In Service to Education

MIT Alumni Leadership Conference

9.25.21

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Senior Associate Director
Abdul Latif Jameel World Education Lab (J-WEL)

MIT | J-WEL Abdul Latif Jameel World Education Lab

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K-12 Community Outreach Administrator
Office of Government and Community Relations

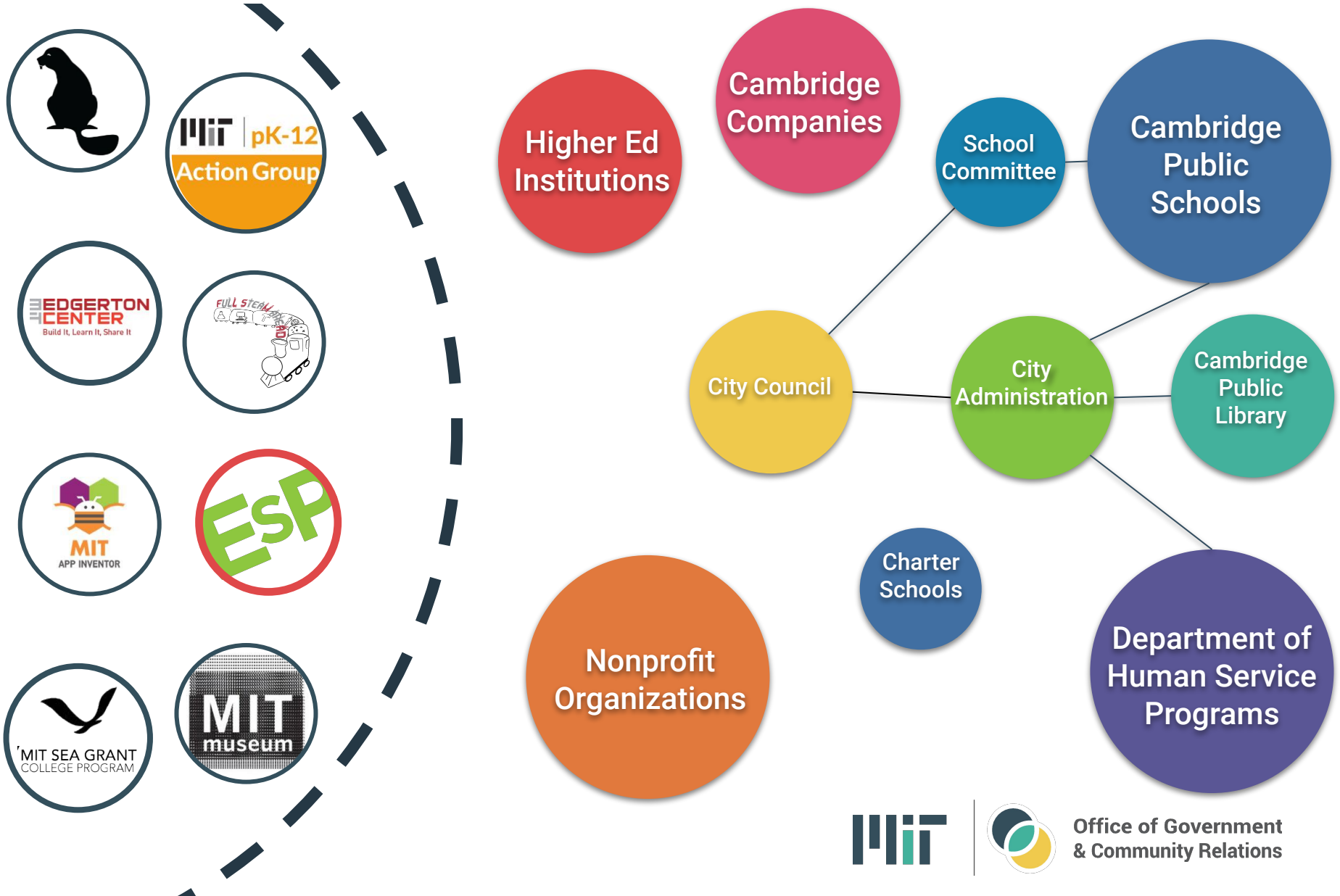
MIT | Office of Government & Community Relations

