

NMSI



The National Math and Science Initiative (NMSI) was created in 2007 by top leaders in U.S. business, education and science as a non-profit organization to improve math and science achievement in American public schools.

NMSI is replicating two programs that were recommended in the National Academies' Blue Ribbon report, "Rising above the Gathering Storm," because they have hard data showing they produce results.

THE ADVANCED PLACEMENT* TRAINING AND INCENTIVE PROGRAM is increasing the number of high school students succeeding in AP courses – which means they are much more likely to complete college. The APTIP formula for success includes: extra training for AP teachers, support from master teachers, more time on task for students in after-school and weekend prep sessions, as well as incentives for teachers and students to excel.

THE UTEACH PROGRAM encourages talented college students majoring in science, technology, engineering and math (STEM) to enter the teaching profession. The UTeach formula for success includes: tailored degree plans, coaching from master teachers, early practice teaching experience, and financial assistance. UTeach students graduate with their STEM degree and a teaching certificate with no extra time or cost.

GAME-CHANGING RESULTS

The **APTIP program** has nearly doubled the number of students taking and passing Advanced Placement courses in participating states.

- + Consecutive progress for three years proves APTIP works: 2008-2011 results from 63 schools in six states showed a 124 percent average increase in passing rates on math, science and English AP exams - nearly six times the national average.
- + Progress among minority students was even more pronounced: College Board results showed a remarkable 216 percent increase in passing scores on math, science and English AP exams among African-American and Hispanic students, over four times the national average.
- + APTIP also is addressing the "gender gap" in critical fields of math and science, as the passing rate for female students has increased 144 percent - over seven times the national average.

Originated by The University of Texas at Austin in 1997, the **UTeach Program** is one of the fastest-growing teacher preparation programs in the country.

- + UTeach is now being implemented in 25 universities in the U.S.
- + Enrollment has more than tripled in three years and is expected to include 4,900 students in fall 2011.
- + More than 82 percent of the graduates who become teachers are still in the classroom after five years, compared to a national average of 65 percent.
- + By 2017, the 13 universities in the first cohort of participating schools will graduate more than 1,000 math and science teachers a year. Those graduates alone have the potential to impact more than a million students during their careers.

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EXPANDING OUR SCOPE

In fall 2010, NMSI also launched the new **Initiative for Military Families (IMF)** to provide AP courses in math, science and English for students in military families. NMSI is partnering with the Military Child Education Coalition, the Military Impacted Schools Association and the Department of Defense Education Activity to implement the IMF program in a total of 28 high schools where there are high concentrations of children with family members serving in the military. Commitments have already been made to boost the number to 37 next year.

NMSI is reinvigorating math and science education in America. How? We're subtracting the boredom from the classroom by adding inspiring teachers and high expectations.

In order to reach rural schools without access to full AP programs, NMSI also is pioneering AP instruction online in South Dakota through the **Learning Power** program, which has rapidly grown to reach half the school districts in the state. NMSI also is supporting an AP incentive program in New Orleans through **Advanced NOLA** with Tulane University and is partnering with the **Legacy Foundation** to bring APTIP to Colorado.

In addition, NMSI sponsors the **Young Leaders Program** along with Exxon/Mobil and *Fortune* magazine to provide leadership training from top corporate executives for female college students who are majoring in math and science.

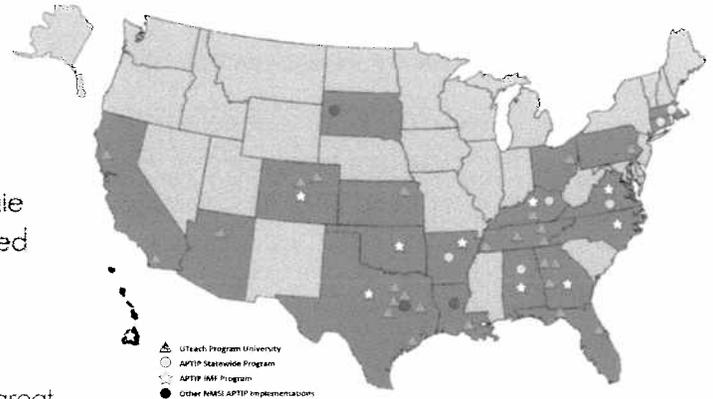
FUNDING SUPPORT

A non-profit organization, NMSI has received major funding from Exxon Mobil Corporation, the Bill & Melinda Gates Foundation and the Michael & Susan Dell Foundation, with additional support from the Carnegie Corporation, Texas Instruments Foundation, and Lockheed Martin Corporation.

YOU CAN MAKE A DIFFERENCE

Help us multiply success across our nation. We are off to a great start, but we need more allies for this crucial national mission. You can get involved by:

- + **Providing a donation.** Help from corporations, foundations and individuals is needed to move math and science education forward.
- + **Applying for a grant.** Encourage your state or university leaders to apply for NMSI grants.
- + **Supporting NMSI programs in your area.** Local donations will leverage the impact of NMSI grants.
- + **Contacting government officials.** Call on your elected leaders to support science, technology, engineering and math (STEM) as education priorities.



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WE'VE GOT A FORMULA THAT WORKS

How the Advanced Placement Training and Incentive Program (APTIP) Works

NMSI begins by selecting state non-profit organizations that have shown strong leadership in education to implement APTIP statewide. NMSI provides the initial grants to replicate APTIP, then state affiliates build local support to ensure the long-term sustainability of the program.

APTIP gives teachers the tools to succeed in the classroom.

Providing special teacher training and on-going support from master teachers is at the heart the APTIP experience. APTIP provided training for more than 8,000 AP and Pre-AP math, science, and English teachers.



