



BARACK OBAMA'S PLAN FOR LIFETIME SUCCESS THROUGH EDUCATION

Barack Obama believes that providing a high-quality education is key to addressing many of our country's challenges, and that world-class public schools provide the path to global opportunity, high-quality employment and strong local communities. While we have many good schools in America, we can still do a better job educating our children and replicating and scaling up successful programs so that they are the norm across the country. We must set ambitious goals for education that include advanced 21st-Century skills, good character and informed citizenship.

Barack Obama's Plan for Lifelong Success through Education will:

- Reform No Child Left Behind.
- Ensure access to high-quality early childhood education programs and child care opportunities so children enter kindergarten ready to learn.
- Work to place effective teachers in every classroom in America, especially those in high-poverty, high-minority areas.
- Reward effective teachers for taking on challenging assignments and helping children succeed.
- Support highly-effective principals and school leaders.
- Make science and math education a national priority.
- Reduce the high school dropout rate by focusing on proven methods to improve student achievement and enhance graduation and higher education opportunities.
- Close the achievement gap and invest in what works.
- Empower parents to raise healthy and successful children by taking a greater role in their child's education at home and at school.

I. REFORM NO CHILD LEFT BEHIND

Barack Obama believes that the overall goal of the No Child Left Behind Act (NCLB) is the right one – ensuring that all children can meet high standards – but the law has significant flaws that need to be addressed. He believes it was wrong to force teachers, principals and schools to accomplish the goals of No Child Left Behind without the necessary resources. We have failed to provide high-quality teachers in every classroom and failed to support and pay for those teachers. Obama understands that NCLB has demoralized our educators, broken its promise to our children and must be changed in a fundamental way.

- **Improve Assessments:** Obama believes we should not be forced to spend the academic year preparing students to fill in bubbles on standardized tests. He will improve the assessments used to track student progress. He will work to create assessment models that provide

educators and students with timely feedback about how to improve student learning, that measure readiness for college and success in an information-age workplace; and that indicate whether individual students are making progress toward reaching high standards. This will include funds for states to implement a broader range of assessments that can evaluate higher-order skills, including students' abilities to use technology, conduct research, engage in scientific investigation, solve problems, present and defend their ideas. These assessments will provide immediate feedback to so that teachers can begin improving student learning right away.

- **Improve Accountability System:** Barack Obama believes we need an accountability system that supports schools to improve, rather than focuses on punishments. Obama also believes schools should assess all of our children appropriately – including English language learners and special needs students. Such a system should evaluate continuous progress for students and schools all along the learning continuum and should consider measures beyond reading and math tests. It should also create incentives to keep students in school through graduation, rather than pushing them out to make scores look better.

II. INVEST IN ZERO TO FIVE EARLY CHILDHOOD EDUCATION

Research shows that early experiences shape whether a child's brain develops strong skills for future learning, behavior and success. Without a strong base on which to build, children, particularly disadvantaged children, will be behind long before they reach kindergarten. Investing in early learning also makes economic sense. For every one dollar invested in high quality, comprehensive programs supporting children and families from birth, there is a \$7-\$10 return to society in decreased need for special education services, higher graduation and employment rates, less crime, less use of the public welfare system, and better health.

Investing in early childhood education during the infant and toddler years is particularly critical. Though parents remain the first teachers for our children, an increasing number of infants and toddlers spend significant parts of their day with caretakers other than their parents. In addition to ensuring that child care is accessible and affordable, we must do more to ensure that it is high quality and provides the early education experiences our children need.

Barack Obama believes the time has come to put children first by focusing investments where research and effective practice tell us we will have the greatest opportunity for long-term success. His comprehensive “Zero to Five” plan will provide critical supports to young children and their parents by investing \$10 billion per year to:

- Create Early Learning Challenge Grants to stimulate and help fund state “zero to five” efforts.
- Quadruple the number of eligible children for Early Head Start, increase Head Start funding and improve quality for both.
- Work to ensure all children have access to pre-school.
- Provide affordable and high-quality child care that will promote child development and ease the burden on working families.
- Create a Presidential Early Learning Council to increase collaboration and program coordination across federal, state, and local levels.

A Pre-School Agenda That Begins At Birth

Children’s ability to succeed in school relies on the foundation they build in their first three years. Pre-kindergarten for four-year-olds is important, but it is not enough to ensure children will arrive at school ready to learn.

The failure to address the early learning needs of children is most apparent with disadvantaged children. One study found that a program that provided family and educational support for disadvantaged children from birth through age five, reduced problems such as probation and criminal offenses by as much as 70 percent over 20 years. Investment in children is not just morally right. As Nobel Prize-winning economist Dr. James Heckman and others have shown, these investments raise productivity of society as a whole.