MIT pK-12 Ecosystem

40+ Groups
100+ Programs

Office of Government & Community Relations

Cambridge K-12 Landscape



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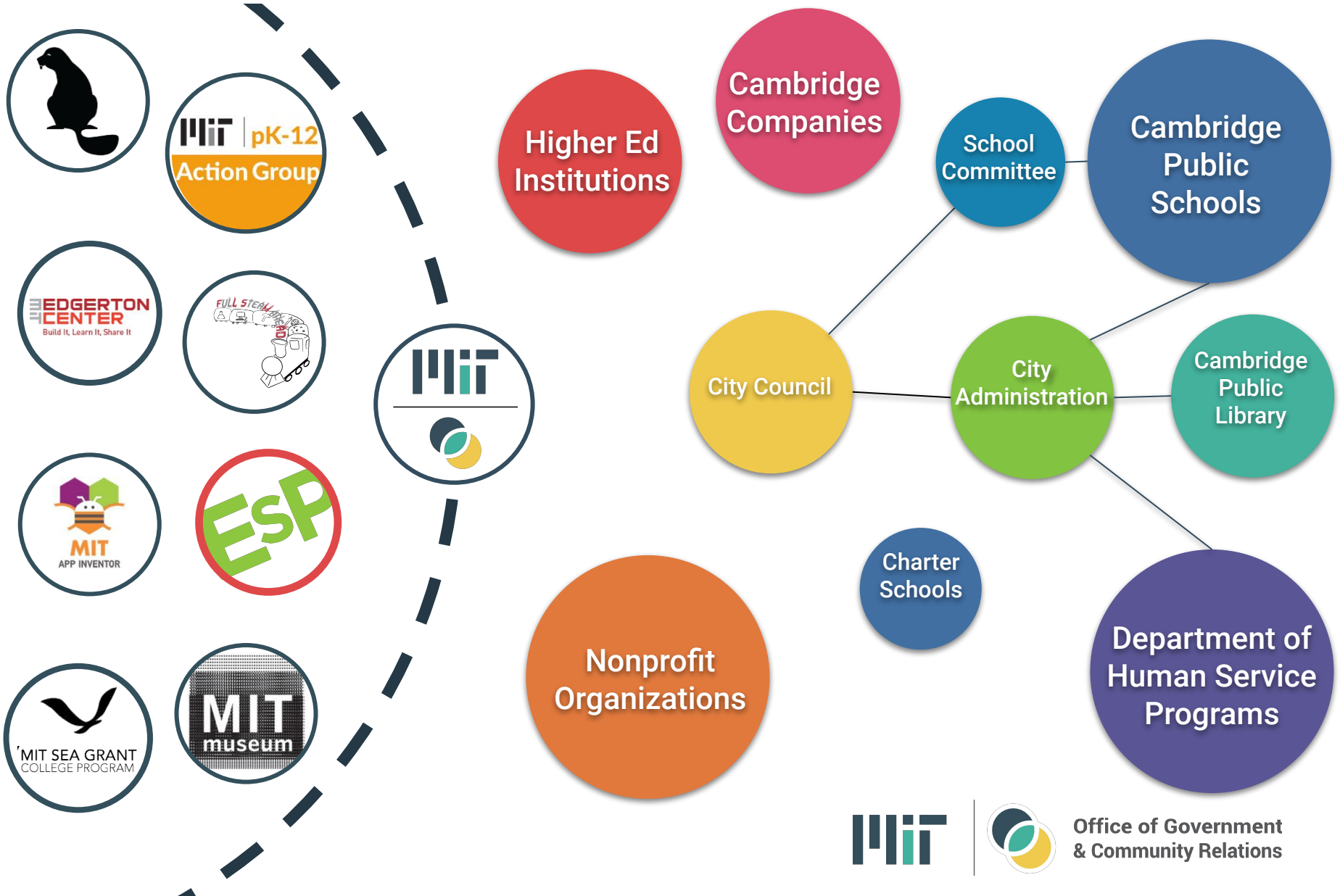

Office of Government & Community Relations

OGCR K-12 Philosophy

- Grow collaborations and **strengthen reciprocal partnerships** with local communities.
- **Provide equitable access** for youth to MIT Programs, Initiatives, Projects, and Events
- **Advance high-quality STEAM+ programming** that provides the opportunity to obtain & practice skills

Office of Government & Community Relations

Our Mission

The mission of Abdul Latif Jameel World Education Lab is to spark a global education renaissance for all learners. With our collaborators, we leverage educational innovation, research, and effective practice to address learning needs and opportunities, developing solutions with global applicability.