Training more AP teachers means more advanced classes can be offered in the U.S.

APTIP has nearly doubled the number of students taking and passing AP courses in math, science and English in participating states.



Reaching a wider range of students reduces the “opportunity gap.”

APTIP is opening doors to more under-represented students. In three years, our first cohort of schools in the APTIP has increased the number of African-American and Hispanic students taking AP courses in the critical areas of math, science, and English by **286 percent** in participating schools - over **eight and a half times** the national average.



Boosting female participation in APTIP reduces the “gender gap.”

In three years, our first cohort of schools in the APTIP also has raised the number of female students taking AP math and science in participating schools by **169 percent**, which is over **seven times** the national average. This significantly improves access for more young women to careers in the fast-growing fields of science, technology, engineering, and math (STEM).





Expanding AP enrollment reshapes school culture.

APTIP is raising the bar for academic achievement in public high schools by inspiring and equipping more students to master ambitious coursework. APTIP's formula for success includes training for AP teachers, on-going support from master teachers, more time on task for students in after-school and Saturday study sessions, as well as incentives for teachers and students to excel.



Mastering AP coursework prepares more students for success in college and life.

Students who pass an AP courses are three times more likely to complete college. Even those who do not pass benefit from the exposure to college-level curriculum and are more likely to graduate from college. College graduates then have access to higher-paying jobs — unemployment for workers without a college degree is nearly twice that of college graduates. Students mastering AP math and science courses gain an additional competitive edge: Eight of the 10 fastest-growing occupations require math and science skills.



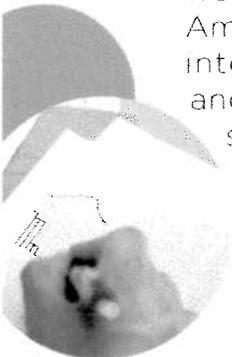
Providing rigorous learning experiences pays off.

Three consecutive years of positive results show APTIP works. APTIP schools have increased passing rates in AP math, science and English by an average **124 percent** — nearly **six times** the national average. There is no other formal program in the country that has produced these types of results.



Raising the academic bar with APTIP helps the U.S. become more competitive.

Advanced Placement students stand out in an increasingly competitive world. They compare favorably with top students in other countries while American student achievement overall has dropped below average. 2010 international rankings by the Organization for Economic Cooperation and Development (OECD) show the U.S. ranks 25th in math and 17th in science. NMSi's goal is to raise the level of achievement in American public schools by helping more students master AP courses — and soar.



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WE'VE GOT A FORMULA THAT WORKS



Initiative for Military Families

Bringing the Best In Education to Students from Military Families

The MISSION:

The **Initiative for Military Families (IMF)** is providing consistent, quality math and science education in high schools serving military bases in the United States. The initiative brings college-level coursework to students through the highly-regarded and highly-effective Advanced Placement* curriculum. Because the AP courses are standard across the country, this program provides **excellence** and **continuity** for students whenever their families are transferred.

WHO:

The program is being replicated throughout the U.S. by the **National Math and Science Initiative (NMSI)**. A non-profit organization, NMSI has been at the forefront of public-private efforts to raise math and science achievement in the U.S. since 2007, when it was created with foundational support from **Exxon Mobil Corporation**, the **Bill & Melinda Gates Foundation** and the **Michael & Susan Dell Foundation**.

WHEN and WHERE:

The IMF was launched in the 2010-2011 school year in four public high schools: two serving Fort Hood in Texas, and two near Fort Campbell in Kentucky. In fall 2011, the program will be expanded to more than 28 additional high schools serving military students, for a total of 32 schools.

MULTIPLYING SUCCESS:

Expanding student participation in AP courses through the IMF not only gives students from military families the opportunity to earn college credit for advanced coursework, it also significantly increases their chances of succeeding in college. Students who pass an AP exam are three times more likely to complete their college education. In the last two years, NMSI has doubled the number of students taking and passing AP math, science, and English exams in participating schools, dramatically boosting their chances of being college-ready.

WHY:

Almost **two million young people** in America have a parent serving in the military today. More than **220,000** of those young people have someone deployed overseas today. The separation, concerns about safety, and frequent transfers can be particularly hard on the children whose parents protect our country.





HOW:

Generous inaugural funding to launch the program was provided by **Lockheed Martin Corporation**. Major funding to add 14 high schools is being provided by **BAE Systems, Boeing, ExxonMobil, the Jack Kent Cooke Foundation, and Northrop Grumman**, with additional support from **Modern Technology Solutions Inc., the Colorado Legacy Foundation, and the O'Donnell Foundation**. The **Department of Defense Education Activity (DODEA)** is joining the private sector support by awarding grants to implement the IMF in 11 more high schools serving military population, and the **Office of Naval Research (ONR)** is sponsoring three schools.

PARTNERS:

NMSI's partners in the initiative include the **Military Child Education Coalition (MCEC)** and the **Military Impacted Schools Association (MISA)**.

RESULTS:

The IMF is already producing results - in the first year, the number of students enrolled in AP math, science and English classes in IMF schools increased **64 percent**. The Advanced Placement Training and Incentive Program (APTIP) being implemented via the IMF is dramatically increasing the performance of high school students across the country. Schools participating in the program for the last two years showed a **977 percent** increase in AP exams passed in math, science, and English, which is **seven times the national average**.



GOALS:

With additional funding, the program can be expanded to include the majority of public high schools on or near military bases.

YOU CAN HELP:

Join us in this national mission! For more information, please visit www.nationalmathandscience.org.



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