will be working very hard with Congress to make sure my plan becomes a reality. I urge the Senate to take the first step by passing my proposal to modernize schools this week. In this era of fiscal discipline, we must recognize that government alone cannot do the job. We must mobilize all Americans -- government, schools, businesses, teachers, parents and students themselves -- in a concerted effort to improve math and science education.

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Business must help us get out the message to our young people that what you study and how well you do in school does matter when you apply for jobs. I want to thank Ed Rust and Lou Gerstner, the Business Roundtable and the National Alliance for Business for encouraging employers to ask job applicants for school transcripts. And today, I want to announce that later this year, I will convene a group of business leaders to discuss ways to raise student performance in our country.

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Thank you. Now I'm eager to hear your thoughts and ideas.

● Suzanne Dale

03/14/98 05:51:26 PM

Record Type: Record

To: Aviva Steinberg/WHO/EOP

cc: See the distribution list at the bottom of this message

Subject: IGA Participation/MD Education Event

As you know, the following state and local elected officials are confirmed to attend the Education Meeting w/POTUS on Monday, 3/16 (10:50am - 12:05pm):

Governor Parris Glendening (D-MD)
Governor Cecil Underwood (R-WV)
Mayor Richard Daley (D-Chicago, IL)
Mayor Richard Riordan (R-Los Angeles, CA)
Mayor Lee Clancey (D-Cedar Rapids, IA)

Additionally, the following state and local elected officials are confirmed to attend the Remarks to the Students of Springbrook High School (12:10 - 12:40pm):

Governor Parris Glendening (D-MD)
Governor Cecil Underwood (R-WV)
Mayor Richard Daley (D-Chicago, IL)
Mayor Richard Riordan (R-Los Angeles, CA)
Mayor Lee Clancey (D-Cedar Rapids, IA)
PLUS (ONLY coming to Remarks to Students):
State Delegate Henry Heller (D-MD)
State Delegate Adrian Mandel (D-MD)

Logistics FYI -- primarily for IGA Staff and "much more than you'd like to know"
(but please let me know if you are aware of corrections) --

IGA Staff Traveling in POTUS Motorcade and Attending Events (will need perimeter chairs at Education Meeting):

Mickey Ibarra
Lynn Cutler

The following have been cleared to enter the WH complex prior to the motorcade departure and upon the motorcade return for press availability, but will not enter the West Wing (security/dropping off and picking up electeds):

With Governor Underwood: (car has been cleared)

PRESIDENT WILLIAM J. CLINTON
REMARKS AT TIMSS ROUNDTABLE
SPRING BROOK HIGH SCHOOL
SILVER SPRING, MARYLAND
MARCH 16, 1998

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Now we must strengthen math and science education again so that a new generation can unlock the opportunities of the 21st century. ~~I've spent billions on his math and science programs. But in this era of fiscal discipline, we must~~ recognize that government alone cannot do the job. We must mobilize all Americans -- government, schools, businesses, teachers, parents and students themselves -- in a concerted effort to improve math and science education.

In my balanced budget, I've proposed a comprehensive strategy to make our schools the best in the world. We must have high, national standards of academic achievement and national tests in fourth grade reading and eighth grade math to ensure every child masters the basics. We must strengthen math instruction in our middle schools. We must have smaller classes in the early grades so that teachers can give students the attention they deserve. We must hire more well-prepared and nationally-certified teachers. We must modernize our schools for the 21st century. We must encourage public school choice, ^(and charter schools) and social promotion and demand greater accountability from students and teachers, principals and parents. And we must bring more mentors to middle schools to inspire students to begin preparing for college early.

I will be working very hard with Congress to make sure my plan becomes a reality. But ~~everyone else~~ must do their part. *Senate should pass construction bill this week*

States can make sure that every math and science teacher is qualified to do the job. We must insist that math and science teachers have at least ~~minored~~ in their subjects while in college. Today, nearly one out of every five science teachers, more than a quarter of all math teachers, and more than half of all physics teachers have neither majored nor minored in the subjects they

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And most important of all, parents must take active roles in their children's education. Encourage them and insist on finding out whether your child is meeting the highest standards of academic excellence.

Thank you. Now I'm eager to hear your thoughts and ideas.

If requirements are to matter, they must be enforced.
School districts must not be permitted to hire people who don't meet these requirements. continue

**PRESIDENT WILLIAM J. CLINTON
REMARKS TO STUDENTS AT SPRINGBROOK HIGH SCHOOL
SILVER SPRING, MARYLAND
MARCH 16, 1998**

Acknowledgments: Principal Durso, Gov. Glendenning

I've come to Springbrook High School today to talk about the importance of math and science education in America, to find ways we can improve teaching, raise student achievement and encourage more of you to take the most challenging and advanced courses available in our schools.

Why is math and science so important? Well, look around you. More than ever before, these disciplines are revolutionizing the way all of us live, work and play. In 1993, when I became President, and all the seniors here today started high school, the World Wide Web barely existed. There were just fifty web sites. Today, millions of Americans and millions of organizations have web pages -- from the White House to your school newspaper *Blueprint*, to my cat Socks. 1.5 million new pages are created every day -- that's 65,000 every hour. Today, every one of you here is just a click of a mouse away from some of the finest libraries in the world. Pretty soon, you'll be able to reach every book ever written, every symphony ever composed, every painting ever painted.