How we work

J-WEL works with member organizations — schools, colleges, companies, nongovernmental organizations (NGO's) and government agencies — to address challenges and opportunities that have the potential to transform education worldwide.

- **Membership -** fostering a global community of organizations that want to transform education. Members create their own future with inputs from the J-WEL community and the educational community at MIT.
- **Projects -** works together with organizations in the co-design and co-implementation of key projects that address worldwide needs.
- **Programs** - designing programs that serve the critical needs in education. For example, workshops, certifications, etc.
- **Grants/research -** inviting MIT faculty to propose innovations and educational research that will impact MIT education, with broad potential for impact in global settings.

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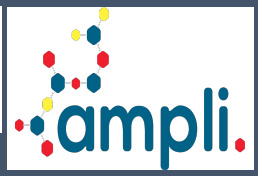
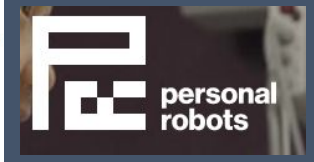
MIT Full STEAM Ahead, Mission

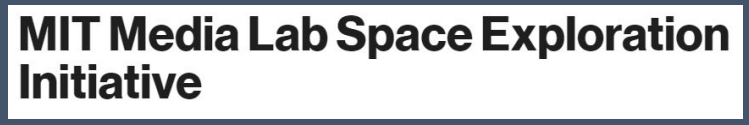
Our mission is to create and share high quality resources to facilitate digital and non-digital learning for K-12 and lifelong learners. By providing science, technology, engineering, arts, and mathematics (STEAM) based curriculum and outreach programs, we aim to inspire a diverse global community of educators, students, and parents to find innovative and humanistic solutions to the challenges of learning at a distance.

