The New England Section of the American Institute of Aeronautics and Astronautics (AIAA) has new initiatives this fall to support STEM educators. The link to the AIAA is: AIAA.org. There are 30,000 members worldwide. The 1000 members of New England Section are in VT, NH, ME, MA, and RI. Adjacent provinces in Canada have recently been added: Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and New Brunswick.  CT has its own section. For more information about the New England Section, please visit <https://engage.aiaa.org/newengland>.

We are recruiting K-12 STEM teachers and administrators to support science, technology, engineering and mathematics, STEM, and increase the number of Educator Associates in the Section. Educator Associate membership is free. As you will see in the link, the process is simple: <https://www.aiaa.org/get-involved/students-educators>.

We are offering

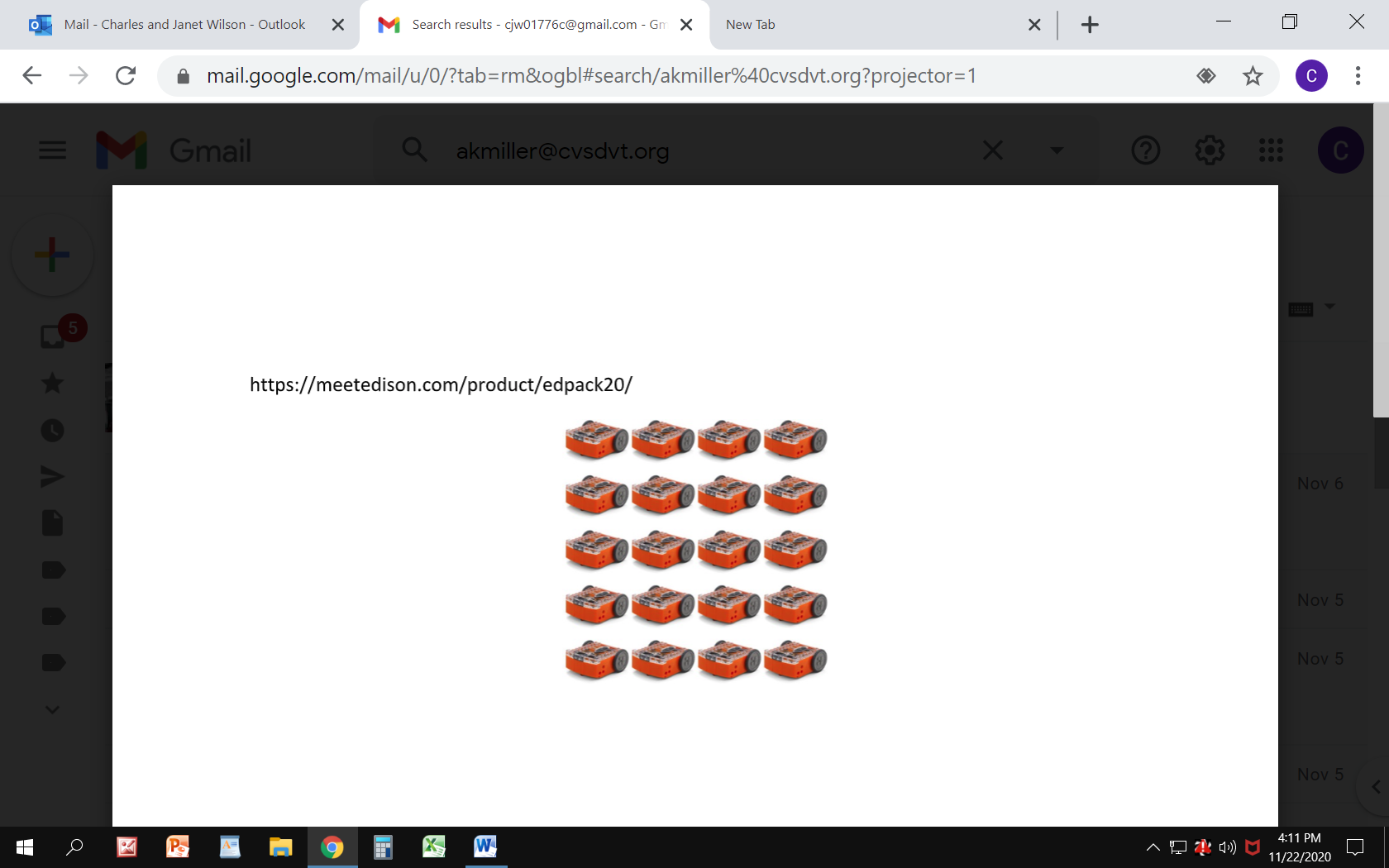
1. $250 grants for supplies and equipment – see the attachment.
2. mentoring to high schools by a panel of members, supplementing two existing programs at other organizations – see the attachment.
3. a new Aerospace Robotics Competition, ARC – see the attachment and <https://www.aeroroboticscomp.com/index.html>. As an option for this initiative, the Section could provide funds so that teachers and mentors can gain experience using the $100 Tello drone and the free DroneBlocks– see an example of using code blocks to launch, fly four 20” legs of a square and land: https://www.youtube.com/watch?v=5NGPrMP1r2Y

