

MA PLTW Grant Info Overview

PLTW Networking Conference

October 12, 2018



**CONNECTING THE CAREERS OF TOMORROW
TO THE CLASSROOMS OF TODAY**

There are three objectives for today's session

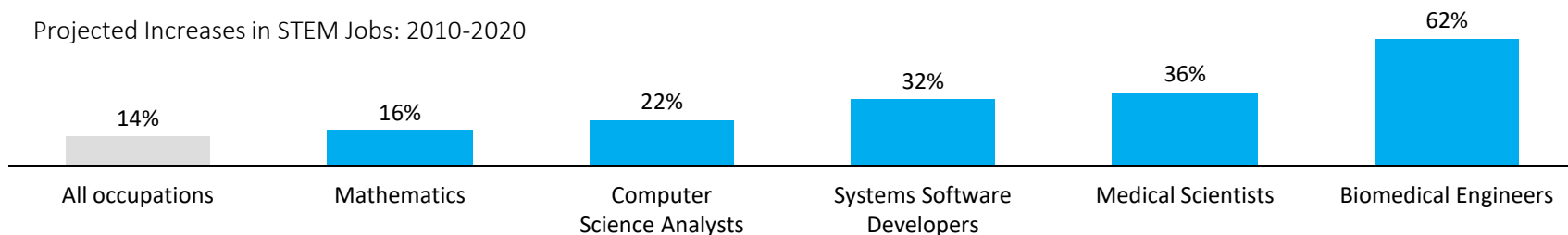
1. Share an overview of PLTW in Massachusetts
2. Share about the grant opportunity
3. Answer questions

Preparing our students for the future is critical

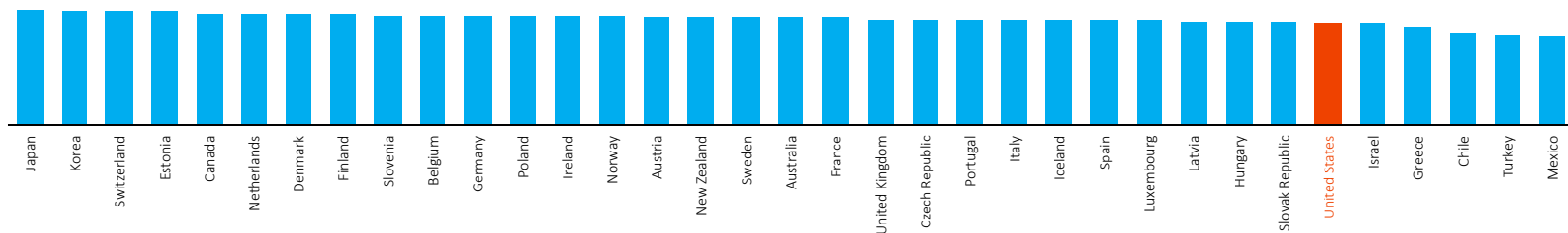
STEM is the future. The world economic forum cites that 65% of children entering school today will have jobs that do not yet exist.¹

The K-12 system isn't 21st century-ready. Over the next 10 years U.S. industries will need one million more STEM graduates than our system will generate.²

Projected Increases in STEM Jobs: 2010-2020



This issue is urgent. American students ranked 30th among the 35 OECD member nations in math competency and 19th in science.³



¹ Executive Summary: The Future of Jobs: Employment, Skills and Workforces Strategy for the Fourth Industrial Revolution. World Economic Forum.

² PCAST President Obama's Council of Advisors on Science and Technology. (February 2012).

³ PISA 2015 Results: Excellence and Equity in Education. PISA.

A partnership between PLTW, WPI, and Mass STEM Hub will help to deepen and enrich programming



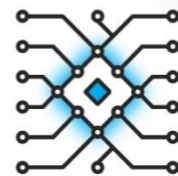
WPI



PROJECT LEAD THE WAY

PLTW

*Expanding the existing
affiliate relationship to
provide additional
training options for
teachers*



**MASS
STEM HUB**

*Providing premier K-12
curriculum in Computer
Science, Engineering, &
Biomedical*

*Creating an ecosystem of enrichment activities and
supports around PLTW to maximize the impact for
students and teachers*

MSH helps schools implement programming that builds critical thinking, complex problem solving, and STEM skills

Our **MISSION** is to provide schools with access to and support for premier STEM programming that engages students and prepares them for college and 21st century careers.