Illinois is a national leader in investing in children from birth. Following recommendations of the Illinois Early Learning Council, which Barack Obama championed and helped create in the State Senate, Illinois recently launched Preschool for All. The state has made a commitment to provide a universal, voluntary and high-quality early learning program for three-year olds at-risk and all four-year-old children in Illinois, and sets aside funding to support evidenced-based early learning programs targeting infants, toddlers and their families. The program also ensures that all early learning and child care programs are properly coordinated to ensure seamless supports for children as they grow.

Recognizing that the present patchwork in the states is inadequate, Obama’s “Zero to Five” plan will provide a coordinated strategy to the early education and care of children. Obama will create incentives for the states to deliver more – and better – early education for young children.

- **Early Learning Challenge Grants:** Barack Obama will provide funding to enable states to create or expand high-quality early care and education programs for pregnant women and children from birth to age five. Early Learning Challenge Grants will help states create a seamless system of early learning, address gaps in services and enhance quality programs that serve all young children. In order to receive funding, states will be required to match new federal funds, meet quality and accountability standards, develop strong public/private partnerships, ensure that parents receive solid information, and provide support for both early learning and family support services.
- **Expand Early Head Start:** Barack Obama will quadruple the number of infants and toddlers participating in Early Head Start. Early Head Start (EHS) is the nation’s primary early education program for children from birth to age three. It is known for its comprehensive vision of care for low-income children and its high standards of quality services. EHS is designed to foster the child’s social, emotional, cognitive and physical development while supporting the important role of parents and caregivers in early learning. EHS enables communities to design flexible programs through a variety of service delivery options, including home-based services, but requires that programs adhere to research-based standards and principles to best support children and families.
- **Encourage All States to Adopt Voluntary, Universal Pre-School:** Total enrollment in state-funded pre-K by four-year-olds rose by 40 percent over the past five years. Yet state pre-K remains solely a program for four-year-olds in most states with a very small number of children served at younger ages. Barack Obama will provide funding to states to accelerate the trend toward voluntary, universal pre-school for all. States may use Early Learning Challenge Grants to fund high-quality preschool programs that seek to enroll every four-year-old or every three-and-four-year-old. The Early Learning Challenge Grants will provide states with the flexibility

to adopt sliding-scale systems, targets and other measures designed to give children in greatest need priority.

- **Unlock the Full Potential of Early Head Start and Head Start:** Early Head Start and Head Start have traditionally served our most under-resourced families. The recent Head Start reauthorization is an important start to increasing quality and fostering collaboration with other early childhood programs. Barack Obama believes that we should invest more in those programs and ensure that they are using high-quality, evidence-based models of instruction that have been proven to work.
 - Increase Head Start Funding: Barack Obama supports increasing funding for the Head Start program to provide low-income preschool children with critically important learning skills. He also recognizes and supports the important role parents play in the success of Head Start.
 - Improve Quality of Early Head Start and Head Start: Barack Obama will provide \$250 million in dedicated funds to create or expand regional training centers designed to help Head Start centers implement successful models.

- **Expand the Child and Dependent Care Tax Credit:** The Child and Development Care Tax Credit provides too little relief for families that struggle to afford child care expenses. Currently the credit only covers up to 35 percent of the first \$3,000 of child care expenses a family incurs for one child and the first \$6,000 for a family with two or more children. The credit is not refundable, so upper-income families disproportionately benefit while families who make under \$50,000 a year receive less than a third of the tax credit. Barack Obama will reform the Child and Dependent Care Tax Credit by making it refundable and allowing low-income families to receive up to a 50 percent credit for their child care expenses.

- **Increase Funding for the Child Care Development Block Grant Program:** The Child Care Development Block Grant (CCDBG) program provides critical support to low-income families to pay for child care. However, the Bush administration has funded this program at a constant level, while costs per child have increased. As a result, 150,000 fewer children receive CCDBG assistance today than at the beginning of the Bush Administration. If these misguided priorities continue, 300,000 children are expected to lose federal CCDBG by 2010. Barack Obama will reverse this policy and ensure that CCDBG remains adequately funded every year.

- **Improve Child Care Quality:** Since his days as an Illinois legislator, Barack Obama has been a champion of improving the quality of child care services. The Obama administration will encourage states to use their CCDBG quality set-aside funding and other federal supports to develop strategic plans that better coordinate all state birth-to-five services. This measure will help ensure that state and local programs act in an efficient manner to provide all children with the early learning resources they need for a lifetime of success. Obama will also double the resources for quality within CCDBG to support efforts such as developing quality rating systems for child care that reflect higher standards and supports for teacher training and professional development. Other examples of quality enhancements include improving student/teacher ratios, providing family support in child care settings and increasing professional development and teacher training.