fullsteam.mit.edu

MIT Full STEAM Ahead – MIT Community



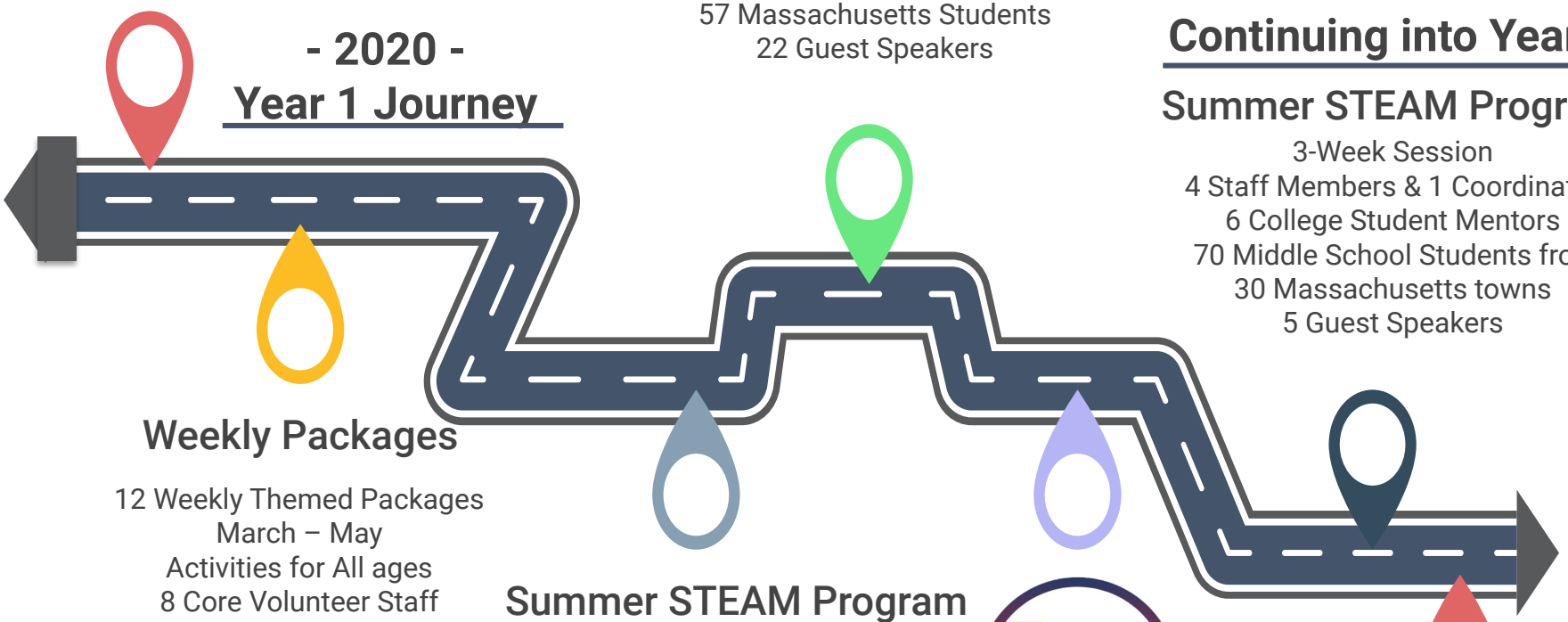




Fall STEAM Program

10 week High School Program
6 Staff Members & 5 Coordinators
53 College Mentors from 32 Universities
600 Students from Spain
57 Massachusetts Students
22 Guest Speakers

- 2020 -
Year 1 Journey



Weekly Packages

12 Weekly Themed Packages
March – May
Activities for All ages
8 Core Volunteer Staff
3 MIT Student Helpers
14 MIT DLCs involved

Summer STEAM Program

Two 3-Week Sessions
6 Staff Members & 2 Coordinators
33 MIT Student Mentors
340 Middle School Students from 47 Massachusetts towns
4 Guest Speakers

