

Executive Order Number Fifteen - Fostering Science, Technology, Engineering And Mathematics ("STEM") Education In Our Schools And Creating A STEM Council To Lead Those Efforts

TO: HEADS OF ALL STATE DEPARTMENTS AND AGENCIES

RE: FOSTERING SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS ("STEM") EDUCATION IN OUR SCHOOLS AND CREATING A STEM COUNCIL TO LEAD THOSE EFFORTS

WHEREAS, today's economy demands that Delaware students leave our schools ready to compete in international markets and prepared for the careers of tomorrow, which increasingly will require strong abilities in science, technology, engineering and mathematics, or "STEM" subjects; and

WHEREAS, Delaware has a long tradition, dating back more than 200 years, as a home of innovation in the sciences and technology, and those capabilities have fueled economic growth in Delaware for generations; and

WHEREAS, Delaware employers continue to be national leaders in the innovation economy, and seek out employees with strong backgrounds in science, technology, engineering and mathematics who can strengthen their research and development, make their workplaces more efficient and ensure their business practices are environmentally-sensitive; and

WHEREAS, to ensure Delaware students are sought after employees in the world economy, Delaware schools need to effectively prepare them for post-secondary education and careers in STEM fields; and

WHEREAS, because STEM education programs cover numerous disciplines, including agricultural sciences, biological sciences, physical sciences, psychology, economics, engineering, computer sciences and earth, atmospheric and ocean sciences, STEM education can foster diverse interests among numerous students and prepare them to make a difference in many different sectors of Delaware's workforce; and

WHEREAS, the Delaware Department of Education, through its Innovative Action Team Strategic Plan, recognizes that STEM education programs need to be prioritized in Delaware's schools to prepare students for college and careers; and

WHEREAS, the Innovative Action Team Strategic Plan establishes a goal of increasing student enrollment in STEM career pathways by 50% over the 2010 to 2013 period, and accomplishing that goal will require collaboration among the Department, school leaders, educators, the business community, museums, research centers, non-profits, and institutions of higher education; and

WHEREAS, a council that can coordinate STEM-related efforts would (a) strengthen cross-disciplinary dialogue between teachers and stakeholders in STEM subjects; and (b) leverage the members' collective expertise regarding the STEM-based initiatives currently underway to identify the most effective programs and curricula.

NOW, THEREFORE, I, JACK A. MARKELL, by virtue of the authority vested in me as Governor of the State of Delaware, do hereby DECLARE and ORDER that:

1. The Delaware STEM Education Council (the "Council") is hereby created.
1. The Council shall be composed of no less than 16 members, who shall be appointed by, and serve at the pleasure of, the Governor. The membership of the Council shall reflect the demographic and geographic diversity of the State and shall be composed of:
 - (a) The Secretary of Education or his or her designee appointed by the Secretary;
 - (b) The Secretary of Labor or his or her designee appointed by the Secretary;
 - (c) The Secretary of the Department of Technology and Information and Chief Information Officer or his or her designee appointed by the Secretary;
 - (d) At least three educators presently teaching in the science, technology, engineering or mathematics or related fields, at least one of whom should be a secondary school teacher and at least one of whom should be an elementary school teacher;
 - (e) At least two curriculum specialists with experience in the science, technology, engineering, mathematics or related fields;
 - (f) A superintendant of a Delaware school district;
 - (g) A representative of a Delaware charter school;

- (h) At least two representatives of Delaware employers, with a particular emphasis on employers active in the science, technology, engineering or mathematics fields;
- (i) At least two representatives of Delaware institutions of higher education;
- (j) A representative of the Delaware Foundation for Science and Mathematics Education; and
- (k) A representative of the Delaware Business Industry Education Alliance.
- (l) Such other persons who can contribute to the efforts of the Council.

3. The Governor shall designate one or more members of the Council to serve as Chairperson(s). Members of the Council shall receive no compensation but shall be reimbursed for customary and usual expenses directly incurred in the performance of their duties. The Council shall adopt and make public procedures and standards for the conduct of its affairs, consistent with this Order.

1. The Council shall have the following powers, duties and functions:

- (a) Advise the Department of Education on issues relating to STEM education and work with the Department on plans to accomplish the Department's specific goals and objectives for STEM education in Delaware;
- (b) Review and evaluate STEM education programs being implemented in Delaware schools or elsewhere, and work with districts and charter schools on incorporating proven STEM instruction programs that offer a rigorous course of study into their curricula;
- (c) Review and evaluate federal sources of funding for STEM-related programs at the state, district, and school level, and assist the Department, districts, or charter schools in the application process for grants to create STEM-related programs;
- (d) Advise the Department of Education on strategies to improve student test scores in mathematics, science and other areas subject to standardized testing, and on alignment of STEM programs with science and mathematics common standards;
- (e) Collaborate with institutions of higher education on college-readiness standards for students seeking to pursue STEM educational pathways, and work with the Department, school districts and charter schools on strategies to increase the number of students who are college-ready in STEM fields;

- (f) Meet with educators and school leaders on how to improve professional development in STEM-related areas, including review of STEM-related professional development programs and STEM alternative certification programs, and promote the state-wide use of effective programs;
- (g) Promote collaboration and partnerships on STEM education issues between schools and local employers;
- (h) Study the demographic distribution of students taking STEM education programs or choosing STEM career pathways, including the representation of women and minorities, and develop strategies to address those disparities and promote STEM education and careers in high-needs, high-minority or low-performing school environments; and
- (i) Pursue strategies for increasing the recognition among students, teachers, parents and educators of the importance of STEM education.

5. The Department of Education, through the Secretary, shall provide reasonable staff support to assist the Council in performing its duties and shall, upon request, provide the Council with reports and data helpful to the Council's ability to perform its assigned duties. All other executive branch state agencies and departments shall cooperate with the Council when requested. The Council may call and rely upon the expertise of individuals and entities outside of its membership for research, advice, support or other functions necessary and appropriate to accomplish its mission.

6. The Council shall report any recommendations to the Secretary of the Department of Education on a periodic basis, and may report any recommendations for legislation, regulation or other significant policy proposals to the Governor and the Chairpersons of the Education Committees of the State Senate and House of Representatives at such times determined by the Chairperson.

APPROVED this 18th day of January, 2010