- **Support Parents with Young Children:** Barack Obama will expand evidence-based home visiting programs to all low-income, first-time mothers. The Nurse-Family Partnership, for example, provides home visits by trained registered nurses to low-income expectant mothers and their families. The trained nurses use proven methods to help improve the mental and physical health of the family by providing counseling on substance abuse, creating and achieving personal goals, and teaching effective methods to nurture children. Proven benefits of these types of programs include improved women's prenatal health, a reduction in childhood injuries, fewer unintended pregnancies, increased involvement of fathers and increased maternal employment, reduced use of welfare and food stamps, and increased children's school readiness. Researchers at the Federal Reserve Bank of Minneapolis concluded that these programs produced an average of five dollars in savings for every dollar invested and produced more than \$28,000 in net savings for every high-risk family enrolled in the program. The Obama plan will assist approximately 570,000 first-time mothers each year.

- **Presidential Early Learning Council:** Building on his record creating the Illinois Early Learning Council, Barack Obama will promote program collaboration and encourage states to better coordinate the use of federal and state funding streams across early learning and child development systems such as Head Start, Child Care, Education, Early Childhood Special Education, Early Intervention, Maternal and Child Health, Child Welfare and Child Abuse Prevention and Health. Obama believes we need to work at the federal and state level to break down barriers that prevent program integration and encourage the development of state early learning systems. Obama will establish a Presidential Early Learning Council to encourage necessary dialogue among programs at the federal and state levels, and within the private and nonprofit sectors to collect and disseminate the most valid and up-to-date research on early learning, and to highlight best practices and model programs at the state and local level. Many corporate and philanthropic leaders have already demonstrated their commitment to investing in early care and education at the state and national level. As part of the Council's efforts, Barack Obama will bring together governors and state elected leaders, business leaders, community and religious leaders, and experts from research and science to discuss the opportunities for expanding public/private investments in our youngest children.

III. RECRUIT, PREPARE, RETAIN, AND REWARD AMERICA'S TEACHERS

From the moment our children step into a classroom, the single most important factor in determining their achievement is their teacher. Barack Obama values teachers and the central role that they play in education. To ensure competent, effective teachers in schools that are organized for success, Obama's teaching quality plan will:

- Expand service scholarships to underwrite high-quality preparation for teachers.
- Support ongoing improvements in teacher education to enable teachers to meet the challenges of their demanding jobs,
- Provide mentoring for beginning teachers so that more of them stay in teaching and develop sophisticated skills.
- Create incentives for shared planning and learning time for teachers.
- Support career pathways in participating districts that provide ongoing professional development and reward accomplished teachers for their expertise.

The goal is to fundamentally transform the teaching profession by ensuring that it offers high-quality opportunities for professional growth and career development, as other professions like law, medicine, architecture, engineering and accounting do. The teaching quality initiative will help eliminate teacher

shortages in hard-to-staff areas and subjects, improve teacher retention rates, strengthen teacher preparation programs, improve professional development, and better utilize and reward accomplished teachers.

RECRUIT

The professionalization of teaching begins with recruitment efforts that restore prestige and financial incentives to education careers, including adequate entry-level salaries and service scholarships that cover high-quality teacher education programs.

- **Teaching Service Scholarships:** Barack Obama will create substantial, sustained Teaching Service Scholarships that completely cover training costs in high-quality teacher preparation or alternative certification programs at the undergraduate or graduate level for those who are willing to teach in a high-need field or location for at least four years. The North Carolina Teaching Fellows program has produced more than 8,000 teachers for the state's schools since it began in 1986, many of whom are members of underrepresented minority groups and prepared to teach in high-need fields like science and math. An evaluation following fellows over seven years found that 75 percent were still teaching in the public schools in the state, and many of the remainder had advanced to educational leadership positions in schools or districts.

Some Teaching Service Scholarships will be targeted to high-ability candidates who might not otherwise enter teacher preparation and the incentives will also be used proactively to recruit candidates to the fields and locations where they are needed. Nearly all of the vacancies currently filled with emergency teachers could be filled with talented, well-prepared teachers with 40,000 service scholarships of up to \$25,000 each. The scholarships will cover four years of undergraduate or two years of graduate teacher education, including high-quality alternative programs for mid-career recruits in exchange for teaching for at least four years in high-need field or location. The scholarships will be allocated on the basis of academic merit and other indicators of potential success in teaching and will be targeted to areas of teaching shortage as defined nationally and by individual states.