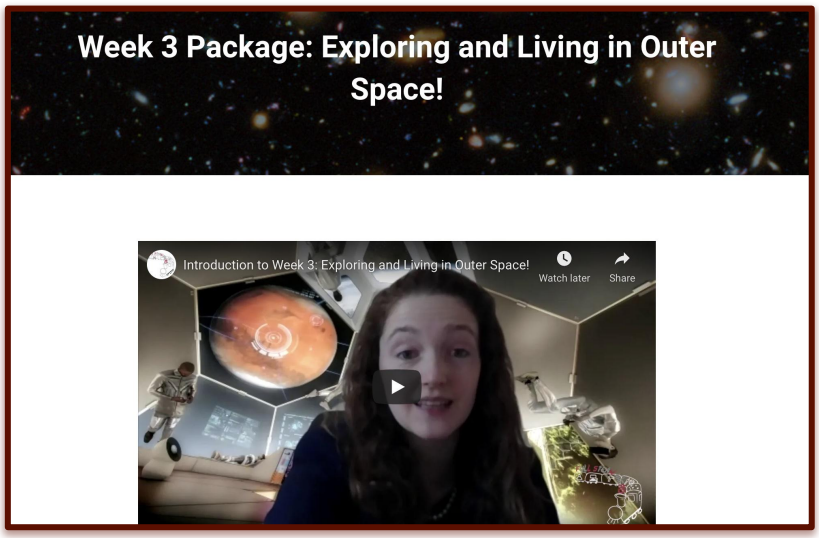
- 2021 -
Continuing into Year 2

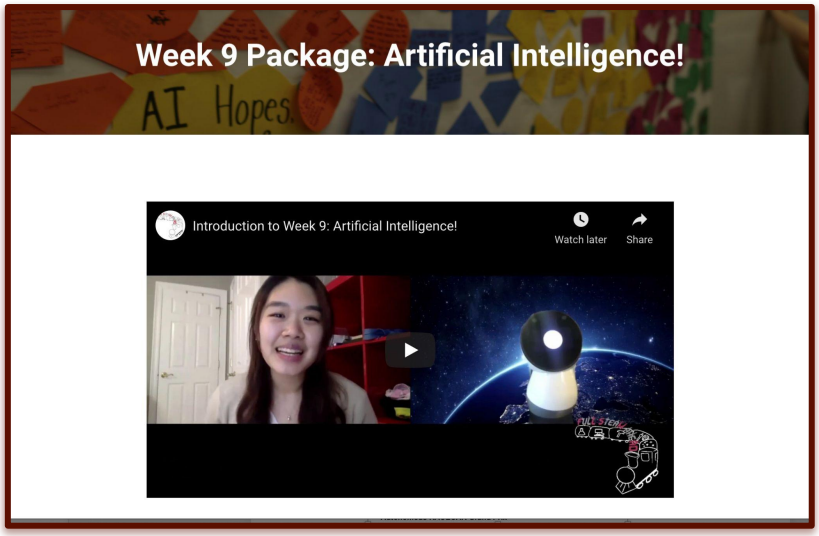
Summer STEAM Program

3-Week Session
4 Staff Members & 1 Coordinator
6 College Student Mentors
70 Middle School Students from 30 Massachusetts towns
5 Guest Speakers

Fall International Program

Weekly Packages

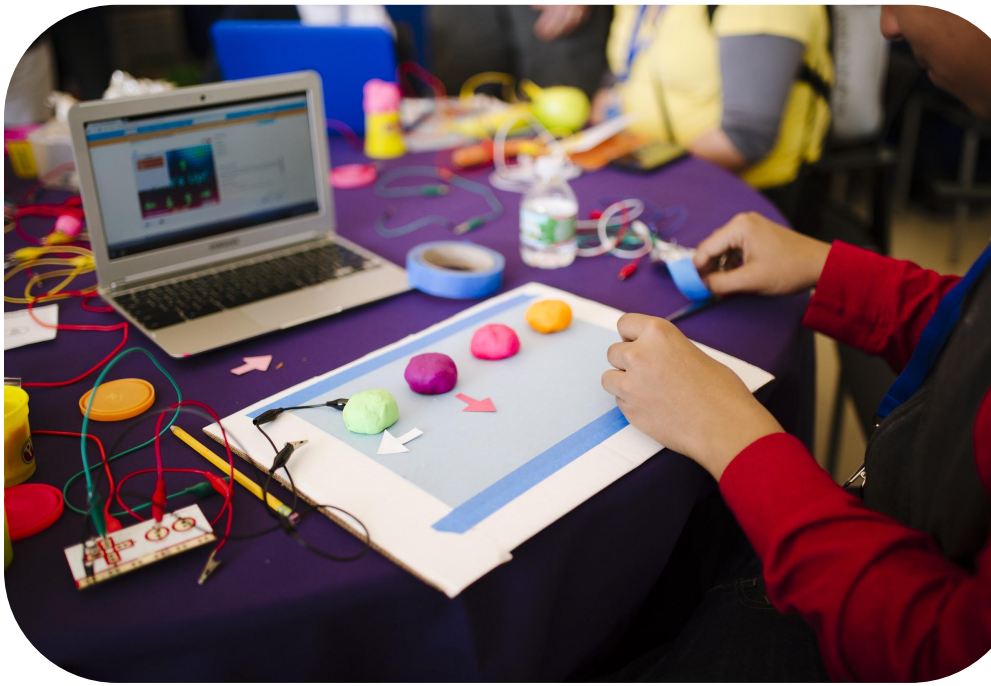




Week	Topics
1	Spread of Disease
2	Stepping Into Invention Education
3	*Exploring and Living In Outer Space!*
4	Making Music and Sounds
5	The World Around Us
6	Inventing Matters!
7	Reveal! Discovering Science Through Compelling Images
8	Making Music and Sounds Part 2
9	*Artificial Intelligence!*
10	Learning Creative Learning

Beyond the FSA program

- Build on the MIT pK-12 ecosystem and help improve MIT pK-12 programs
- Serve young learners within local communities and schools
- Engage in international collaboration (e.g. Spain)
- Generate curriculum and programming for future programs



