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FISCAL IMPACT REPORT

ORIGINAL DATE 1/30/06
 SPONSOR Nava LAST UPDATED 2/13/06 HB _____
 SHORT TITLE Mathematics and Science Education Initiative SB 551/aSEC/aSFC
 ANALYST McOlash/Lewis

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY06	FY07		
	NFI		

(Parenthesis () Indicate Expenditure Decreases)

Relates to:

- HB 26 Santa Fe Teacher Science Instruction
- HB 38/SB 56 Education Department Science & Math Division
- HB 126 Middle School Math & Science Teacher Training
- HB 158 NMSU Science, Math & Aerospace Academy
- HB 463 NM Tech Science & Math Career Preparation
- HB 479 UNM Web-Based Math & Science Curriculum
- SB 25 Middle School Teacher Science & Math Training
- SB 45 NMSU K-12 Science & Math Assistance Programs
- SB 451 Teacher Math & Science Development

Relates to Appropriation in the General Appropriation Act

SOURCES OF INFORMATION

LFC Files

Responses Received From

- Public Education Department (PED)
- Legislative Education Study Committee (LESC)
- Energy Minerals and Natural Resources Department, State Parks Division (SPD)

SUMMARY

Synopsis of SFC Amendment

The Senate Finance Committee amendment:

- 1) adds web-based mathematics and science curricula as fundable programs for the improvement of math and science curricula; and
- 2) strips the appropriations from the bill.

Synopsis of SEC Amendment

Senate Education Committee amendment (Section 4) strikes B, 4
~~assist school districts to develop and implement a strategic, long-term plan for improving mathematics and science education in their school systems;~~

and inserts in lieu thereof:

ensure that school district strategic plans include goals for improving mathematics and science education aligned to the department's academic standards;

The bill adds mentoring and web-based homework assistance as fundable programs. It also reduces the seventeen member Mathematics and Science Advisory Council to twelve members primarily by reducing the number of school administrators, higher education institutional members, Indian nations, tribes, or pueblos, and the general public.

SB 551/a SEC reduces the appropriation by \$70,000 (from \$425,000 to \$355,000) for staff and other expenses of the PED Mathematics and Science Bureau.

Synopsis of Original Bill

Senate Bill 551 enacts the Mathematics and Science Education Act as a new section of the Public School Code. Among its other major provisions, the bill also creates the Mathematics and Science Bureau in the Instructional Support and Vocational Education Division of the Public Education Department (PED), under the direction of a bureau chief appointed by Secretary of Public Education; creates the Mathematics and Science Advisory Council; and creates the Mathematics and Science Proficiency Fund.

SB 551 requires PED to design and implement a statewide research-based mathematics and science initiative to improve mathematics and science proficiency in the state. The components of the initiative are:

- alignment of curricula and instruction with state standards and benchmarks;
- consistent assessment and evaluation of student proficiency;
- requirements for appropriate, rigorous professional development;
- promotion of the use of subject-specific mathematics and science teachers at the elementary level; and
- addressing the achievement gap for students with disabilities and English language learners.

Among other duties, SB 551 requires the Mathematics and Science Bureau to:

- work with the advisory council to develop a statewide strategic plan for mathematics and science education in the public schools;
- assist school districts in developing their own strategic plans for improving mathematics and science education in their school systems;
- recommend funding mechanisms;
- promote collaboration among public schools, institutions of higher education (IHEs), and other organizations to improve mathematics and science education; and
- assess the outcomes of such efforts.

As prescribed in SB 551, the Mathematics and Science Advisory Council comprises 17 members, appointed by the Secretary of Public Education to staggered four-year terms. More specifically, the council consists of two members representing the general public, one member with expertise in state government, and the following 14 members representing a variety of constituencies: an elementary, middle school, and high school teacher with expertise in mathematics and/or science education; one mathematics or science faculty member from a two-year IHE and one from a four-year IHE; a mathematics or science education faculty member from a four-year IHE; a mathematician, scientist, or engineer from a national laboratory; a representative of an Indian nation, tribe or pueblo; a school district administrator; a school principal; one administrator each from a two-year and a four-year IHE; and a representative of the New Mexico Partnership for Mathematics and Science Education.

Among its duties, the advisory council must:

- advise PED on the statewide strategic plan that must be incorporated into PED's five-year strategic plan for public elementary and secondary education;
- advise the bureau, PED, and the Legislature on the implementation of the plan and collaborate with the bureau to revise it as necessary;
- make recommendations on funding, budgets, and policies; and
- produce an annual report for PED, the Governor, and the Legislature.

The Mathematics and Science Proficiency Fund created by SB 551 is to be administered by PED to provide awards to public schools, districts, and public IHEs that implement innovative, research-based mathematics and science programs or professional development programs. Furthermore, each award recipient must provide an annual report to the bureau that accounts for the money awarded, details and evaluates the outcomes of the proposal that was funded, and provides any other information that the bureau has requested.

FISCAL IMPLICATIONS

A total of \$4.3 million is appropriated from the General Fund for expenditure in FY 06 and FY 07 for the following purposes:

- \$425,000 to PED for staff and other expenses of the bureau;
- \$40,000 to PED for the advisory council;
- \$120,000 to PED to work with national laboratories and other federal facilities to create internships for high school students;
- \$500,000 to PED to work with IHEs and the council to increase the rigor of mathematics and science courses in teacher preparation programs;
- \$3.0 million to PED for mathematics and science summer institutes for public school teachers; and
- \$250,000 to the State Parks Division of the Energy, Minerals & Natural Resources Department to support a statewide outdoor classroom program.

Any unexpended or unencumbered balance remaining at the end of FY 07 shall revert to the General Fund.

SIGNIFICANT ISSUES

- The 2005 state-by-state scores from the National Assessment of Educational Progress

(NAEP), reported in The Nation's Report Card, indicate the following information regarding New Mexico's status in mathematics achievement:

- » Overall math scores for grade 8 are higher than only three of the 52 jurisdictions tested (states, the District of Columbia and the Department of Defense Education Activity schools) and lower than 47 jurisdictions;
 - » The average grade 8 math score was 24 points lower for Hispanic students (26 points lower for Native American students) than for white students; and
 - » Students eligible for a free/reduced lunch program had an average grade 8 math score that was 24 points lower than students who were not eligible.
- For 2005, science achievement on the New Mexico Standards Based Assessment declined steadily from elementary through middle school, with approximately 77 percent at or above proficiency in grade 3 to approximately 25 percent in grade 8. Grade 9, the highest grade currently tested in science, was slightly higher than the middle school grades with 36 percent at or above proficiency.

The importance of mathematics and science is also becoming part of the national agenda. New Mexico's two senators, Jeff Bingaman and Pete Domenici, are planning to introduce three bills focused on restoring America's leadership in science, mathematics, and technology. The bills are based on 20 suggestions contained in the report, *Rising Above the Gathering Storm*, produced by the National Academy of Science at the request of Senator Bingaman and Senator Lamar Alexander.

ADMINISTRATIVE IMPLICATIONS

PED anticipates that administrative support for this work will be absorbed within the existing resources.

OTHER SUBSTANTIVE ISSUES

The timeframe of the bill will require the coordination of various processes within the PED to hire and establish the bureau, locate space, identify council members, and create the strategic plan that will then identify how the other funds will be allocated to postsecondary institutions, public schools and national laboratories to then have the RFPs ready to implement the summer institutes by June 2007.