Even if you do not apply for a grant nor respond to our offer for mentoring and ARC, being an Educator Associate opens up doors to many AIAA benefits. (Check out this NASA video on how to wring out a wet washcloth while on the Space Station: https://www.youtube.com/watch?v=KFPvdNbftOY. It is part of Aerospace Micro-Lesson Number 95 in the AIAA Foundation’s Aerospace Micro-Lessons list and is one of the most popular.) Here is the link to Foundation activities.

<https://www.aiaa.org/get-involved/students-educators/k-12-teacher-resources>.

1. **$250 grants**

Once you become an Educator Associate you may apply for the grant using the attached request for proposals. As you will see, we have two categories of schools being supported: typical schools and those which are under-resourced and have disadvantaged students. We anticipate ten grants in each category. Endri Lesha lesha.endri@gmail.com runs this project and can answer questions. One educator in Charlotte VT used his grant to free-up matching funds to purchase a 20 Meetedison wheeled robots.



1. **Mentoring**

We are starting a mentoring program in high schools that may want to partner with us.  This could be a great opportunity for students that are interested in pursuing STEM careers who may not know what career pathways are available to them.  The goal of this event is to make engineering feel more accessible and possible to any student who has genuine interest.

Mentorship would first take form as a virtual panel discussion, where there will be 3-4 panelists with a wide array of experience and backgrounds. The event would start with a brief presentation about engineering, and will be followed by a Q&A session. One highlight of the panel presentation could be a demonstration by the Mechanical Engineering Department at Southern New Hampshire University of their new wind tunnel facility. (Access to the SNHU wind tunnel may be curtailed because of Covid-19). Students will also have the opportunity to ask questions anonymously to encourage participation from everyone.  This event can be personalized if there is a specific topic of interest and the event will be about an hour long.

If interested, please email [qiana.curcuru@gmail.com](mailto:qiana.curcuru@gmail.com), to coordinate details.

1. **Aero Robotics Competition**

From the web: <https://www.aeroroboticscomp.com/region.html>. It is relatively new and is active in California and Florida. We hope to bring it to New England. The competition is built upon three pillars:

* Hands-on flying of Unmanned Aerial Vehicles (UAVs)
* Developing knowledge of unmanned and autonomous systems
* Learning about aerospace engineering principles

# We had a zoom on November 6th to discuss this with the founders of ARC. A copy of their charts is attached. The section plans to fund this through locally as a pilot program. Mentors will zoom in weekly to help. The schedule is:

# Get organized and then practice building software to control drones with DroneBlocks in November and December. From DroneBlocks.io: “DroneBlocks teaches STEM and the real-world application of drone technology through our free app.” The drone will be controlled by your DroneBlocks software which can be simple or complex. DroneBlocks has simulation software to show how a drone would react to a given set of commands. Here are two options, control using either blocks of code or programming in JavaScript. It likely that the Section will provide funds so that teachers and mentors can

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# Expecting students being able to get together in January and February, the students will assemble the hardware. A kit with all required drone parts will be provided at no charge to the school. The assembled drone will be available in succeeding years.

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# Compete in a virtual competition in April or May.

If interested please contact Allison Tsay at allisontsay@gmail.com.