AMENDMENT TO H.R. 1806
OFFERED BY MS. BONAMICI OF OREGON

At the end of title II, add the following new section:

SEC. 205. NATIONAL RESEARCH COUNCIL REPORT ON
STEAM EDUCATION.

(a) Sense of Congress.—It is the sense of Congress that—

(1) the Science, Technology, Engineering, and Mathematics (STEM) Talent Expansion Program set an important goal of increasing the number of students graduating with associate or baccalaureate degrees in the STEM fields, and this should continue to be a focus of that program;

(2) to further the goal of the STEM Talent Expansion Program, as well as STEM education promotion programs across the Federal Government, innovative approaches are needed to enhance STEM education in the United States;

(3) STEAM, which is the integration of arts and design, broadly defined, into Federal STEM programming, research, and innovation activities, is a method-validated approach to maintaining the competitiveness of the United States in both work-
force and innovation and to increasing and broad-
ening students’ engagement in the STEM fields;

(4) STEM graduates need more than technical
skills to thrive in the 21st century workforce; they
also need to be creative, innovative, collaborative,
and able to think critically;

(5) STEAM should be recognized as providing
value to STEM research and education programs
across Federal agencies, without supplanting the
focus on the traditional STEM disciplines;

(6) Federal agencies should work cooperatively
on interdisciplinary initiatives to support the inte-
gration of arts and design into STEM, and current
interdisciplinary programs should be strengthened;

(7) Federal agencies should allow for STEAM
activities under current and future grant-making
and other activities; and

(8) Federal agencies should clarify that, where
appropriate, data collection, surveys, and reporting
on STEM activities and grant-making should exam-
ine activities that involve cross-disciplinary learning
that integrates specialized skills and expertise from
both art and science.

(b) NATIONAL RESEARCH COUNCIL WORKSHOP.—
The National Science Foundation shall enter into an ar-
rangeement with the National Research Council to conduct
a workshop on the integration of arts and design with
STEM education. The workshop shall include a discussion
of—

(1) how the perspectives and experience of artists and designers may contribute to the advancement of science, engineering, and innovation, for example through the development of visualization aids for large experimental and computational data sets;

(2) how arts and design-based education experiences might support formal and informal STEM education at the pre-K-12 level, particularly in fostering creativity and risk taking, and encourage more students to pursue STEM studies, including students from groups historically underrepresented in STEM;

(3) how the teaching of design principles can be better integrated into undergraduate engineering and other STEM curricula, including in the first two years of undergraduate studies, to enhance student capacity for creativity and innovation and improve student retention, including students from groups historically underrepresented in STEM; and

(4) what additional steps, if any, Federal science agencies should take to promote the inclu-
sion of arts and design principles in their respective

STEM programs and activities in order to improve

student STEM learning outcomes, increase the re-
cruitment and retention of students into STEM

studies and careers, and increase innovation in the

United States.

(e) REPORT.—Not later than 18 months after the
date of enactment of this Act, the National Research
Council shall submit a report to Congress providing a
summary description of the discussion and findings from
the workshop required under subsection (b).