PREPARE

If students are expected to achieve 21st-century learning standards, we can expect no less from their teachers. Yet teachers' access to knowledge through preparation and professional development is more haphazard in the United States than in most other industrialized countries. Preparation programs range from excellent to extremely weak, and state regulatory systems are uneven across the country.

- **Performance-Based Teacher Education:** Most professions besides teaching require preparation programs to be accredited, and use the accrediting process to leverage quality. Professional accreditation in teaching is voluntary in most states, so there is no guarantee of quality. Obama will change this by requiring professional accreditation of all programs preparing teachers, with a focus on evidence regarding how well teachers are prepared. In order to help identify the most successful programs, colleges of education and alternative licensure programs will track their graduates' entry and retention in teaching and their contributions to growth in student learning. Challenge grants will encourage the adoption of successful practices across the entire enterprise of teacher preparation.

Teacher preparation programs will be further strengthened if they are guided by a high-quality, nationally-available teacher performance assessment that measures actual teaching skill in content areas. Barack Obama will fund the development of such an assessment, which, unlike

current examinations used for licensing, will do more than merely measure basic skills and subject matter knowledge via paper-and-pencil tests. It will collect evidence about how prospective teachers plan and teach in the classroom, evaluate student work, and adapt their teaching to student learning needs. The high-quality, nationally-available teacher performance assessment will:

- Incorporate challenging teaching standards.
 - Require evidence of teacher performance and outcomes in promoting student learning.
 - Provide data that can be used for the accreditation process.
 - Facilitate teacher mobility across states, so that teachers can easily move from states with surpluses to those with shortages.
- **Professional Development Schools:** Professional Development Schools enable teachers to learn from expert practitioners in the field. Like teaching hospitals in medicine, Professional Development Schools partner universities with school sites that exhibit state-of-the-art practice and train new teachers in the classrooms of expert teachers while they are completing coursework. These schools also engage in intensive professional learning for veteran teachers and may become hubs of professional development for their school districts. Many of these new models are located in urban school districts, creating a pipeline of teachers well-prepared to teach in cities. Highly-developed models have been found to increase teacher effectiveness and raise student achievement. Barack Obama will provide \$100 million to stimulate teacher education reforms built on school-university partnerships.
- **High Quality Preparation for High-Need Districts:** In the U.S. Senate, Barack Obama has authored legislation to create Teaching Residency Programs to prepare teachers to work in high-need districts. These school-university partnerships, such as the Chicago Academy for Urban School Leadership, have strong track records of recruiting, training and supporting high-quality teachers and can provide a pipeline of teachers to high-need districts and support them in innovative ways. In the Teacher Residency Program, each participating beginning teacher:
- Receives a living stipend or salary for a year-long residency training program, which is paid back through a three-year service requirement in the district.
 - Learns from a trained, experienced, expert mentor working in a school designed to offer high-quality instruction to high-need students.
 - Engages in rigorous graduate level coursework from a partnering university, earns a master's degree, and teaching certification.
 - Acquires knowledge of planning, content, student learning, management of the classroom environment, and professional responsibilities.
 - Continues to receive mentoring, professional development, and coaching support during the first two years of teaching.

As president, Obama will expand the number of Teacher Residency Programs by providing funding for 200 new programs that would each serve an average of 150 candidates each year. Each year, Obama's plan will supply 30,000 exceptionally well-prepared recruits to high-need schools to provide long-term commitment and leadership in these districts.

RETAIN

Retention is as important as recruitment to addressing the teaching shortage. With 30 percent of new teachers leaving within five years – and a higher percentage in urban areas – solving the retention crisis is absolutely critical. Beginning teachers need mentoring and support, and accomplished veteran teachers need opportunities for career advancement and recognition. Teacher attrition is extremely costly both in terms of district costs for recruitment, selection and training and in terms of lost student gains. Teachers become noticeably more effective after their third year in the classroom, the point at which far too many have already left, only to be replaced by other novices. Estimates of the annual cost of teacher attrition exceed \$2 billion nationally. Two recent analyses of a large-scale national teacher survey revealed that, in addition to adequate salaries and working conditions, the most important predictors of teachers’ ongoing commitment to the profession are the extent of their preparation and the quality of the mentoring and support they receive.