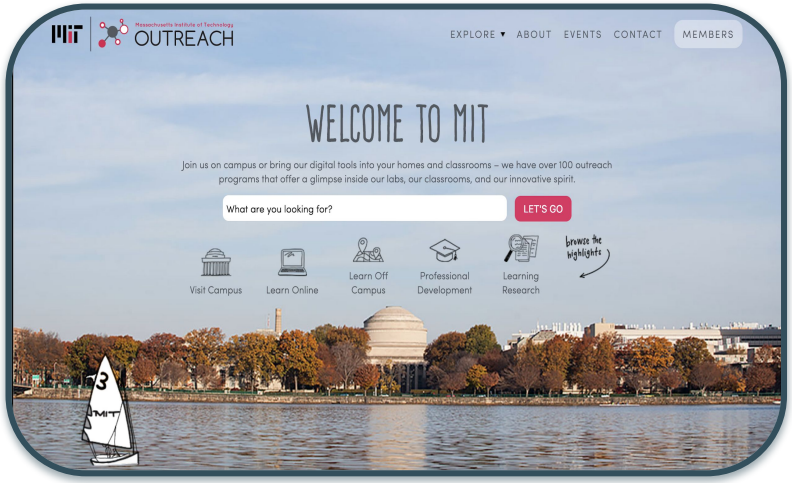
Join Us!

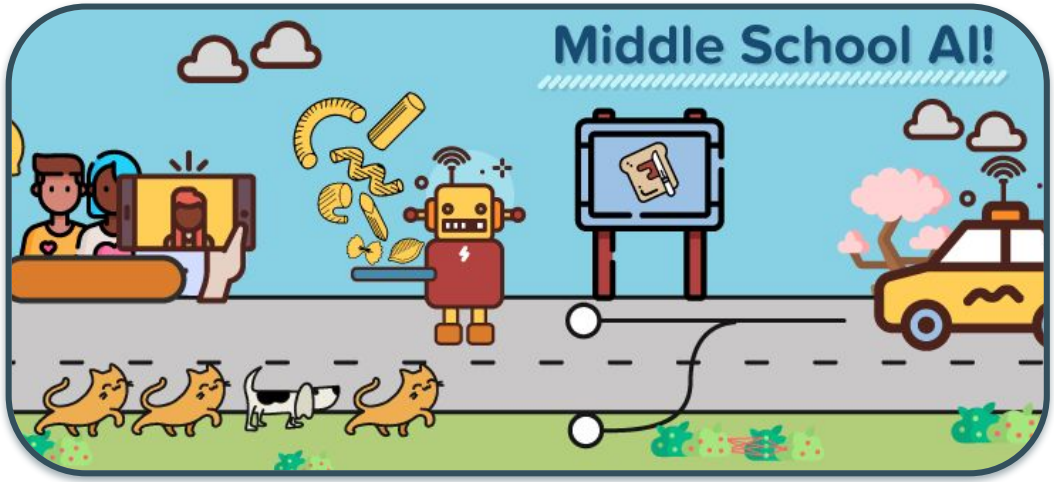
Sign up for the newsletter @ [pK12.mit.edu](pK12.mit.edu)

Donate to the MIT pK-12 Ecosystem - tinyurl.com/MITpk12give

Share curriculum and activities with your local communities

Collaborate with MIT pK-12 organizations via the Alumni Association!





J-WEL
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Office of Government & Community Relations

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MIT PK-12

Belize STEAM Lab School

MIT is committed to making the world a better place; our engagement in Belize through the Ministry of Education, Youth, Sports & Culture (MoEYSC) allows us to work together to improve Belizean education through the new STEAM Lab School.