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THE WHITE HOUSE

WASHINGTON

March 14, 1998

PRESIDENTIAL MEETING ON MATH AND SCIENCE EDUCATION

DATE: March 15, 1998
LOCATION: Springbrook High School
BRIEFING TIME: 9:30 am - 10:00 am
EVENT TIME: 10:30 am - 11:50 am (meeting)
12:00 pm - 12:45 pm (remarks to students)
FROM: Bruce Reed/Mike Cohen

I. PURPOSE

To bring together leaders from government, business, education, and the scientific community to discuss the recent 12th grade Third International Math and Science Study (TIMSS) results, and to issue a set of challenges to the nation to improve student achievement. You will also announce new on-line math and science help for parents, teachers, and students.

II. BACKGROUND

You will be meeting with 25 leaders from government, business, education, and the scientific community to discuss how the nation should respond to recent findings from the Third International Math and Science Study (TIMSS) that while U.S. 4th graders are near the first in the world in science and above average in math, U.S. 12th graders lag below the international average in both subjects.

These results demonstrate the importance of implementing your education agenda, including proposals for: national standards and tests in math and reading, smaller classes with well-prepared teachers, modern school buildings, Education Opportunity Zones to end social promotions and fix failing schools, technologically advanced schools, and "High Hopes" mentoring to encourage students to take tough classes and prepare for college.

In addition to reiterating your legislative proposals, you will issue the following new challenges to boost student achievement in math and science.

- **Reducing out-of-field teaching.** You will challenge states and school districts to reduce the percentage of math and science teachers without a major or minor in their subject area. The average K-8th grade math teacher takes only three undergraduate math courses. Twenty-eight percent of secondary math teachers lack a major or minor in their subject area, as do 18% of secondary science teachers and 55% of physics teachers.
- **Rigorous Tests for New Teachers.** You will challenge states to require all new

teachers of math and science to pass challenging tests of math or science knowledge and teaching proficiency. With nearly half of our nation's teaching force to be replaced over the next several years in order to accommodate growing student enrollments and an aging teaching force, raising standards of teaching now can boost the quality of our schools for decades.

- **A Call to Action for Schools, Students, and Parents.** You will challenge schools to offer -- and students to take -- tough math and science courses throughout middle school and high school. Only 25% of U.S. students take algebra before high school, and only 25% of U.S. high school students take physics before graduating. You will challenge parents to insist that school districts provide ways of showing how children are doing compared to national standards and international benchmarks. Today, parents have no way of finding out how their children do compared to the international standards in TIMSS.

You will also announce the following new on-line resources for parents, students, and teachers:

- **"Federal Resources for Educational Excellence" (FREE) Web-site.** A new website is available today to connect teachers, parents, and students to teaching and learning resources in math, science, and other subject areas from NASA, the Energy Department, the National Science Foundation, and other agencies.
- **The TIMSS On-Line Challenge.** The U.S. Department of Education will launch this fall a website that puts TIMSS math and science problems on-line. This will enable parents to give a quiz to their children, learn what their children should know in math and science, and learn how their children are doing compared to students from other countries.

Summary of the TIMSS Results:

TIMSS showed that U.S. 12th graders scored among the lowest of 21 nations in general math and science, with the U.S. outperforming only Cyprus and South Africa. Performance of U.S. 12th graders in advanced math and physics courses also lagged behind their peers from other nations. The 12th grade findings completed a multi-year study showing U.S. 4th graders near the first in the world in science and above average in math, with U.S. 8th graders slightly above the international average in science and below the international average in math. The 21 nations participating in the 12th grade study were the U.S., Canada, Australia, and many European nations. No Asian countries participated in the 12 grade tests. (See attachment of how the U.S. ranks compared to each participating country for all three grades.)

While there is not yet an analysis of the 12th grade TIMSS, an analysis was done of the 8th and 4th grade TIMSS. The analysis found that U.S. curriculum was less advanced, and that it covered more subjects superficially rather than a few subjects in depth. The analysis also showed that U.S. teachers often do not get as much training as those in other nations.

Although other tests (including the National Assessment of Educational Progress) show that U.S. student achievement is improving, TIMSS makes clear these improvements are not rapid enough to keep pace with other nations in an increasingly global economy.

Springbrook High School

Springbrook High School is a good school with above-average test scores. Although the school has a solid math and science program, it is not particularly stronger than any of the other academic areas taught in the school. Springbrook has a very diverse student body (35% African American, 20% Asian, 16% Hispanic, 28% white), and it enrolls a total of 2,200 students.

[NOTE: Last week Springbrook High School held its first Anti-Violence Week, to honor one Springbrook student and one former student who were killed within the last year. Former Springbrook student Alfredo Enrique Tello, Jr. was brutally killed at age 19. Samuel Sheinbein (who fled to Israel) and Aaron Needle are charged with the murder. Two months later a Springbrook student Elmer Flores was killed in a robbery.]