➤ **Mentoring:** In places like California that have funded mentoring, beginning teacher attrition has fallen: generally, first year teachers who are mentored effectively leave at rates of no more than five percent. Barack Obama’s Career Ladder Initiative will provide federal resources to states and districts to leverage state efforts to create strong mentoring that supports beginning teachers. Obama will provide \$1 billion in funding for grants to create mentoring programs and reward veteran teachers for becoming mentors. The program will:

- Select mentors based on demonstrated teaching skill and effectiveness.
- Work in the same subject area as those that they are assisting.
- Visit, observe and consult with the beginning teachers at least weekly.
- Meet regularly to develop their skills as mentors and to share resources and ideas.
- Receive relief from teaching duties as a result of such additional responsibilities.
- Provide underperforming teachers with individual help and support. If after receiving intensive assistance, they are still underperforming, the district will find a quick and fair way to put another teacher in that classroom, as Peer Assistance and Review programs developed by professional teachers’ associations and school boards in a number of districts have shown how to do.

➤ **Paid Common Planning Time:** Students do better when teachers get time to collaborate to share best practices, review student work and plan curriculum and lessons together, research shows. Studies also show that collaboration and paid planning time are key to retaining good teachers. Obama’s plan will include incentives for redesigning schools so that they are organized for teacher learning, and funding for paid common planning and professional learning time.

REWARD

Existing compensation systems places classroom teaching at the bottom, provides teachers with little opportunity to share their knowledge and skills with others and requires teachers to leave the classroom if they want greater responsibility or substantially higher pay. Barack Obama believes we need a different career continuum, one that places teaching at the top; creates a career progression that supports teachers as they become increasingly expert, and provide additional coaching and professional development for teachers to develop their skills; and provides special supports for teachers in need of more intensive assistance.

In order to honor our students’ needs and our educators’ hard work, we must modernize the teaching profession to ensure adequate support, pay and professional accountability. Teachers should be better compensated, with both a more competitive base salary for well-prepared and successful teachers and

professional compensation systems designed with the help and agreement of teachers' organizations. Compensation systems can provide salary incentives for demonstrated knowledge, skill and expertise that move the mission of the school forward and reward excellent teachers for continuing to teach.

Career Ladder Initiative

Barack Obama's Career Ladder Initiative will provide funding to districts that are prepared, with the participation of their teachers' associations, to create opportunities for high-achieving veteran teachers to gain additional compensation for serving as mentors and leading curriculum planning, professional development and school reform efforts. Participating districts will design programs that include equitable and competitive salaries, with compensation systems that recognize knowledge, skills and accomplishment in the classroom as well as willingness to provide leadership in hard-to-staff locations. Where districts are addressing shortages in high-need schools, they will need to address the teaching conditions in those schools – ensuring strong administrative leadership; reasonable class sizes; and the necessary books, materials, and equipment to support learning.

Career ladder programs will include differentiated supports and compensation in ways that recognize and develop growing expertise. For example:

- **Support for Beginners:** As beginning teachers are mentored in their early years, those who successfully complete an induction program and demonstrate their competence will have the ability to move from a “novice” level of teaching to a “professional” status, which is accompanied by the award of earned tenure and increased compensation.
- **Opportunities for Advancement:** As teachers gain expertise, they should have the opportunity to move into leadership roles associated with their knowledge and skills. In addition to the tremendous benefits for beginning teachers, for example, mentoring programs also offer career advancement opportunities for teachers. The opportunity to mentor and coach other teachers creates an incentive for expert veterans to remain in teaching as they gain from both learning from and sharing with their colleagues. Cincinnati, Rochester and Denver among other districts, have developed career ladders that create opportunities for advancement for expert teachers, with mentoring being one of the differentiated responsibilities available to accomplished teachers.
- **Professional Compensation:** Like promising local initiatives in Denver and Cincinnati, compensation systems that reward teachers for deep knowledge of subjects, additional skills for meeting special kinds of student and school needs (for example special education knowledge or bilingual language abilities), high levels of performance measured against professional teaching standards (such as National Board certification and local standards-based assessments), and a variety of contributions to student learning can encourage teachers to continue to acquire needed skills, enhance the expertise available within schools and improve learning for many traditionally under-served student groups. In these systems, multiple indicators of teaching quality are used to capture teachers' contributions to their own student's learning growth and to the school as a whole, as well as their work with parents and families.

As important as recognition and financial rewards for teachers are the opportunities that career ladders provide for teachers to contribute to the improvement of education in their school and district. This approach to compensation innovation is more productive than annual bonuses for a handful of teachers, as it has positive spillover effects for both individual and organizational improvement, motivation and change. Beginning teachers appreciate the opportunities to be mentored as they start their careers. Veteran teachers appreciate the opportunity to take on

advanced roles, coach others and contribute to school reform as they move up the career ladder. The school benefits as it becomes organized to take advantage of the knowledge of accomplished teachers and to incorporate professional learning at every stage of the continuum, ending the teacher isolation that has impaired the improvement of teaching in many schools.