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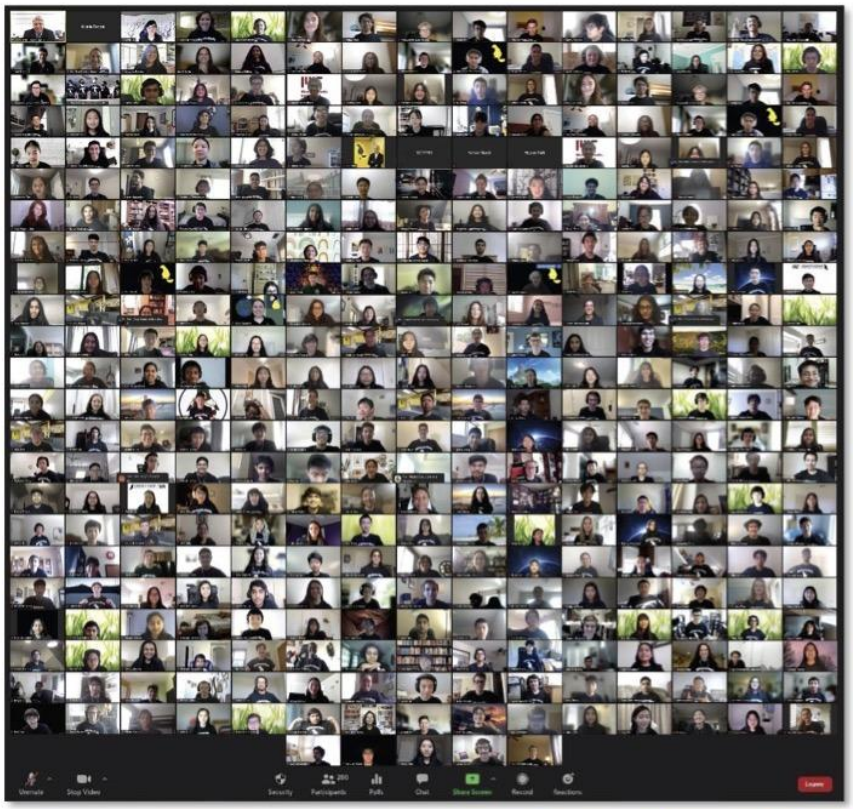
MIT Beaver Works Summer Institute 2021

4-week virtual program for high school students (5 July – 1 August 2021)



BWSI – Huntsville, AL

BWSI – Kwajalein

- Four-week virtual STEM program for talented High School rising seniors
  - 351 students from 195 schools (29 states)*
  - 152 female students (43%)
- Started in 2016, 13 hands-on, intensive project-based challenges in 2021
  - Autonomous RACECAR Grand Prix
  - Autonomous Cognitive Assistant
  - Autonomous Air Vehicle Racing
  - Autonomous Underwater Vehicles Challenge
  - Build a CubeSat
  - Unmanned Air System – Synthetic Aperture Radar
  - Data Science for Health and Medicine
  - Remote Sensing for Disaster Response
  - Serious Game Design and Development with AI
  - Assistive Technology
  - Embedded Security and Hardware Hacking
  - Cyber Security for SW Intensive Systems
  - Quantum Software
- Women's Networking Dinner and 3 DEI in STEM Workshops
- In-person programs at Huntsville, AL and Kwajalein**
- Live webcasted final event – over 8k viewers

LEMELSON-MIT

Celebrating invention, inspiring youth

What we do…

- The Lemelson-MIT Program is a national leader in invention education
- Inspire youth to invent solutions to real-world problems
- Provide suite of educational STEAM offerings

What we can do together…

- Mentor youth working on invention projects
- Sponsor invention events w/ local companies
- Be guest speakers in LMIT courses and events

Contact us at info-lemelson@mit.edu

Sisters With A Dream students from Fletcher-Maynard Academy met with Dr. Shirley Ann Jackson in F18.

Wouldn't it be great if more kids took STEM classes in high school?

Get kids doing digital fabrication, coding, electronics, and prototyping, and watch them get good at problem-solving, collaboration, experimentation and communication!

Making is a practice any teacher can use to empower students in any subject.

Kids need it now!

Let us help you bring creative experiential learning to your school district.

Check out k12maker.mit.edu to:

- **Set up a school Makerspace**
- **Choose the tools** best for you
- **Train students and staff**
- **Explore Maker projects** for academic classes
- **Pitch a Maker initiative** in your school

Contact us at edgerton-k12-maker@mit.edu

The Edgerton Center has been a home for experiential learning at MIT for decades, embodying the "Mens et Manus" motto that becomes a lifelong philosophy for MIT grads. Learn more about our Clubs and Teams, High-Speed Imaging, and other K-12 Outreach opportunities at edgerton.mit.edu