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FISCAL IMPACT REPORT

SPONSOR Papen **ORIGINAL DATE** 2/12/2020
LAST UPDATED _____ **HB** _____
SHORT TITLE Pilot Project for Early Physics Education **SB** 42
ANALYST Gaussoin

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Nonrecurring	Fund Affected
FY20	FY21		
	\$600.0	Recurring	General Fund

(Parenthesis () Indicate Expenditure Decreases)

Relates to Senate Bills 21 and 155 and House Bills 71 and 125.
 Relates to an appropriation in the General Appropriation Act

SOURCES OF INFORMATION

LFC Files
 Legislative Education Study Committee (LESC) Files

Responses Received From
 Public Education Department (PED)

No Response Received
 Albuquerque Public Schools (APS)

SUMMARY

Synopsis of Bill

Senate Bill 42 appropriates \$600 thousand from the general fund to an early physics education fund for a five-year early physics education pilot project.

There is no effective date of this bill. It is assumed the effective date is 90 days following adjournment of the Legislature.

SB42 would create an early physics education fund to be administered by PED and subject to appropriation by the Legislature.

The pilot project would be based on three annual student cohorts in sixth, seventh, and eighth grade and use age-appropriate physics education curricula. SB42 requires that PED select at least

10 diverse schools for the pilot and that participating school districts provide half the funding for the pilot. Student performance would be evaluated throughout the pilot and PED would provide reports on the efficacy of mandating physics education for sixth through eighth grades to the governor and the Legislature.

FISCAL IMPLICATIONS

The appropriation of \$600 thousand contained in this bill is a recurring expense to the general fund. Provisions of this bill revert any unexpended or unencumbered balance to the general fund at the end of FY26 rather than FY21, effectively extending the appropriation over five fiscal years. Extending appropriations beyond FY21 restricts the Legislature’s ability to prioritize funding, forecast revenue availability, and meet obligations of establishing a balanced budget.

SB155 would require PED to administer the science early education pilot project, including selection of participants, disbursement of funds, and establishing reporting requirements and evaluation criteria. This likely would involve agency resources and staff time. It is presumed the agency can absorb these costs.

The House Appropriations and Finance Committee Substitute for House Bills 2 and 3 includes \$5 million for PED’s STEAM initiative.

SIGNIFICANT ISSUES

Despite a doubling of the state’s investment in science, technology, engineering, arts, and mathematics – STEAM – education since FY18, statewide science proficiency rates have dropped 5 percentage points in the last three years, and only 35 percent of New Mexico students were proficient in science in FY19. Further, PED in 2017 adopted the NM STEM Ready Science Standard, which combine the national Next Generation Science Standards and six New Mexico-specific standards, to improve the rigor of STEAM instruction.

Developing robust early STEAM education is consistent with national best practices and helps prepare New Mexico students for a changing economy. The Workforce Solutions Department (WSD) reports qualified candidates in fields such as engineering, medicine, physics, and computer technology are in high demand, especially in rural areas of New Mexico. The U.S. Bureau of Labor Statistics projects STEAM-related job sectors are projected to grow significantly through 2026.

However, PED says the NM STEM Ready standards “negate the bill’s proposed requirement that PED make a recommendation to the governor and Legislature on the efficacy of adopting physics as a mandatory or elective course in grades six through eight” because the NM STEM Ready standards already includes the teaching of physics at grades six, seven, and eight.

PERFORMANCE IMPLICATIONS

From PED:

SB42 requires that student progress be measured through standardized assessments in science and mathematics at the beginning and throughout the program. In spring of 2020, the census field test for the new science standardized assessment will be administered in

grades five, eight and 11. These are cumulative assessments and all assess students' understanding of physical science standards. New or other standardized assessments are implicated and would need to be created and put in place to evaluate the progress in grades six and seven as required by SB42.

ADMINISTRATIVE IMPLICATIONS

SB42 would require PED to administer the science early education pilot project, including selection of participants, disbursement of funds, and establishing reporting requirements and evaluation criteria.

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

SB42 is closely related to SB155, which appropriates \$600 thousand from the general fund to the Public Education Department for a five-year early physics education pilot project for sixth through eighth grades to determine if an early physics education will improve overall academic performance and encourage an interest in science and mathematics careers. However, SB155 does not set parameters for the pilot or create a fund.

The House Appropriations and Finance Committee Substitute for House Bills 2 and 3 includes \$5 million for PED's STEAM initiative.

HB71 would appropriate \$2 million to Workforce Solutions Department to establish and administer teen technology center programs in five New Mexico cities.

HB125 would appropriate \$138 thousand to PED to contract with a nonprofit organization to provide public school students a bilingual STEAM learning experience within a portable planetarium.

SB21 would appropriate \$1 million to PED for the development and support of STEAM programs in middle schools and high schools, including robotics teams.

TECHNICAL ISSUES

In section 1C, SB42 states PED will select "public schools" for the project; the implication, however, is that it will select school districts. If school districts are the intent, the language should be changed.

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