Summary of New National Defense Education Act
Senator Edward Kennedy

Spurred into action by launch of Sputnik, Congress passed the National Defense Education Act (NDEA) in 1958. The near 50 year old law declared a national "educational emergency" and federal expenditures for education more than doubled in the four years after its passage. The programs authorized under the Act helped the Unites States to improve rapidly in math, science, engineering and technology, and led to our dominance in the arms race and global economy.

Today, our nation once again faces an international challenge in math and science education: we must confront a shortage of highly skilled and educated workers, especially in math, science, engineering and technology. Third in the world in 1975, America now ranks 15th in the production of new scientists and engineers. This poses a threat to our national security and our economic security.

To address these needs, the New National Defense Education Act of 2005 would:

Modernize K-16 Education by:

Establishing K-16 readiness councils to link student skills and curricula with the expectations of colleges, businesses, and the Armed Forces. The New NDEA would empower the Secretary of Education to award grants to States for the development of K-16 Student Readiness Councils. The Councils would engage elementary, high school, college and university professionals, members of the business community and military personnel to realign K-12 learning so that students, especially low-income and minority students, leave high school with the skills necessary to succeed in institutions of higher education, the modern workforce, or the Armed Forces.

Creating a barometer of national math and science student achievement in 4th, 8th and 12th grades. NAEP only requires math assessment in 4th and 8th grade; science remains voluntary. As a result, we cannot reliably monitor trends in K-12 math and science achievement and readiness. The New NDEA would require the NAEP program to measure math and science achievement in 4th, 8th, and 12th grade. The program's authorized funding level would also be doubled to support NAEP's expanded purpose.

Revising math and science student achievement and readiness expectations to meet international standards. Recent data suggest that U.S. schools are falling far behind other countries in math, science, engineering and technology. The New NDEA would require the Secretary of Education to contract with the National Research Council to review and assess existing national standards in Math and Science, including those used in developing the National Assessment of Education Progress ("NAEP) in order to ensure that they are appropriate measures of student readiness levels. They would also review how student achievement and readiness compares to other countries. The bill authorizes the Commissioner of Education Statistics to award a $1.5 million grant to the Board on Testing and Assessment of the National Research Council (NRC).

Recruit, Retain and Reward High Quality Math, Science, and Technology Teachers by:

Providing $4,000 college grants per academic year to future math and science teachers. The New NDEA would amend Title II of the Higher Education Act of 1965 (HEA) to allow the Secretary of Education to award eligible institutions funds for Teacher Education Assistance for College and Higher Education (TEACH) Grants. Students would receive $4,000 grants each academic year in exchange for agreeing to teach four years in either a high-need public school or in a high-need field, like mathematics, the sciences, or technology education.

Making competitive grants available for higher education institutions to recruit math, science, and engineering majors to become teachers. The bill would authorize the Secretary of Education to award $200 million in grants to improve the availability and recruitment of teachers from among students majoring in high-need subjects, such as mathematics, science and engineering. Institutions of higher education would apply for funds to create new recruitment incentives, update and enhance curriculum, create dual appointments for faculty between school of education and schools of arts and sciences, and develop strategic plans between schools of education and local school districts.

Increasing loan forgiveness for math, science, and technology teachers. The total amount of loan forgiveness would increase from $17,500 to $20,000 for eligible teachers, including math, science, and technology educators.

Providing up to $15,000 in tax exemption for math, science, and technology educators at high-need schools. The bill would revise Internal Revenue Code and allow eligible educators at high-need schools or teaching high-need subjects, like mathematics, science and technology education, to exclude up to $15,000 of their gross annual income when filing their taxes.

Supporting training and professional development opportunities for math, science, and technology educators through summer institutes. The Act authorizes the Director of the National science Foundation (NSF) to award grants to State agencies. Eligible entities would receive funds from the State agencies to establish and operate science, mathematics, engineering, and technology summer institutes that provide professional development for elementary and secondary school teachers.

Double the Number of New American Scientists by:

Investing in math, science, and technology textbooks and laboratories. When the original NDEA was passed, Congress recognized that students need lab equipment to perform experiments and up-to-date math and science textbooks to learn. NDEA contained a program to fund math and science infrastructure improvements around learning in K-12 schools. The New NDEA would renew and expand that commitment by authorizing the Secretary of Education to provide local agencies $100 million to build, repair or upgrade schools' math, science, and technology laboratory equipment and textbooks. The program would give priority to low-income and low-achieving school districts.

Making college and graduate school tuition-free for low and middle income students studying math, science, engineering, and technology. Under the New NDEA, the Secretary of Education would award grants to colleges to provide free tuition for middle- or low-income undergraduate and graduate students earning degrees in math, science, engineering, or technology. The Secretary would award a total of $250 million for fiscal year 2006 and $350 million annually from fiscal year 2007 – fiscal year 2011. To be eligible, students would need to fall below the existing HOPE Credit income limit – currently $52,000 in adjusted gross income for a single individuals or $105,000 for a couple.