Our **WORK** happens in three phases:

Identify
proven
programs

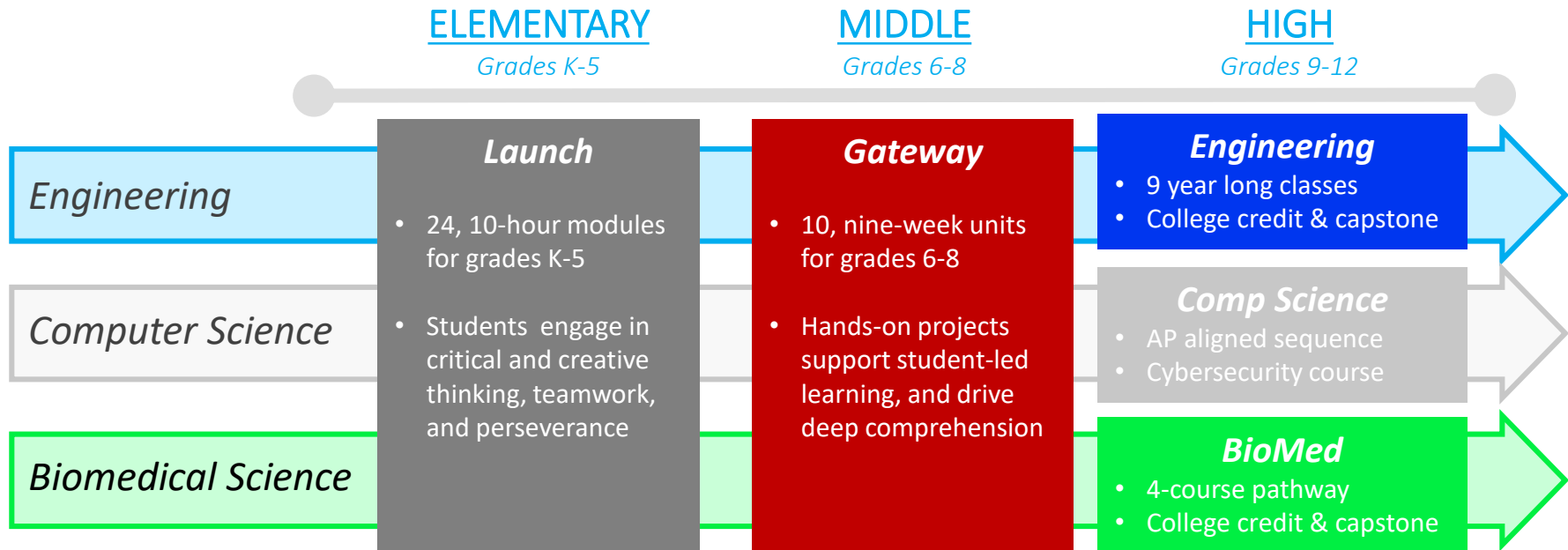


Develop
supports for
high-quality adoption

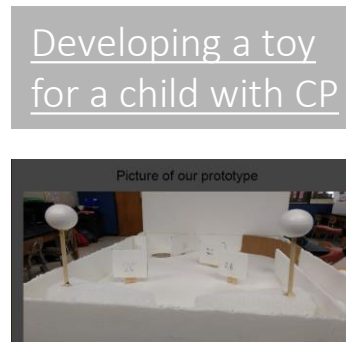


Create complementary
programming for schools
to amplify impact

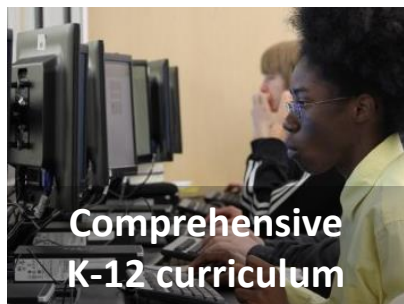
The first proven program that we are working to support in Massachusetts is Project Lead The Way



*Example
problem-based
student projects*



PLTW increases student preparedness for and interest in STEM by offering high-quality applied learning K-12



