Legislative Proposals to Strengthen Science and Math Education in the
No Child Left Behind Act of 2001
Prepared by National Science Teachers Association

Over the past few years the challenges facing K-12 science and mathematics education have been well documented. Simply put, the science, mathematics, engineering and technology education we provide to our students during the K-12 years is absolutely critical to our nation’s future.

As Congress prepares to reauthorize the No Child Left Behind Act, the National Science Teachers Association (NSTA) urges you and your colleagues to consider five key recommendations that we believe will help to strengthen science and math education.

1. Include Science in Adequate Yearly Progress
2. Set Aside Funding for Teacher Professional Development and Mentoring under Title II A
3. Strengthen Elementary Science and Math Education by Creating Master Teachers for K-8 Classrooms
4. Create P-16 STEM Councils
5. Expand the NCLB Math and Science Partnerships under Title II B

1. Include Science in Adequate Yearly Progress
Amend the No Child Left Behind Act to require that the science assessments, which will begin in the 2007-08 school year, be included in the state's accountability system beginning in the 2008-09 school year. Annual assessments in science in grades 3-8, similar to annual assessments in math and reading, should be phased in.

Suggested change to current language:

Title I, Section 1111(b) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)) is amended— (1) in paragraph (2)(G), by striking “mathematics and reading or language arts” and inserting “mathematics, reading or language arts, and (beginning in the 2008–2009 school year) science”; and (2) in paragraph (3)(C)(vii), by striking “mathematics, reading or language arts” and inserting “mathematics, reading or language arts, and (beginning in the 2009–2010 school year) science”.

A similar recommendation can be found in Science Accountability Act, H.R. 35, 110th Congress; Aspen Institute Commission on No Child Left Behind Recommendations

2 Set Aside Funding for Teacher Professional Development and Mentoring under Title II, Part A
NSTA joins other core subject teacher groups in support of a set aside in NCLB Title II, Part A Teacher Quality grants that would ensure an investment in teacher professional development and mentoring for teachers in the core subject areas.
Teacher quality is the most important factor in student achievement. An important goal of Title II, Part A is to ensure that communities get the support they need to provide qualified mentors for new teachers and to provide effective professional development opportunities for all educators.

Unfortunately, many schools and districts are electing not to spend Title II A funds on important professional development or mentoring activities that would help teachers to improve student achievement. The reality is that in many communities, even though school leaders want to fund professional development and mentoring programs, competing priorities are forcing them to use funds for other purposes.

Teachers deserve a guarantee that resources will be available to help them meet NCLB’s HQT requirements and accountability mandates.

NSTA believes that LEAs should spend 50 percent, or half, of their Title II, Part A funds from the state, for professional development and mentoring activities for core subject teachers. This will guarantee that teachers receive the professional development and mentoring they need to help schools and students reach the goals of this law. The LEA would continue to use half of the Title II money for other allowable purposes.

Providing a set aside would not undermine the authority and flexibility of local administrators to make decisions for their schools. Instead, we believe it will send a powerful message and empower school administrators who know that teacher training and mentoring are priorities that must be addressed and funded in order to improve the quality of teaching in their schools.

Suggested change to current language:

Section 2123. Local Applications and Needs Assessments (b) is amended to add the following new subparagraph (4) and to redesignate subparagraphs (4) thru (11) as (5) thru (12)

(4) An assurance that the local educational agency will allocate 50 percent of funds awarded under this subpart to professional development activities (which may include teacher mentoring).

3. Strengthen Elementary Science Education

Amend Title II, Part A language to strengthen and clarify allowable use of funds at both the state and local level to create science and mathematics Master Teacher programs in K-8 schools. Master Teachers (also known as specialists in core academic subjects, exemplary teachers or mentor teachers) would provide mentoring to other teachers; model lessons or co-teach lessons; provide oversight of hands on inquiry materials; offer in-service professional development or provide avenues for teachers to obtain professional development; and other duties as determined. Priority would be given to creating master teacher programs in elementary science and mathematics.
Suggested change to current language:

Title II A (Sec. 2113 State Use of Funds, (c) State Activities (14) is amended by adding, at the end, “Priority should be given to assisting local educational agencies in developing science and mathematics master teachers in K-8 classrooms.” Title II A (Sec. 2123, Local Uses of Funds, (a)(10) is amended by adding, at the end, “Priority should be given to programs that develop exemplary master teachers in elementary mathematics and science classrooms. Master teachers would provide mentoring to other elementary teachers; model lessons and/or co-teaching lessons; provide oversight of hands-on inquiry materials, equipment, and supplies, including coordination of supplying, replacing and repairing such materials; offer in-service professional development and/or provide avenues for teachers to obtain professional development; work with high risk and/or gifted and talented students; work with the reading specialists, ELL specialists or curriculum specialists to help teachers learn strategies to facilitate the learning of content area reading; work with teachers to integrate technology into the teaching of science and mathematics; work with other district/school master teachers by sharing information, updates and opportunities for their own professional growth; develop learning communities that will create and sustain professional development opportunities beyond the limits of the role of the master teacher; identify accessible resources that can empower teachers as they design their own personal learning opportunities; support teachers as they design curriculum that is in alignment with state standards; and craft experiences that will invigorate teachers and create enthusiasm for the teaching and learning of science and mathematics.”

4. Create P-16 STEM Councils
Amend Title II, Part A to expand State use of funds to allow the establishment or strengthening of existing P-16 councils. Councils would be focused on alignment of K-12, postsecondary education and workforce systems and would provide a venue for addressing pipeline issues and implementing systemic reforms.

Suggested change to current language:

Sec. 2113 State Use of Funds (c) State Activities is amended by adding the following new subparagraph (19):

“(19) Establishing or strengthening existing P-16 Councils that would focus on aligning K-12, postsecondary education and workforce systems and for providing a venue for addressing pipeline issues and implementing systemic reforms. Councils should be composed of key state stakeholders, including state officials, K-12 and postsecondary education representatives, and business leaders.

Required activities would include the following:
(i) Align K-12 standards, assessments, curricula with the expectations of postsecondary education and the skills required to enter the workforce;
(ii) Align teacher preparation and certification with K-12 standards; and,
(iii) Strengthen alignment/coordination between 2-year and 4-year degree institutions.

(B) Allowable activities would include the following:

(i) Focusing on improvement of struggling schools/teacher recruitment; and,
(ii) Focusing on early awareness and college preparation programs.”

Similar recommendation found in: BHEF's Math Science Report

5. Expand the NCLB Math and Science Partnerships under Title II B
Amend No Child Left Behind Title II, Part B to increase technical support to states so they may develop and support more state based STEM reform projects in the Math and Science Partnerships program. Currently there are no administrative funds provided those charged with administering the program. State agencies must do a better job to administer these programs; to provide technical support to existing, and potential MSP, grantees; and to conduct needs assessments and evaluation of MSP initiatives.

Suggested change to current language:

Section 2202. Grants for Mathematics and Science Partnerships is amended to add the following new subparagraph (i) and to redesignate subparagraphs (i) and (ii) as (ii) and (iii), respectively.

“(i) the State may reserve a portion of the State’s allotment, not to exceed 5% of the allotment, to support the administration of the program authorized by this Part, as well as the activities described in paragraphs (e) and (f) of this section.”

Further, paragraph (B) is amended to read “…under subparagraph (A)(i) or (A)(ii) among the State educational agencies…”

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