IV. SUPPORTING STRONG SCHOOL LEADERS

The quality of a school's principal is the second most important determinant of student achievement, and the single most important determinant of whether teachers stay in a particular school. Yet national studies suggest that there is a growing shortage of well-prepared principals even while the demands of the principalship are growing. School leaders today need not only to manage schools, they need to develop high-quality instruction and professional development and redesign school organizations so that they better support student and teacher learning. Obama will create a challenge grant program for states and districts in order to:

- **Develop an Infrastructure for Professional Development:** Creating and sustaining high-quality leadership development requires a comprehensive plan to enable principals to develop the sophisticated skills they need and ongoing financial support. Barack Obama will provide funding for the creation or enhancement of state leadership academies. These academies, located in universities, state agencies or free-standing organizations will sponsor, host and coordinate professional development opportunities for educational leaders in their respective states. In addition, the academies will serve as centers where each state's top educational leaders can gather to share practices and help create the professional development requirements and offerings in their states.

Obama's plan will also support research about the effectiveness of these various approaches to principal training so that future professional development investments can be guided by evidence about what best supports principals' in learning essential practices and becoming effective at guiding high-performing school organizations.

- **Supporting a Continuum of Professional Development:** Barack Obama will provide states with funding and guidance to develop multi-tiered credentialing systems that encourage principals to grow professionally over the course of their careers, and particularly within their first few years on the job, when they are most open to and in need of professional development. Some states have already developed exemplary multi-tiered credentialing systems that the federal government can look toward for best practices to promote in other states.

Delaware, for example, has created a three-tiered licensing system, which requires new principals to receive 30 hours per year of mentoring for three years, with each year focusing on different components of Delaware's standards for principals. A state-funded Principal's Academy helps to implement the state's mentoring program, and the Delaware Academy for School Leadership (DASL), housed at the University of Delaware, also offers mentoring for new principals and other professional development programs for school leaders.

V. MAKE SCIENCE AND MATH EDUCATION A NATIONAL PRIORITY

This year marks the 50th anniversary of Sputnik, the first orbiting launch into space. In 1957, the beginning of the space age sparked an explosion of the attention to the development of American scientists who would work to further America's place as a leader in the sciences and the global economy. And yet, fifty years after Sputnik, science and math education is in a crisis in all American schools. As the *Gathering Storm* report concluded, "danger exists that Americans may not know

enough about science, technology, or mathematics to contribute significantly to, or fully benefit from, the knowledge-based economy that is already taking shape around us.” For example:

- In 2003, the Program in International Student Assessment found that U.S. 15 year olds ranked 28th out of 40 countries in mathematics and 19th out of 40 countries in science.
- Almost 30 percent of students in their first year of college are forced to take remedial science and math classes because they are not prepared for college-level classes.
- A recent report shows that of students entering college with plans to major in science or engineering, less than 25 percent of underrepresented minorities graduate with a degree in that field within six years. In 2000, minorities received only 14 percent of bachelor’s degrees in engineering and mathematics.
- While employment in science, math, engineering, and technology (STEM) fields increased between 1995 and 2004 by 23 percent, the share of higher education degrees in STEM fields fell from 32 percent to 27 percent and there were declines in the number of students earning degrees in engineering.

These statistics are dismal. In the 21st Century, everyone needs to know science and math, not only to find employment, but also to be healthy and well-informed citizens. Moreover, over 80 percent of the fastest growing occupations are dependent upon a knowledge base in science and math. Barack Obama will make math and science education a national priority, and provide our schools with the tools to educate 21st-Century learners.

- **Recruit High-Quality Math and Science Teachers:** Barack Obama’s Teaching Service Scholarship program will prioritize recruiting math, science and technology degree graduates. Additionally, Obama’s Teacher Residency Program can also supply teachers in these high-needs subject areas. Obama’s plan to stimulate Professional Development Schools can help new science and math teachers, or veteran teacher needing to hone their skills, learn from professionals in the field. Programs such as New York City’s “Math for America” help build a community of excellent teachers to serve in these high-needs areas.
- **Enhanced Science Instruction:** Science is often a low priority in the school program, particularly at the elementary level. A number of recent reports indicate that the strictures of NCLB are correlated with a further reduction in the amount of time spent on science and other subjects in many schools. Barack Obama will work with governors to create flexible and workable systems for the states to achieve the goal of ensuring all children have access to strong science curriculum at all grade levels. Obama will also support state efforts to make science education a priority at the pre-K level. The Science in Elementary program in Pennsylvania is an example of a state taking steps to encourage inquiry based science state-wide, and has offered materials and professional development to one to three elementary schools from every district in the state.
- **Improve and Prioritize Science Assessments:** Assessments should reflect the range of knowledge and skills students should acquire. Science assessments need to do more than test facts and concepts. They need to use a range of measures to test inquiry and higher order thinking skills including inference, logic, data analysis and interpretation, forming questions, and communication. High-performing states like Connecticut, Maine, New Hampshire, and Vermont, use an assessment that calls for students to design and conduct investigations, analyze and present data, write up and defend results. Barack Obama will work with governors and educators to ensure that state assessments measure these skills.