III. PARTICIPANTS

Briefing Participants:

Secretary Riley
Secretary Pena
Bruce Reed
Rahm Emanuel
Mike Cohen

Event Participants:

✓ Secretary Richard Riley
Secretary Federico Pena
✓ Governor Parris Glendening, Maryland
✓ Governor Cecil Underwood, West Virginia
✓ ~~Mayor Richard Daley, Chicago, IL~~
✓ Mayor Richard Riordan, Los Angeles, CA
✓ Mayor Lee Clancey, Cedar Rapids, IA
✓ William Schmidt, National Coordinator for TIMSS, Professor, Michigan St. University
✓ Rudy Crew, Chancellor of New York City Schools
✓ Diane Ravitch, Former Assistant Secretary of Education in the Bush Administration.
Currently, a Senior Fellow at Brookings and Research Professor at New York University.
Bruce Alberts, President of the National Academy of Sciences
Neil Lane, President of the National Science Foundation
✓ Bill Nye, Host of Weekly Television Show, "Bill Nye The Science Guy"
✓ Alan Wurtzel, Vice Chairman of the Board, Circuit City
✓ Wilmer Cody, Chair of the Chief State School Officers and Commissioner of Education in Kentucky
✓ Robert Moses, Director of the Algebra Project, which helps disadvantaged students prepare for rigorous math classes
✓ Bob Chase, NEA President

✓ **Sandy Feldman**, AFT President

✓ **Nancy Grasmick**, Superintendent of Schools, Maryland

✓ **Migues Nevarez**, President of University of Texas Pan American

✓ **Walter Secada**, Professor of Math and Science Education at the University of Wisconsin, and Director of the Department of Education Regional Comprehensive Assistance Center

✓ **Cindy Mayorga**, Springbrook High School Student

✓ **Cyrus Ishikawa**, Springbrook High School Math and Physics Teacher

✓ **Congressman Wynn**

✓ **Senator Sarbanes**

IV. PRESS PLAN

MEETING: Pool Press for Opening Statement. Meeting is then Closed Press.

SPEECH: Open press remarks before the student body.

V. SEQUENCE OF EVENTS

- **YOU** will be greeted at the school by Principal Mike Durso, Governor Glendening, Superintendent of Schools Nancy Grasmick, and Members of Congress.
- *You will also be greeted by Michael Cohen's son, Ross, who attends Springbrook.
- **YOU** will enter the media center and take your seat at the table. (All other participants will already be seated.)
- The Pool will enter the room.
- **YOU** will make a statement to the press and invite Secretary Riley to make remarks.
- Sec. Riley will make remarks and introduce Bill Schmidt, TIMSS Nat'l Coordinator.
- Bill Schmidt will briefly review the TIMSS findings, then the pool will depart.
- **YOU** will begin the meeting by calling on Secretary Pena to briefly describe the Energy Department's commitment to Science education.
- **YOU** will then open the meeting by calling on each participant to speak. Each participant will give a brief statement on their view of the improvements that can be made in math and science education, and you are free to respond. (**YOU** should begin by calling on the Governors and Mayors present.)
- 10 minutes prior to the close of the meeting Bill Nye will depart to the auditorium, where he will do a brief pre-program for the students.
- Secretary Riley will help bring the meeting to a close.
- **YOU** will thank participants and then depart.

Speech to the Student Body:

- **YOU** will be announced onto the stage accompanied by the school Principal and Secretary Riley.
- The Principal will make brief remarks and introduce **YOU**.
- **YOU** will make remarks.
- **YOU** will work a ropeline, and then proceed to the overflow room.
- **YOU** will make very brief, informal remarks, and then depart.

VI. REMARKS

Provided by Speechwriting.

DISCUSSION POINTS FOR EDUCATION MEETING

(1) Improving performance is critical to U.S. economic growth and individuals personal opportunities

- Most of the highest growth areas in our economy are in areas that require strong math and science skills (e.g., information technology, health professions, systems analysts, engineers).
- Almost 90% of new jobs require more than a high school level of literacy and math skills.
- For students to get on the road to college and high paying jobs, math and science skills are critical. Students who take algebra and geometry go to college at much higher rates (83% vs. 36%) than those who don't.

(2) We must have higher standards and expectations in middle and high school mathematics and science.

- In grades 4-8, students in other nations are studying algebra, geometry and other topics, while U.S. students continue to be taught primarily arithmetic.
- The content taught in U.S. eighth-grade mathematics classrooms is generally at a seventh grade level compared to the 40 other nations in the TIMSS study.
- A recent international comparison of science and math examinations for college-bound students by the AFT shows that our SAT, ACT, and AP exams are much less rigorous than similar exams from other nations.
- The standards of state assessments vary widely, and many 8th grade mathematics assessments are less rigorous than the NAEP standards. The voluntary national tests will help address this.

(3) Students should take four years of rigorous high school mathematics and science.

- Only 25% of U.S. high school students take physics and only 10% take calculus. Most students do not take four years of high school mathematics and science. Even among college bound students, less than half do so.
- Businesses can demonstrate the importance of a rigorous course of study by looking at student transcripts when making hiring decisions. The U.S. Chamber of Commerce, the National Alliance of Business, and the Business Roundtable are encouraging employers to do this.

(4) U.S. curriculum should be more focused, instead of covering more subjects superficially.

- At 8th grade, U.S. mathematics and science curriculum is less focused than that of other nations --"a mile wide and an inch deep."