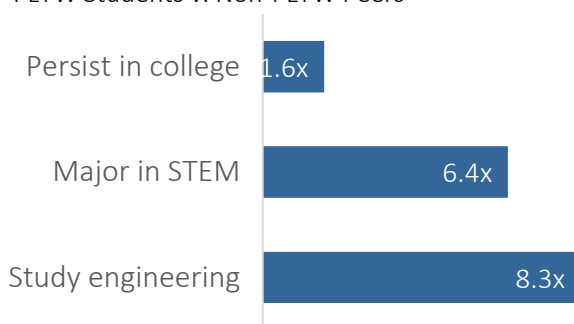
Project Lead The Way's impact has been validated by research

Achievement

PLTW students outscored non-PLTW peers in math & science (+5 points in math and science, 0.15 standard deviation/0.05 sd respectively)

Higher education

PLTW Students v. Non-PLTW Peers*

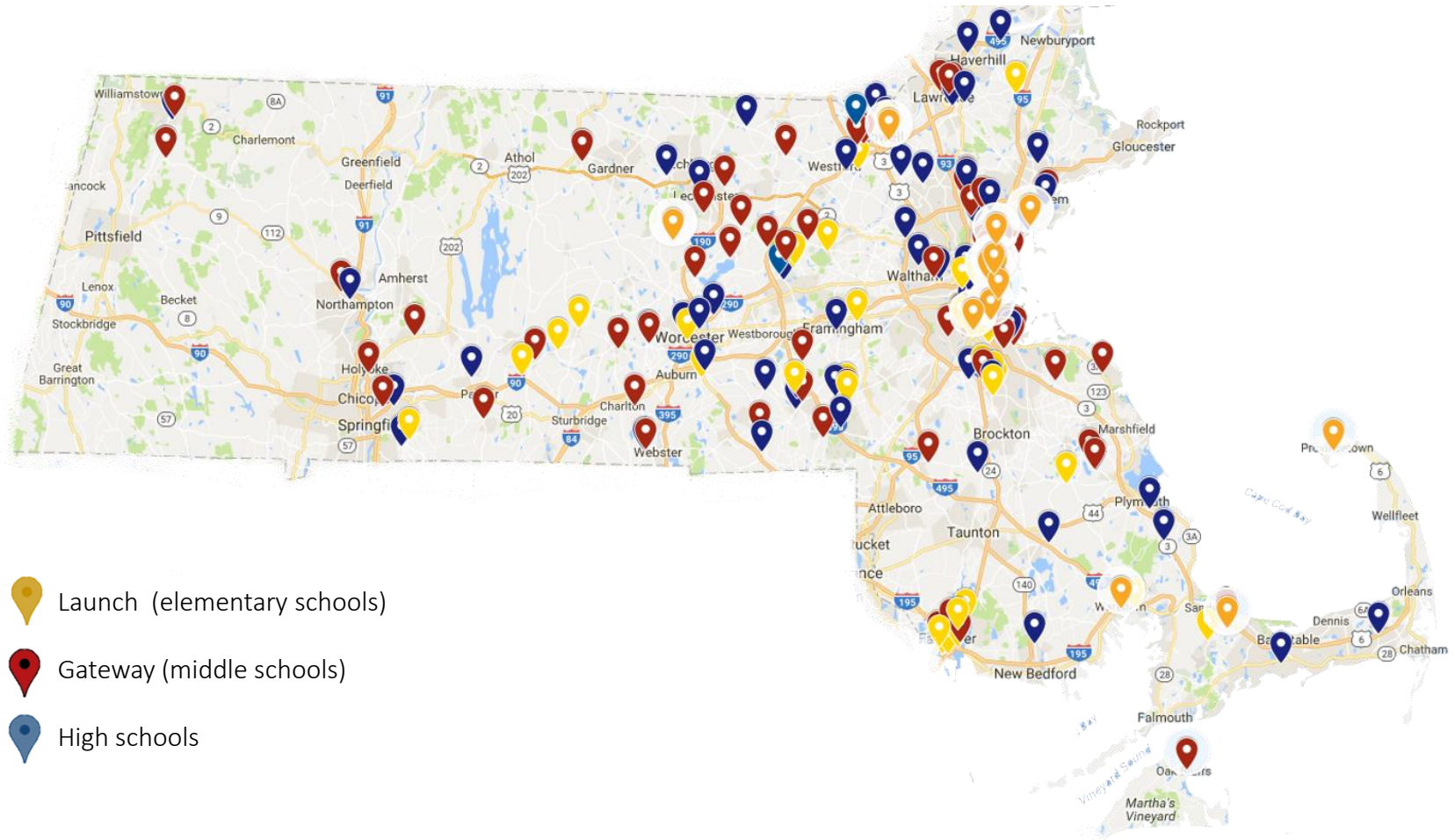


Premier endorsement



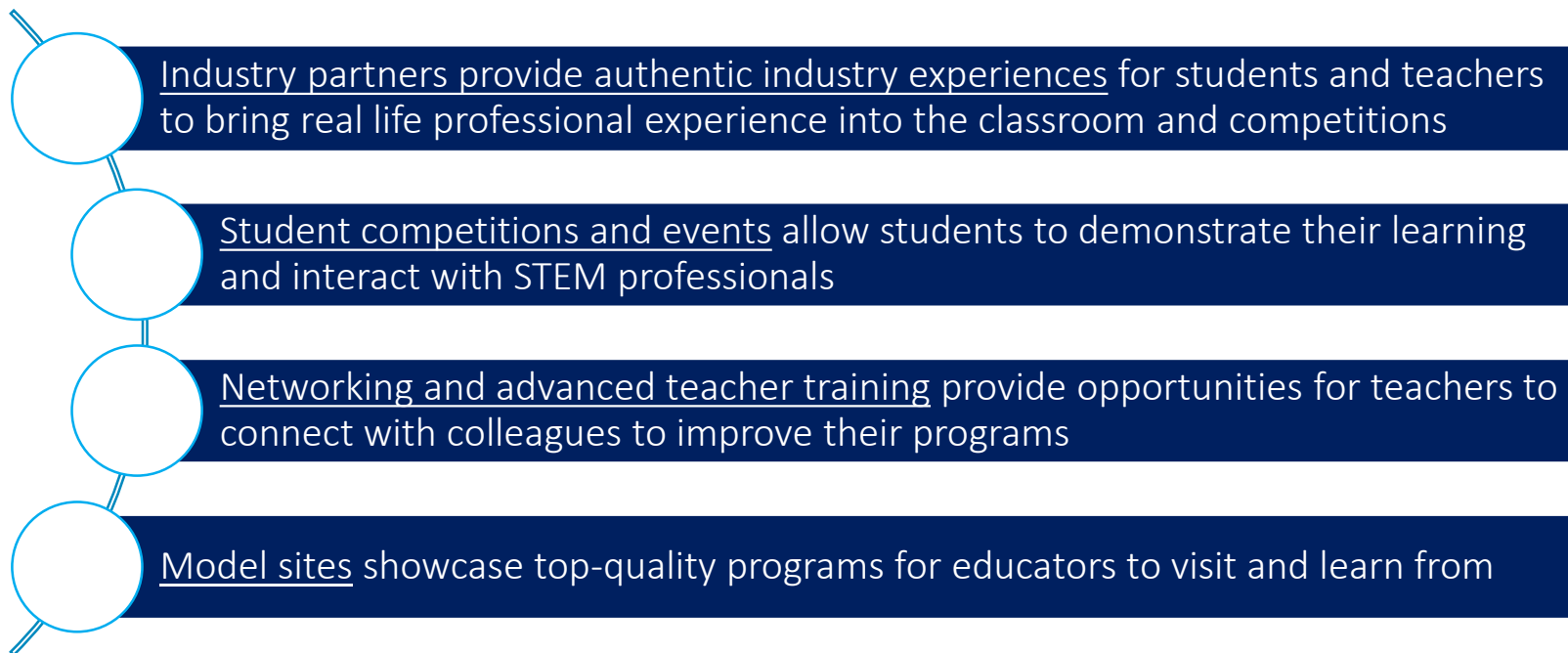
PLTW is just one of four programs endorsed by Change the Equation as ready to scale nationwide.

There are over 200 PLTW schools in Massachusetts



The statewide plan provides additional supports and programming to PLTW students & educators

Example Connections



State investment along with a significant grant from One8 will help schools create STEM pathways using PLTW

Baker-Polito Administration Awards \$1 Million Grant to Develop STEM High-Quality Career Pathways for Students

First-of-its kind grant will increase access to project-based STEM courses across Massachusetts

Baker-Polito Administration Awards \$1.7 Million to Help More Students Study STEM

BOSTON — The Baker-Polito Administration today announced \$1.7 million in school grants to expand computer science, engineering, and biomedical science education for students at 73 schools across the Commonwealth in grades K-12

The state and One8 have renewed their commitment, making another \$1,000,000 in funding available for schools to implement starting in 2019-20