VI. HELPING OUR MOST AT-RISK CHILDREN SUCCEED IN SCHOOL

Additional Learning Time

The typical school day is a throwback to America's agricultural era and is not on par with that of other developed countries around the world. We expect students to learn more today than ever before and many experts agree that additional learning time, particularly for struggling students, is important to gaining knowledge and skills for the 21st Century. Longer school days or longer school years can help provide additional learning time for students to close the achievement gap. Barack Obama will create a \$200 million grant program for states and districts that want to provide additional learning time for students in need.

Reduce the High School Dropout Rate

Only 70 percent of U.S. high school students graduate with a diploma. African American and Latino students are significantly less likely to graduate than white students. Today, dropouts are twice as likely to be unemployed, and for those who work, pay is low, advancement limited and health insurance less available.

- **Success in the Middle:** The dropout problem begins well before high school. The middle grades (grades 5, 6, 7, 8) are a crucial, but often overlooked, segment of the educational pipeline. Middle school students must gain skills in reading, mathematics, and other subjects to be successful in the rigorous high school coursework that follows. Early indicators can reveal students that need the most help. Sixth-grade students who do not attend school regularly, who undergo frequent disciplinary actions, or who fail mathematics or English have only a 10 percent chance of graduating high school on time. The eighth-grade gap in NAEP mathematics scores between white and Hispanic students was as wide in 2007 as in 1990. Without effective interventions and supports, at-risk sixth-grade students are at risk of becoming tenth-grade dropouts.

As president, Barack Obama will address these risks at the appropriate time, rather than waiting for ninth-grade to start taking action. In the U.S. Senate, Obama has introduced the "Success in the Middle Act," which will provide federal support to improve the education of middle grades students in low-performing schools by:

- Requiring states to develop a detailed plan to improve middle school student achievement.
 - Developing and utilizing early identification data systems to identify those students most at-risk of dropping out.
 - Investing in proven strategies such as: (1) providing professional development and coaching to school leaders, teachers and other school personnel in addressing the needs of diverse learners and in using challenging and relevant research-based best practices and curriculum; and (2) developing and implementing comprehensive, school-wide improvement efforts and implementing student supports such as personal academic plans, teaching teams, parent involvement, mentoring, intensive reading and math instruction and extended learning time that enables all students to stay on the path to graduation.
- **Redesigned Schools:** Many schools have been redesigning the way they operate so that they are more successful in teaching all students, by rethinking the factory-model that we inherited from reforms a century ago and creating schools that allow teachers to work in teams, personalize

instruction for students and collaborate together to create a more rigorous and relevant curriculum. These efforts include the development of small schools and small learning communities in secondary schools. Well-designed models have improved school safety, increased attendance and sharply reduced dropouts. Obama will support federal efforts to continue to encourage schools to organize themselves for greater success by developing stronger relationships among adults and students, a more engaging curriculum, more adaptive teaching, and more opportunities for teachers to plan and learn together.

- **Competitive Grants for Evidence-Based Models to Help Students Graduate:** Studies show that a majority of students who leave high school without a diploma continue to pursue the goal of high school graduation. Unfortunately, states and districts lack the resources to make substantial investments in alternative education pathways. Non-profit and community-based organizations have tried to fill in the gap, but they lack substantial resources. As president, Barack Obama will establish a competitive grant process open to existing or proposed public/private partnerships or entities that are pursuing evidence-based models that work – such as Diploma Plus or Teacher Advisor programs. These grants will decrease the dropout rate by increasing the capacity of state and district leaders as well as outside leaders – foundations, politicians, entrepreneurs, and community leaders – to collaborate on improving graduation rates.