- The typical U.S. 8th grade mathematics textbook covers 35 topics while the typical Japanese 8th grade textbook covers 7.
- (5) **Teachers must be prepared to teach challenging math and science.**
- The average K-8 teacher of mathematics takes only 3 undergraduate math courses. In high school, in 1993-94, 28% of mathematics teachers, 18% of general science teachers and 55% of physics teachers were teaching out-of-field, meaning that they have neither a major nor a minor in the subject they teach.
 - TIMSS found that in a typical U.S. classroom, students are drilled to learn how to repeat how the teacher solves a problem. In Japan, students are asked to solve problems and then present their methods and solutions to the class in order to increase their own understanding.
 - This is why it is essential that states require new teachers to take rigorous tests of their knowledge and skills, that states and districts reduce the number of out-of-field teachers, and that colleges and universities commit to recruiting and preparing more top-notch math and science teachers.
- (6) **Our students do not start behind, they fall behind.**
- In comparison with students in other nations U.S. 4th graders students are above average in mathematics and second only to Korea in science.
 - The strong performance of the "First in the World Challenge" districts north of Chicago show that with the right effort, our students can be first in the world.
- (7) **U.S. achievement in mathematics and science is improving, but not fast enough.**
- The achievement of U.S. students has improved in the last decade as shown by higher scores on the NAEP, SAT, and ACT.
 - TIMSS and other international assessments show that other nations are also improving. Thus, to improve our relative international standing and remain competitive in the increasingly global economy, we must redouble our efforts.
- (8) **U.S. students are mastering the basics of computation but have troubles with more advanced content and skills**
- Both NAEP and TIMSS show that our students do well in the basics of computation. 79% of 8th graders can add, subtract, multiply and divide.
 - Our students have trouble with more advanced content (geometry, measurement, algebra) and with solving multi-step problems.
- (9) **We must destroy the myth that math and science are only for a few students.**
- Surveys show that about half of middle and high school students say they will drop math and science as soon as they are able to -- even if they want to go into fields such as engineering or medicine that require math and science knowledge.

12th GRADE TIMSS RESULTS

MATH PERFORMANCE

Top Tier

Netherlands
Sweden
Denmark
Switzerland
Iceland
Norway
France
New Zealand
Australia
CanadaAustria
Slovenia
Germany
Hungary

Middle Tier

Italy
Russian Federation
Lithuania
Czech Republic
United States

Low Tier

Cyprus
South Africa

MATH PERFORMANCE (ADVANCED STUDENTS)

Top Tier

France
Russian Federation
Switzerland
Australia
Denmark
Cyprus
Lithuania
Greece
Sweden
Canada
Slovenia

Low Tier

Italy
Czech Republic
Germany
United States
Austria

SCIENCE PERFORMANCE

Top Tier

Sweden
Netherlands
Iceland
Norway
Canada
New Zealand
Australia
Switzerland
Austria
Slovenia
Denmark

Middle Tier

Germany
France
Czech Republic
Russian Federation
United States
Italy
Hungary
Lithuania

Low Tier

Cyprus
South Africa

SCIENCE PERFORMANCE (ADVANCED STUDENTS)

Top Tier

Norway
Sweden
Russian Federation
Denmark
Slovenia
Germany
Australia
Cyprus
Latvia
Switzerland
Greece
Canada
France Czech Republic

Low Tier

Austria
United States

4TH AND 8TH GRADE TIMSS RESULTS

4TH GRADE

MATH

Top Tier

Singapore
Korea
Japan
Hong Kong
Netherlands
Czech Republic
Austria

Middle Tier

Slovenia Ireland
Hungary
Australia

United States

Canada
Israel

Low Tier

Latvia
Scotland
England
Cyprus
Norway
New Zealand
Greece
Thailand
Portugal
Iceland
Iran
Kuwait

4TH GRADE

SCIENCE

Top Tier

Korea

Middle Tier

Japan
United States
Austria
Australia
Netherlands
Czech Republic

Low Tier

England
Canada
Singapore
Slovenia
Ireland
Scotland
Hong Kong
Hungary
New Zealand
Norway
Latvia
Israel
Iceland
Greece
Portugal
Cyprus
Thailand
Iran
Kuwait

8th GRADE

MATH

Top Tier

Singapore
Korea
Japan
Hong Kong
Belgium
Czech Republic
Slovak Republic
Switzerland
Netherlands
Slovenia
Bulgaria
Austria
France
Hungary
Russian Federation
Australia
Ireland
Canada
Belgium-French
Sweden

Middle Tier

Thailand
Israel
Germany
New Zealand
England
Norway
Denmark

United States

Scotland
Latvia
Spain
Iceland
Greece
Romania

Low Tier

Lithuania
Cyprus
Portugal
Iran
Kuwait
Colombia
South Africa

8th GRADE

SCIENCE

Top Tier

Singapore
Czech Republic
Japan
Korea
Bulgaria
Netherlands
Slovenia
Austria
Hungary

Middle Tier

England
Belgium
Australia
Slovak Republic
Russian Federation
Ireland
Sweden

United States

Germany
Canada
Norway
New Zealand
Thailand
Israel
Hong Kong
Switzerland
Scotland

Low Tier

Spain
France
Greece
Iceland
Romania
Latvia
Portugal
Denmark
Lithuania
Belgium-French
Iran
Cyprus
Kuwait
Colombia
South Africa

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Walter Secada, Professor of Math and Science Education at the University of Wisconsin, and Director of the Hispanic Dropout Project

Cindy Mayorga, Springbrook High School Student

Cyrus Ishikawa, Springbrook High School Math and Physics Teacher

Congresman Wynn

Senator Sarbanes

4. The New York Times

02/25/98 Section: National Desk; Section B; Page 10, Column 1

U.S. Trails the World in Math and Science

By ETHAN BRONNER

The most comprehensive and rigorous international comparison of schooling ever undertaken reveals American high school seniors to be among the industrial world's least prepared in mathematics and science, prompting educators and political leaders, including President Clinton, to call for a re-examination of the nation's approach to teaching quantitative skills.

