

5/5/25

Dear members of the Education & Cultural Affairs Committee of the Maine State Legislature. My name is Cary James. I am a resident of Orono Maine. I am an advocate for transformative apprenticed research (TAR) science, technology, engineering, and mathematics (STEM) programs and in particular the Maine State Science Fair (MSSF) and Maine Middle School Science and Engineering Fair (MMSSEF).

I was a science, technology, engineering and mathematics (STEM) teacher for 34 years and finished my teaching career in 2019 having spent 20 years as the Science Department Chair and STEM director at Bangor High School. I currently work as the Student Success Coordinator for the Maine College of Engineering and Computer Science.

Hundreds of my students participated in the Maine State Science Fair (MSSF) over a wonderful 34-year career. In my opinion the MSSF was the most significant learning experience my students had. The fair provides STEM education opportunities for all Maine students regardless of where they go to school or economic status.

The MSSF plays a vital role in promoting student aspiration and success in many ways including but not limited to:

- Developing critical thinking and research skills
- Inspiring them to pursue future career skills in STEM ultimately supporting the Maine economy
- Connecting classroom concepts to real world applications
- Learning that failure is necessary component in developing solutions to our most pressing problems whether in medical fields, manufacturing, or the environment
- Providing vital scholarships opportunities allowing economically disadvantaged students to fund their educations
- Empowering students to pursue their passions for what they are interested in learning

Post secondary students and researchers who come directly from our high schools will help shape the future US and Maine economies. However, for these high school students to become future players, they must be prepared in the STEM areas. Exciting and motivating students to pursue STEM career paths depends critically on the opportunities offered to students through participation in adjudicated forums like the MSSF. An extensive report entitled "[A framework for K-12 Science Education](#)" presented a detailed structure describing scientific and engineering practices, concepts having inter disciplinary applicability, and the relationships of core science

disciplines to STEM. The report identified eight practices shown in the table below. The MSSF encompasses all of them!

1	Asking questions and defining problems
2	Developing and using models
3	Planning and carrying out investigations
4	Analyzing and interpreting data
5	Using mathematical information and computer technology and computational thinking
6	Constructing explanations and designing solutions
7	Engaging in argument from evidence
8	Obtaining, evaluating, and communicating information

Students from Maine represent the best and brightest that our country has to offer. This plays itself out repeatedly at national and international competitions such as the International Science and Engineering Fair. Without the MSSF these opportunities would not exist for Maine students.

Respectfully submitted



Cary James

BBEST Student Success Coordinator

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