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This year's grant looks to replicate last year's efforts to expand and improve PLTW in Massachusetts

School eligibility

- Open to all **public** schools, **K-12**
 - Current schools to expand current programs
 - Current schools to adopt new programs
 - New schools to adopt for the first time
- Competitive preference to schools that students from **economically disadvantaged** backgrounds
- Competitive preference to districts building out **pathways** across schools

PLTW programs

- All PLTW programs included for in-school implementation
 - Launch (grades K-5)
 - Gateway (grades 6-8)
 - HS Engineering, Biomedical, and Computer Science

Grant Sponsors



STEM Advisory Council



So what makes a compelling application for the Massachusetts grant?

- **Meaningful and sustained student exposure** to the program (e.g., multiple units/modules/courses for students over multiple grades)
- **Plan for significant student participation** at the school level over time (e.g., 75-100% students participating at the K-8 level by year 3, 15-25% of high school students participating by year 3)
- **Teacher and leader champions**
- **Plan to financially sustain the program** after the grant

Grants are intended to defray the start up costs associated with a new program or significant expansion

Allowable expenses

- Core Training
- Program required durable equipment and supplies
- Required computers and/or tablets (*per PLTW device ratio guidelines*)

Unallowable expenses

- Participation Fee
- Consumables
- Salaries or stipends or benefits
- Meals
- Infrastructure or renovations
- Indirect Costs
- Equipment and supplies listed as "Optional"

For target grant size, school should use standard PLTW grants as a model

PLTW STANDARD: Vast majority of budgets should align to standard PLTW grants

MAXIMUM AWARD: Robust implementations may seek additional funding, based on:

- # of students reached at the school level
- # of modules/units/courses offered
- # of teachers trained



Program	Standard	Max
Launch (K-5)	\$7,500	\$20,000
Gateway (6-8)	\$20,000	\$40,000
HS Computer Science	\$20,000	\$30,000
HS Engineering	\$35,000	\$50,000
HS Biomedical	\$35,000	\$50,000

Funding notes:

- **Allowable funds:** PLTW training, required equipment & materials, required computer hardware
- **Unallowable funds:** Participation fee, consumables, teacher stipends, meals, indirect costs, optional equipment
- **Fund disbursement:** Over two years for new program implementation grants

The Massachusetts specific grant opportunity seeks to minimize additional requirements

- Implement PLTW according to your school's grant plan
- Attend grant **convening** on Tuesday, March 5th (snow date Wednesday, March 13th)
- Complete required PLTW training (@ WPI)
- Administer **end-of-course assessments** to all PLTW enrolled students (*high schools only*)
- **Roster** students in the PLTW system and the DESE reporting system by Oct 1
- Attend PLTW Massachusetts **Conference**
- Administer student & teacher annual **survey**
- Complete **financial** report

The first part of the application is due November 16th

Part 1 of Application

- Due Nov 16th
- Accessed through myPLTW
- Utilize the “**Save and return later**” functionality
- One application per school per program
- One application allows your school to be considered for multiple grant opportunities

Part 2 of Application

- Due Jan 9th (invites out Nov 30th)
- Completed as a PDF
- Seeks additional programming detail and grant budget

Next steps

- Visit the PLTW website: www.pltw.org and create a myPLTW account to access the grant application
- Plan for the PLTW programs you want to offer
 - Gather buy-in at the teacher, school leader, and district level
 - Consider budget for the short and long term
 - Select a teacher
 - Determine scheduling
- Take advantage of MA-specific grant opportunities
 - Reach out to Mary with questions
 - Attend a tour to see PLTW programming in action and build support amongst teachers & leaders in your district

We have several upcoming PLTW school tours for your to learn more, build support, see the program in action

Date	Time	Location	Programs
Tue Oct 23	8:45-12:00	Uxbridge HS	HS Engineering and HS Biomedical Science
Wed Oct 24	9:30-12:00	Thomas Prince	Launch and Gateway (K-8)
Thu Oct 25	9:30-12:00	Randolph MS	Gateway (6-8)
Tue Oct 30	8:30-12:00	Leominster HS & Sky View MS	Gateway (6-8) & HS Engineering
TBD	TBD	Plymouth	HS Biomedical Science

Can't make a tour?

Info session at WPI 10/16 8:00-9:30

Webinar 10/17 3:30-4:30

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Questions?

For more information, please contact:

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