Particularly devastating, the American officials said, was the bleak performance of the best American students in advanced subjects. In physics and advanced mathematics, not one of the countries involved — including less well-off nations like Greece, Cyprus and Latvia — scored lower than the United States.

"This study has burst another myth," said William H. Schmidt, an educational statistician from Michigan State University who coordinated the American portion of the study. "Our best students in mathematics and science are simply not world class. Even the very small percentage of students taking Advanced Placement courses are not among the world's best."

The results seemed particularly jarring given the continuing dominance of the United States in a global economy based increasingly on information and technology. Some wondered whether American colleges and universities were making up for the gaps.

The data, released yesterday, are from the Third International Mathematics and Science Study, which in the spring of 1995 tested samplings of 4th, 8th and 12th graders. More than 40 countries participated in the 8th-grade portion and about half that number in each of the other two sections. The Asian nations, traditional high performers, did not take part in the high school portion.

The fourth-grade results, released in June, showed the United States to be above the international average and were hailed as evidence that the attention paid in recent years to improving schools was paying off.

The eighth-grade results, released

seven months earlier, had raised some concern because Americans dipped below the international average in mathematics although they scored above it in science.

But the latest results, for high school seniors, are being greeted with shock and dismay by large numbers of educators and officials who see them as evidence of a fundamental national failing.

"There is something wrong with the system and it is our generation's responsibility to fix it," President Clinton said yesterday in response to the results of the study. "You cannot blame the schoolchildren."

Education Secretary Richard W. Riley said the results confirmed what the Administration has been saying: that the country needs clearer, firmer academic standards and better prepared science teachers.

Conservative lawmakers have opposed the national tests on grounds that they would represent a centralization of education, which they view as more properly controlled locally.

While versions of the international study in the 1960's, 70's and 80's produced equally poor results for American high schoolers, they were largely discounted because of perceived societal and educational differences between the United States and other countries. This time, officials say the differences have narrowed, and those that remain were statistically accounted for.

Those who carried out the study said there were no clear or simple explanations for the low level of American performance. "It is not class size or homework or social life or television," said Ina V. S. Mullin of Boston College, co-deputy director of the study. "Around the world, everybody watches television."

The examination given to the 12th graders consisted of four parts: general mathematics, which includes fractions and percentages, graphics and some algebra; general science, which includes earth science, life science and physical science; advanced mathematics, which includes calculus, geometry and

equations, and physics.

Students were selected to represent their nations; 23 countries participated in some part of the exam. To account for margins of error, results were clustered into groups.

In general knowledge of mathematics, American 12th graders did better than those in only two countries, Cyprus and South Africa. Students in four countries, Italy, Russia, Lithuania and the Czech Republic, performed at the same level as those in the United States. Fourteen countries outperformed America, led by the Netherlands and Sweden. The results were similar for science.

The advanced mathematics assessment was given to students who had taken or were taking pre-calculus, calculus or Advanced Placement calculus, and the advanced physics assessment to students who had either taken or were taking physics or Advanced Placement physics. In advanced math, 11 countries outperformed the United States and no country performed more poorly; in physics, 14 countries did better than the United States and none did worse.

One ray of light was performance by American students who took Advanced Placement calculus. When these students — about 5 percent of those in the nation — were separated out and measured against students abroad in advanced mathematics, they did slightly better than the international average. But in physics, when the same statistical exercise was done, Americans were still below the international average.

One of the nagging problems worldwide seen in the study was a sex gap favoring boys in math and science. Boys significantly outperformed girls in mathematics and science in all 21 countries tested in the fields except Cyprus, South Africa and the United States.

Pascal D. Forgione Jr., the United States Commissioner of Education Statistics, said that previous explanations for the country's comparatively poor performance no longer held true. In the past, Mr. Forgione said, other countries tended not to keep the less academically

1. The Atlanta Constitution

03/10/98Section: EDITORIAL; Page A;08

Give national tests a try

Here's a simple problem: Take a country that opposes national education standards, add superficial curricula created by committee and what do you get?

The answer: American 12th-graders scoring near the bottom of the industrialized world in a major international mathematics and science test.

The disheartening performance of U.S. students in the Third International Mathematics and Science Study proves that local control has amounted to endorsed failure in our schools.

The national testing proposed by President Clinton is essential to set academic benchmarks by which all of America's schools could gauge their performance. The testing could also serve as an early-warning bell for schools that are falling behind. In math and science, that alarm bell has already been sounded. High school seniors in the United States trailed their counterparts in most

countries, outperforming only Cyprus and South Africa. In advanced mathematics and physics, no country was worse.

Oddly, the GOP response to the dismal showing has been to criticize any attempts at national reforms, urging instead that initiatives be left to local school districts.

But that may well be the source of the problem. Unlike high-scoring European students who follow a national curriculum designed by the experts, the United States relies on local districts to determine what will be taught. The result is a splintered approach to teaching the crucial math and science skills that will enable American students to compete in an increasingly technological economy.

According to Michigan State University researchers, incoherence of curricula is the most important factor in America's underperformance, not teachers, homework or school financing.

