



STEM Education Innovation Alliance

MEETING AGENDA

DATE February 23, 2022
TIME 10:00 AM to 12:30 PM
LOCATION Virtual Gathering | Microsoft Teams

TVW will live stream the meeting. Recording will be available following meeting.

TOPICS | Space Exploration and Industrial Development

Welcome & Introductions of New Members

John Aultman & James Dorsey | *Co-Chairs, STEM Alliance*

10:00 AM **NASA Astronaut – Meet and Greet**

Captain Victor J. Glover, Jr. was selected as an astronaut in 2013 while serving as a Legislative Fellow in the United States Senate. He most recently served as pilot and second-in-command on the Crew-1 SpaceX Crew Dragon, named Resilience, which landed May 2, 2021.

Captain Glover participated in the MESA program. He will speak to the influences beyond the classroom experiences that helped shape his career.

Victor J. Glover, Jr. | *Captain, United States Navy; Astronaut, NASA*

10:25 AM **The Museum of Flight - Aerospace Education Continuum**

- Introduction to education department, *Boeing Academy for STEM Learning*
- Overview of aerospace education continuum of programs
- Virtual tour of the flight deck of Space Shuttle Full Fuselage Trainer
- Introduction to *Suited for Space* program, an educational program for grades 5 through 8 where students learn to design pressure spacesuits for the low-pressure environments of space.

Dana Riley Black, Ph. D. | *Vice President of Education, The Museum of Flight*

Yann Defarbus | *Program Coordinator, The Museum of Flight*

10:55 AM **Washington State University – Mitigating Lunar Dust with Cryogenic Liquids**

Washington State University student team successfully designed, tested, and demonstrated a prototype to clean lunar dust from spacesuits using liquid cryogen sprays, winning the prestigious Artemis Award at NASA's Breakthrough, Innovative and Game-changing Idea Challenge. The award recognizes WSU's project for its potential to contribute to and be integrated into NASA's Artemis mission, which aims to land the first woman and person of color on the moon in 2025.

Ian Wells | *Undergraduate Researcher*, Mechanical Engineering, HYdrogen Properties for Energy Research (HYPER) Lab

John Macdonald Bussey | *Undergraduate Researcher*, Materials Science and Chemical Engineering, Institute of Materials Research

Lauren Reising | *Undergraduate Researcher*, Mechanical Engineering, HYdrogen Properties for Energy Research (HYPER) Lab

Nathaniel Swets | *Undergraduate Researcher*, Mechanical Engineering, HYdrogen Properties for Energy Research (HYPER) Lab

Camden Butikofer | *Undergraduate Researcher*, Mechanical Engineering, HYdrogen Properties for Energy Research (HYPER) Lab

Stasia Kulsa | *Graduate Researcher*, Flute Performance, HYdrogen Properties for Energy Research (HYPER) Lab

11:20 AM

City of Kent - Kent Valley Advanced Manufacturing: Growth in Space and Growing Skills Demands

Kent Valley's space cluster is growing and what it means for our community and south King County region. As one of the most diverse cities in the country and home to many high-tech aerospace companies and largest hubs of aerospace manufacturing in the United States, the City of Kent is very focused on identifying complementary municipal investments that may help bridge the diversity gap in STEM fields and ensure our kids are prepared to take the exciting jobs of the future at these growing Kent Valley companies.

Presentation Highlights:

- 1) Outline how the Kent Valley has a sixty-year history in research and development in space technologies and advanced manufacturing, and the heating up of space race between great power struggles and commercial giants is revving new manufacturing engines in our region; provide latest stats and high-profile business headlines.
- 2) Emphasize that there are many kinds of STEM jobs, and not all of them involve doctorates, and that a combination of renewed hiring and silver tsunami demographics means the growth will either come at expense of legacy firms or involve importing talent from other regions, and less likely from local communities...which is hidden cost to disinvestment in traditional manufacturing education prematurely.
- 3) New opportunities abound, and our Council is using its budgeting policy making to prioritize connecting youth in Kent to STEM education and career connected learning opportunities for the long-term, which we believe will make us a more favorable and competitive location for firm formation and retention over the long run.

Economic Development Division | Economic & Community Development Department

Bill Ellis | *Chief Economic Development Officer*

Michelle Wilmot | *Economic Development Manager*

11:35 AM

Blue Origin – Company Overview and Current Initiatives

- 1) Plans for space exploration and development (Moon landing, space station); how Blue Origin plans to fully express the democratization of space through its initiatives for the benefit of the Earth – Democratization of space is Blue Origin's key starting point.
- 2) Beginnings, starting with the vision of Mr. Bezos, and expansions since; key accomplishments so far. Blue Origin's goal is to benefit Earth.
- 3) Educational opportunities that will ultimately create a student population with hands-on experience to complement their curriculum: Club for the Future, internships, apprenticeships. Club for the Future, its main channels, and the why it was created.
- 4) *Send a Postcard into Space* program – Blue Origin will launch your postcard to space and back on a New Shepard rocket and return it to you stamped. An outreach of the Club for the Future to continue the democratization of space and provide equitable access.
- 5) Expansion into manufacturing and the jobs of future at Blue Origin that accompany this.

Michael Edmonds | *President, Club for the Future*
Senior Vice President, Sales, Marketing and Strategy

12:20 PM

2022 Legislation Session – STEM-related legislation

Outcomes from workgroup discussions on needed legislative support to advance STEM education and bridge workforce gaps in the state.

Marc Webster | Washington Student Achievement Council

12:30 PM

Meeting Adjourn

FOR MORE INFORMATION AND ASSISTANCE

Ellen Matheny (*STEM Alliance Manager*) welcomes you to contact her at:
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