Close the Achievement Gap

- **Expand Summer Learning Opportunities:** Differences in summer learning opportunities contribute to the achievement gaps that separate struggling minority and poor students from their middle-class peers. Barack Obama’s “STEP UP” plan, which was recently signed into law, addresses the grade school achievement gaps by supporting summer learning opportunities for disadvantaged children through partnerships between local schools and community organizations.
- **Support College Outreach Programs:** Barack Obama supports programs like GEAR UP, TRIO and Upward Bound to encourage more young people from low-income families to consider and prepare for college.
- **Support English Language Learners:** Barack Obama supports transitional bilingual education and will help Limited English Proficient students get ahead by supporting and funding English Language Learner (ELL) classes. He will support development of appropriate assessments for ELL students, monitor the progress of students learning English and hold schools accountable for making sure these students complete school

Expand High-Quality Afterschool Opportunities

Expanding access to high-quality afterschool programs will help children learn and strengthen a broad range of skills and provide relief to working parents who have to juggle child care and work responsibilities. Barack Obama will double funding for the main federal support for afterschool programs, the 21st Century Learning Centers program, to serve one million more children each year. Obama will include measures to maximize performance and effectiveness across grantees nationwide.

Promote Safe Schools

A lack of student discipline is a leading challenge facing many public schools. Negative and reactive school management practices, such as zero tolerance policies, are ineffective and often counterproductive. Barack Obama will promote a more effective and just method of addressing

behavioral problems in schools. Obama will expand an innovative program, already being used in states like Illinois, that teaches students about positive behavior and expects the adults in our schools to set the same high standards for behavior as they do for achievement. Known as “Positive Behavior Support” (PBS), this system is designed to deal with discipline problems in a research-based, experimentally-verified way, based on one simple premise: stop problem behavior before it starts. In PBS schools, there are adult school-wide agreements to teach behavior, with ways to support positive behavior when it occurs. In any given school, the problem might be a general lack of discipline, problems with bullying or school violence or a loss of instructional time because of behavioral issues. In PBS schools, the adults act together to set common expectations, not just for learning, but for the behaviors that support learning. These schools work to stop problem behavior before it starts, using research-validated practices. As a result, students learn more. In the U.S. Senate, Obama has been a leading advocate for this approach, introducing the “Positive Behavior for Effective Schools Act” to make PBS an allowable use of funds under No Child Left Behind.

VII. INVEST IN WHAT WORKS

We currently make inadequate investments into researching and developing better educational tools and methods. While we spend roughly \$400 billion annually in this country on public education, we spend less than seven tenths of one percent of that – \$260 million – figuring out what actually works. By comparison, the Department of Defense spends roughly ten percent of its annual budget on research and development (R&D). And the National Institutes for Health spends roughly 100 times the amount we spend on educational R&D. Those investments are what give America the most advanced military and medical systems in the world.

As president, Barack Obama will double our investment in early education and educational R&D by the end of his first term in office. Part of this investment will involve an R&D program for improving science education. This new program will build knowledge about strategies and mechanism that can bring lasting improvements to science and math and technology education.

Obama believes that we’re not going to solve our education problems just by throwing money at them; we have to make smart investments in innovating long-term solutions and developing a deep knowledge of what works. He will also ensure that the results of this research are disseminated and easily accessible to the public.

VIII. ENLIST PARENTS AND COMMUNITIES TO SUPPORT TEACHING AND LEARNING

Barack Obama will call on parents, families, and schools to work together and take responsibility for instilling in young people our best shared values like honesty, hard work and preparation for good citizenship. A society has not succeeded if we prepare our young people for academic success but not developed their values and readiness for responsible citizenship. Obama’s plan calls for:

- **Clear and high expectations.** Every school receiving funding under this plan is required to lay out clear and high expectations for student behavior and shared values, agreed on by the school’s educators and parents. This plan will support summer planning time for teachers to design and clarify behavioral expectations or receive training in models driving positive student behavior schoolwide.
- **School-family contracts.** The Obama plan will encourage schools and parents to work together to establish a school-family contract laying out expectations for student attendance, behavior, and homework. These contracts would be provided to families in their native language when

possible and would include information on tutoring, academic support, and public school choice options for students.

- **Parental and family responsibility.** Barack Obama will call on parents to turn off the TV and video games, make sure their children are getting their homework done and work to take a greater stake in their child's education both in and outside of school.
- **Service.** All students in grant recipient districts will be expected to engage in some form of community service.

IX. A COMMITMENT TO FISCAL RESPONSIBILITY

Barack Obama's early education and K-12 plan package costs about \$18 billion per year. He will maintain fiscal responsibility and prevent any increase in the deficit by offsetting cuts and revenue sources in other parts of the government. The early education plan will be paid for by delaying the NASA Constellation Program for five years, using purchase cards and the negotiating power of the government to reduce costs of standardized procurement, auctioning surplus federal property, and reducing the erroneous payments identified by the Government Accountability Office, and closing the CEO pay deductibility loophole. The rest of the plan will be funded using a small portion of the savings associated with fighting the war in Iraq.