The United States actually spends more education dollars per capita than other countries. The researchers found that U.S. curricula suffer from a laundry list of topics, lack of depth in key areas and repetitive, unchallenging material. In context, it must be noted that although America has had a history of ignoble standings in international measures of math and science, the United States has also emerged as the undisputed pacesetter in the global technology market. That's because a small fraction of the 3 million students graduating each year are well prepared to flourish in the new information age. But math and science literacy can no longer be limited to future engineers. In our information-driven world, virtually all workers must have the skills to master computers. The disappearance of high-paying, low-skilled factory jobs means that today's generation of high school dropouts could earn less than their fathers and even their grandfathers. ■

COMMENTARY

57. The New York Times

03/02/98 Section: Editorial Desk; Section A; Page 17, Column 1

Low Scores Are No Disgrace

By Howard Gardner

CAMBRIDGE, Mass. — The dismal performance of American 12th graders on the Third International Mathematics and Science Study is naturally disheartening. Even in a pool that lacked the usual high-scoring Asian countries, American students managed to score near the bottom.

But we should resist the tendency to focus on increasing our students' scores on these tests. These tests don't measure whether students can think scientifically or mathematically, they just measure a kind of lowest common denominator of facts and skills. So getting students to do well on them doesn't necessarily mean much in the real world. It doesn't even mean that students will have successful careers in science and technology.

Half a dozen years ago, when our economy was languishing along with our test scores, it was easy to blame our poor schools and to push for better results from our students. Now the United States stands at the top of the world economically, but our students are still scoring at the bottom on international math and science tests. Since high scores on these tests obviously aren't crucial to our economic success, we need to decide what kinds of tests matter in helping

form the kind of citizen we want to have.

Standardized tests should find out if American students can think in a scientific manner. That means teaching students to understand the nature of the scientific method: how experiments are set up, how models and theories are constructed and tested, how to decide what theories best describe a phenomenon. Students learn those concepts only by designing and carrying out their own experiments.

Tests should measure a student's scientific ability by presenting a problem, offering data to solve that problem and positing several different interpretations of the data. The test taker might be asked to determine what conclusions can and cannot be drawn.

But most standardized tests ask fact-based questions that sample a wide range of topics in a somewhat superficial way. Students who score well on these tests are like well-trained athletes or musicians: through practice, they have become proficient at a certain skill — in this case, they have done extensive problem sets in many different "content areas" and can move quickly from one question to another.

These tests are helpful in the real

world, especially in high school and college. But they simply do not show whether a student can think seriously about a scientific issue. We could drill our students with problem sets and raise their test scores, but still be left with a population that remains scientifically and mathematically challenged.

After all, students should be able to apply scientific and mathematical concepts to the world around them. As adults, they need to know how to decide which life insurance to buy, how pesticides affect their food and how interest rates determine home mortgages. Citizens also need to be able to decide whether cloning research should be banned, whether more money should be poured into studying global warming and whether there should be a national health care plan.

Aren't these skills ultimately important for our nation and others, too? We must rethink the way we teach science and math. We must have the foresight to pursue a less traveled road, one that can lead to a citizenry that can think rigorously and make informed decisions and that can handle a future where science and technology will be more important than ever. ■

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February 25, 1998, Wednesday, Final Edition

SECTION: OP-ED; Pg. A17

LENGTH: 905 words

HEADLINE: Put Teachers to the Test

BYLINE: Diane Ravitch

BODY:

Last summer, a suburban school district in New York advertised for 35 new teachers and received nearly 800 applications. District officials decided to narrow the pool by requiring applicants to take the 11th-grade state examination in English. Only about one-quarter of the would-be teachers answered 40 of the 50 multiple-choice questions correctly.

As Congress considers reauthorization of the Higher Education Act, teacher education has emerged as a major issue. Many states -- and now President Clinton -- are clamoring to reduce class size, but few are grappling with the most important questions: If we are raising standards for students, don't we also need to raise standards for teachers? Shouldn't state and local officials make sure that teachers know whatever they are supposed to teach students?

Almost every state claims that it is strengthening standards for students, but the states have been strangely silent when it comes to ensuring that teachers know what they are supposed to teach. Most instead certify anyone with the right combination of education courses, regardless of their command of the subject they expect to teach, and many states require future teachers to pass only a basic skills test.

Today, in some states it may be harder to graduate from high school than to become a certified teacher. Something is wrong with this picture.

Last summer the U.S. Department of Education reported that approximately one-third of the nation's public school teachers of academic subjects in middle school and high school were teaching "out of field," which means that they had earned neither an undergraduate major nor a minor in their main teaching field.

Fully 39.5 percent of science teachers had not studied science as a major or minor; 34 percent of mathematics teachers and 25 percent of English teachers were similarly teaching "out of field." The problem of unqualified teachers was particularly acute in schools where 40 percent or more of the students were from low-income homes; in these schools, nearly half the teaching staff was teaching "out of field."

Many states now routinely certify people who do not know what they are supposed to teach. No one should get a license to teach science, reading, mathematics or anything else unless he or she has demonstrated a knowledge of what students are expected to learn.

The Washington Post, February 25, 1998

A majority of the nation's teachers majored in education rather than an academic subject. This is troubling, even though most of those who majored in education are elementary teachers. There is a widely accepted notion that people who teach little children don't need to know much other than pedagogical methods and child psychology; that is wrong. Teachers of little children need to be well-educated and should love learning as much as they love children. Yes, even elementary school teachers should have an academic major.

The field of history has the largest percentage of unqualified teachers. The Department of Education found that 55 percent of history teachers are "out of field," and that 43 percent of high school students are studying history with a teacher who did not earn either a major or minor in history. This may explain why nearly 60 percent of our 17-year-olds scored "below basic" (the lowest possible rating) on the most recent test of U.S. history administered by the federally funded National Assessment of Educational Progress. Only one out of every five teachers of social studies has either a major or minor in history. It is no wonder that today's children have no idea when the Civil War occurred, what Reconstruction was, what happened during the progressive era, who FDR was, what the Brown decision decided, or what Stalin did? Many of their teachers don't know those things either.

