

## **Press Release**

Northbridge High School  
Science Department

**For Immediate Release**

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### **Northbridge High School Students present their science/ engineering research projects.**

On Friday, February 23, the Northbridge Science Club hosted its first ICED Epic Challenge Dinner and had over 80 people in attendance. The evening began at 6 pm with students presenting their research posters as well as a 3D printing demonstration. US Congressman James McGovern, State Representative David Muradian Jr. and a representative from State Senator Ryan Fattman attended the dinner and provided positive feedback to the students as they engaged in conversation with them and learned of their research topics.

The Epic Challenge program at Northbridge High School has been working with Dr. Camarda for six years and is led by science teacher James Gorman. The program focuses on real-world issues NASA currently faces and is working to resolve but the problems are too large or complex to solve all on their own. Students are charged by Dr. Camarda's Epic Challenge Foundation to develop designs and prototypes in collaboration with engineers and scientists from around the world. This year's Epic Challenge is how to establish a sustainable human colony on Mars. The students have been working in collaboration with Arizona State University, Oxford University, University of Michigan, NASA JPL, and the Finnish Meteorological Institute.

Dr. Charles Camarda delivered a keynote address to the audience and explained how he worked with a team of his friends as well as a team of experts to design and test a patch for the space shuttle heat shield that could be deployed in Space. This engineering approach became necessary after the tragic Columbia mission. He calls the process he used Innovative Conceptual Engineering Design (ICED) methodology. Dr. Camarda is the Sr. Adviser for Engineering Development at NASA Langley Research Center, developer of Innovative Conceptual Engineering Design (ICED) methodology, and founder of the nonprofit Epic Education Foundation. Dr. Camarda explained, "The Epic Education and Epic Challenge Program will take an integrated team of educators, students, parents, administrators, and concerned politicians to radically improve education in the United States." Reflecting on the evening, Dr. Camarda remarked, "After speaking with Congressman Jim McGovern and Representative David Muradian last evening at the Northbridge Fundraising Dinner I feel confident we have the right team to make a difference in the State of Massachusetts!"

Teacher, James Gorman, described how the program has grown at Northbridge High School from a small class with a single project to 2 classes with 6 current student research projects. He gave special thanks to Regeneron Pharmaceuticals, Inc. and Society for Science and the Public for hosting a Research Teacher Conference in Washington, D.C. which he attended this past fall. He remarked, "The conference taught me skill so that I can empower my students to reach out to world-class scientists for collaboration and the inspiration to try it." Instructional Technologist, Christine Cote, followed up by telling the crowd how the high school students have been enriched by their mentors and have sought opportunities at Northbridge Middle School to mentor them.

Several students addressed the audience members and Dr. Camarda to explain how this program has impacted their lives and provided them opportunities for growth. Senior Devon Foster has been in the class for several years and is part of a team of students who have created a prototype for a solar oven tracking system to process raw materials like martian soil. Devon reflected on the program, saying, “it started out as just a class, but quickly grew into my passion and became so much more than just a class.” He goes on to discuss their project for the Mars colony, “after about a month of hard work in and out of school, we created our model which we call “SOTS-1” (Solar Oven Tracking System). Shortly after, Mr. Gorman informed us that we had the opportunity to present our project at NASA Langley Research Center.” The program has continually expanded its enrollment each year.

Representative Muradian also addressed those attending saying, “Typically, you hear from Northbridge all about the sports athletes... However, I feel that this [program] is going to start taking over.” He urged the administration, teachers, and students to keep up their great work and promised his full support. Congressman McGovern said, “This makes me feel good about the future that we have young people that are so dedicated to science.” More information about the Northbridge High School ICED Epic Challenge program at <https://sites.google.com/nps.org/epicchallenge>.

#### Attachment guide

The following photos can be downloaded from a Google Drive: <https://goo.gl/Q9NBfo>

- dinner-1.jpg – Luke Williams presenting his research poster.
- dinner-2.jpg - Dylan Marra presenting his research poster.
- dinner-3.jpg - Eli Perron and James Ciras explaining how the 3D printers work
- dinner-4.jpg - Dr. Charles Camarda’s keynote address
- dinner-5.jpg - group photo of Congressman Jim McGovern, Christine Cote, James Gorman, and State Representative David Muradian, Jr.
- dinner-6.jpg - Liam Kelliher and Daniel Plante posing next to their research poster. Photo credits to Valley Photography.

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