There are many conditions over which school officials have no control, but they have complete control over who is allowed to teach. Why should anyone be certified to teach science or history who doesn't know what he or she is expected to teach the children?

Many state officials say that they have an abundance of people who want to teach and that this is actually an excellent time to raise standards. For career-changers with a wealth of experience in business or the military, however, obsolete certification requirements get in the way. Instead of requiring irrelevant education courses, states should examine prospective teachers for their knowledge of their academic field and then give them a chance to work in the schools as apprentice teachers.

As Congress ponders ways to improve the teaching profession, it should consider incentives for colleges of liberal arts to collaborate with schools of education in preparing future teachers. Representatives from both parts of the same campus should sit down together, study state academic standards and figure out how to prepare teachers who know both their subject and how to teach it well. Teachers need a strong academic preparation as well as practical classroom experience to qualify for one of the toughest jobs in America.

Every classroom should have a well-educated, knowledgeable teacher. We are far from that goal today. Congress can address this problem by focusing on the quality, not quantity, of the nation's teaching corps.

The writer, a senior fellow at the Brookings Institution, was an assistant secretary of education in the Bush administration.

LANGUAGE: ENGLISH

LOAD-DATE: February 25, 1998

Underwood -

How do we make teacher salaries for math & science attractive?

Potus - like retention of math/science teachers
be difficult retains for military pilots

Feldman - lose 50% of all teachers in 1st 5 years

- engine salaries much higher

- can't do it in missionary zeal

- need to place greater merit on

urban - our kids as capable as any in world

- if challenged + supported

- if take more rigorous courses

- look at AP as model - spread

- curriculum, high standard, teacher training

- way of teaching + learning

- national consensus on standards

- still going

Row 1/2

- let alone + well
- keep pushing imp. of teacher knowing their subject
- teachers' preparation

have to know it and have to know how to teach

Row 2

- Peters - I state him by school
- do we have the people to do that?

Ding Cui - ① we need to pay people

- ② professional work 2 hrs
- a wonderful challenge -
e.g. lab, interactive

- need to be a real merit / prestige courses / commitment /
courses & scholars

Proctor

- 6yr old in LA has a 10% chance
need w. to do much with 10% chance

Ballot initiative - 5%

Mayor Bordin

- wants less lg to teach
math/sci + less lang.

- this is not a shd pol

Mayor Chmery

Feb Chare

- holistic approach

- applaud teacher salary increase suggestion

- no surprises - we know what to do

- teach quality

- state/curriculum

-

Peters →

Q- ① - alternative certification

how vigorous have you been in implementing it

- has it been effective

- what are the impediments

② how much work has to be required that will make

Bill Nye

to make hard to be a teacher

Some will have to leave this job.

reward people who are with the 1st

John

✓ neg

And
Ful

med. sci. volunteer

ALL Wym

There is a lot of work to be done.

- active verb - support

- did w. the departure in long beh and
w. the U

\$2 per unit debit to Mark + P.C. &

— *Printed and Published*

- SA. Schol

Example

① K-12 effort

② Core Sched. Technology/
- less effective learn for more effort

③ Curriculum standards

④ public school - we can't get to

Feed back

- NSF partnership with

① Fed. agency - NSF/EP partnership

- NSF - Penn - Energy

Future Work

- Higher Ed needs to be more involved in K-12

Science/engineering majors don't work
there in

→ - how can we train surplus for sci/tech
become better

Be

SCHOOL AND COMMUNITY REPORT

Student Body

The 1996-97 enrollment is 2,153; an increase of 232 from six years ago. The ethnic composition of the student body is 34% African-American, 31% white, 20% Asian, and 15% Hispanic. Compared to six years ago, the percentage of white students has decreased by 12% while the percentage of Hispanic students has increased 7%. The Springbrook area has become more transient. As a result, 23% of the 1996 graduating seniors moved into the Springbrook area after the start of their freshman year. The attendance rate for 1995-96 was 94.65%. The withdrawal rate for the 1994-95 school year was 3%. Average SAT scores were 437 verbal and 499 math for 1994-95 and were 510 verbal and 520 math for 1995-96. A followup of graduates indicates a 5.3% decrease from five years ago in the number of students matriculating at four-year colleges and universities.

School and Community

Based on the 1990 census figures, the community has a population of 54,408 with 2,750 students of secondary school age.

There has been a significant increase in the number of homes in the community in recent years. More specifically, the single family homes increased by over 2,000 and townhomes increased by over 1,000. There are a great number of different languages and a variety of national origins found in these homes.

In this community 22.4% of the adults have advanced degrees.

School Climate

A student satisfaction survey of 1,045 students was conducted early in 1996. Students expressed highest satisfaction with items relating to academic instruction and teacher expectations. Students were less satisfied with with issues concerning peers and discipline.

In November, 1995, all teachers were surveyed using the Teacher

Opinion survey. Teachers largely agreed that an excellent variety of activities is available to the students and that the school provides a clean, pleasant, safe, and orderly environment. ~~Teachers agreed they have a sense of common mission. Teachers' concerns include cheating, sexual harassment, and substance abuse.~~

Parent surveys were completed by 239 of the 1,200 parents (20%) who received surveys. Almost unanimously the parents believe the school looks "neat and well maintained." Aspects of the learning environment rated highest in satisfaction. In fact, in all areas covered by the survey, parent satisfaction was high.

Springbrook High School is situated on 26 acres of land in Silver Spring, Maryland and is one of 22 high schools in Montgomery County, Maryland. It is the second largest high school in the county. County schools are organized into clusters. The Springbrook community consists of a diverse population from a wide socio-economic spectrum. Economically, the median income of Montgomery County residents is one of the highest in the nation; the Springbrook High School cluster, specifically, serves a larger middle class suburban community. The residents of the Springbrook cluster have demonstrated a high regard for education and take pride in the recently renovated Springbrook High School facility. The quality of life and the fine tradition of area schools continue to attract new residents to the area, many of whom commute to Washington, D.C. and Baltimore. The occupations of parents (or guardians) of Springbrook High School students include: managerial, technicians, sales, administration support, service occupations, farming, precision production, repair-skilled, operators, laborers, and fabricators-unskilled.

Renovation of the high school began in the spring of 1992 requiring the complete relocation of the students and staff. This renovation included: making the school accessible to the physically challenged; providing state-of-the-art technology to targeted areas of the curriculum; upgrading core facilities; and providing increased classroom space. Students and staff returned to the school in the fall of 1994. A new high school is projected in the Springbrook cluster to aid in the overcrowding of Springbrook High School and two other cluster high schools. The present student body of 2,153 is expected to reach 2,260 by the year 2010.

Parents have high expectations for their children and for their school. To this end, Springbrook offers a comprehensive program with a strong emphasis on academics. Twenty-two credits are required for graduation. The school enjoys a growing ethnic cross section in its population; right now the school is 30.9% white; 34.1% African American; 19.6% Asian; .1% American Indian; and 15.1% Hispanic. In 1990, 66.4% of the graduating class went on to a four-year college; in 1995, 61% of the graduating class went to four-year colleges; and in 1996, 52.9% of the graduating class went to four-year colleges. In addition, the school has increased its yearly attendance rate and has a very low withdrawal rate. The per pupil expenditure is approximately \$5,205. Residents have repeatedly shown their support for the educational enterprise not only in terms of financial support but by active involvement in the support and direction of the school.

The school has been designated as an ESOL center. The students enrolled in the program come from 20 different countries and speak 12 different languages. The non-ESOL students come from 52 different countries. The dimension this diversity adds to the the Springbrook community is a source of strength to the character and culture of Springbrook High School. With diversity--a diversity reflective of the changing demographics of our nation--each member of the Springbrook High School community benefits from the challenges and the perspectives brought by the different population.

The atmosphere is positive, purposeful, caring, and disciplined. The faculty's very positive view of their school leader is reciprocated, making for a pleasant working environment. The staff values the accessibility of the administration and the support given to them in proposed new ventures. Fairness and respect are themes of the relationship between faculty and administration. These same characteristics are expected in the relationship between students and staff.

Springbrook teachers are experienced professionals who enjoy working with students. The feeling is reciprocated.

The staff at Springbrook is committed and experienced. Over twenty teachers were hired at Springbrook High School for the 1996-97 school year. Many young teachers are now a part of the school. Six of the new

teachers are graduates of Springbrook High School. Three of the supporting staff are graduates of Springbrook High School. At this juncture, the staff has the security of their experience to examine anew the manner in which instruction is being delivered. The staff believes in the setting of higher standards and levels of expectations for all students. The staff also recognizes that profound societal changes have had an equally profound effect upon the attitudes and levels of preparedness students bring to their learning. ~~Springbrook teachers are aware that there is a need to incorporate alternative teaching strategies that will encourage and benefit all students.~~ Expectations must be high; the route to achieving the goal must be varied and informed by the extensive research available on how children learn. In this initiative, the teachers are looking for the support of the community, colleagues, and administration at both the local and County levels, as energies and resources are allocated for the venture. The Springbrook High School students are being graduated into a world very different from that of just fifteen years ago. The Springbrook High School staff is talented, professional, capable, and equal to the challenge at hand.

BELL SCHEDULE
MONDAY - MARCH 16, 1998

TIME		PERIOD (S)
7:25 A.M. - 8:20 A.M.		PERIOD 2
8:20 A.M.		ANNOUNCEMENTS
8:25 A.M. - 9:20 A.M.		PERIOD 3
9:25 A.M. - 9:50 A.M.	"A" LUNCH	PERIOD 4-5
9:55 A.M. - 10:25 A.M.	"B" LUNCH	PERIOD 5-6, 6-7
10:30 A.M. - 10:55 A.M.	"C" LUNCH	PERIOD 7-8
11:00 A.M.	ALL STUDENTS REPORT TO GRADE UNIT	

***UPON PA NOTIFICATION, STUDENTS WILL REPORT IN GRADE UNITS TO THE**
AUDITORIUM - GRADES 11 AND 12
GYMNASIUM - GRADES 9 AND 10

FOLLOWING THE PRESIDENT'S PRESENTATION, ALL STUDENTS WILL RETURN TO GRADE UNIT AWAITING DISMISSAL INSTRUCTIONS.

NOTE THAT DUE TO THE UNPREDICTABILITY OF PRESIDENT CLINTON'S SCHEDULE, SOME OF THE TIMES LISTED ABOVE ARE SUBJECT TO CHANGE. ALL WILL BE KEPT INFORMED!