PRESS KIT

About EIS

The Enterprise In Space (EIS) program is an international initiative of the non-profit National Space Society (NSS). This “Education for Everyone” campaign strives to provide public access to orbital space experiments for students of all ages, fostering a lifelong commitment toward building a better future for humanity by empowering teachers to drive educational change and equipping students with the skills to achieve it. EIS will design, engineer, build, launch, orbit, recover, tour, and exhibit a spacecraft named *NSS Enterprise* to engage the next generation in STEAM education using an artificial intelligence (AI) and student contests to win an opportunity to orbit one of 100+ experiments.

The mission of EIS is to motivate students everywhere to reach for the stars. The EIS program is developing a freely distributed online space science curriculum that will interface with an AI tutor, named Ali, and spaceflight opportunities to provide a robust, interdisciplinary, multi-layered learning experience. Winning experiments will orbit and return at no flight cost to teachers, schools or students. To achieve this vision, EIS is forming partnerships with schools, non-governmental organizations, business, and government agencies to:

- Develop and disseminate the EIS Academy [K-12] & Enterprise Centers for Excellence (ECE) [University cutting edge research] based on a Moodle/Google platform that has low entry barrier, easy scalability, and offers a clear benefit to stakeholders. Educators will add quality activities/lessons/courses to the EIS Academy and utilize shared materials in their programs. Students and educators will propose and operate qualifying flight experiment proposals to present/publish results. ECEs will connect students with real-life professionals as role models who will help them enhance ideas, develop inventions and prepare for a career in the new space economy of the upcoming decades.

- Identify and enable the first of a new class of master space science educator, the Enterprise Educator Emissary (EEE). They will be trained and will train other educators and students. Training combines science content and pedagogy with real-world hands-on experiences with a focus on STEAM, the microgravity environment, and space science.

- Establish and support a global network of space science educators and learners.

- Demonstrate the potential of artificial intelligence as an educational tutor. Ali will engage with students about their experiments on Earth and while in orbit and teach the scientific method.

The EIS program is also a tribute to the many great visionaries of science and science fiction. It will demonstrate and pioneer new technologies, while inspiring and encouraging space enterprise. EIS’ goal is to engage and inspire the next generation – all ages and walks of life – by igniting a renewed interest in space exploration and development. To learn more, become a virtual crew member today!

Contact

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Achievements

- EIS Becomes an International Project of the National Space Society
- EIS Partners with Value Spring Technologies to develop a tutor for every student
- EIS Education Partners with Yerkes Observatory Education
- EIS officially launched at National Space Society's 2015 International Space Development Conference® in Toronto, Canada
- EIS Partners with SpaceWorks Enterprises Inc. and Terminal Velocity to explore Engineering Plans for the Mechanics of the NSS Enterprise
- EIS Launches EIS Academy, Massive Online Program for STEAM Education
- Launches Crowdsourcing of the EIS Orbiter
- EIS Education Collaborates with Janet's Planet
- EIS partners with Made In Space, Secures Plans to 3D Print Airframe of the spacecraft
- EIS Education Launches Enterprise Centers For Excellence, partners with Prairie Nanotechnology, Center for Applied Space Technology, Deep Space Industries, SPACE Canada, Canadian Space Society, Canadian Space Commerce Association, Global Aerospace Corporation and Ohio University's SunSat Competition
- EIS Education collaborates with Smithsonian Science Education Center on a mission patch design lesson and developing space science summer educator academy

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Videos

Unless otherwise labeled, all videos are **Courtesy of Enterprise In Space**. Visit our YouTube channel.

youtube.com/user/EnterpriseInSpace

Sound Bites

All sound bites are **Credit Enterprise In Space**

Podcasts and Interviews

- Trek Geeks - Episode 5: Larry Nemecek & Enterprise In Space
- MegaPodzilla #90: Larry Nemecek & Lynne Zielinski talk “Enterprise In Space”!!
- Holosuite Media - Tribbles in Ecstasy Take 155: An Enterprising Chat!
- Sci-fi Talk: Enterprise In Space with Larry Nemecek
- Earth Station One Episode 253 - Odd Romantic Couples in The Verse
- Earth Station One Episode 244 - Farragut Fest 2014
- Trek Make: A Star Trek Podcast - Episode 80: Enterprise In Space
- G&T Show Supplemental Log - Enterprise In Space
- Ten Forward Bonus Episode! Enterprise In Space
- Starfleet Escape Podcast Episode 50: Enterprise In Space
- The Event Horizon #77: Larry Nemecek, and enterpriseinspace.org
- The Rusted Robot Episode 49: Larry Nemecek talks Enterprise In Space
- Super Awesome Geek Show SPECIAL: Larry Nemecek & Lynne Zielinski: Enterprise in Space & The National Space Society
- Trekcast: Larry Nemecek about Enterprise In Space
- Visionary Trek - Enterprise In Space
- Slice of SciFi Enterprise In Space: Following a Dream
- Priority One Episode 191 Systems Overload
- MATTER STREAM 23: Enterprise In Space
- Holosuite Media - Tribbles in Ecstasy Take 207: Happy as Larry

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Logos, Icons, & Banners

The EIS logo

The EIS Banner

The NSS logo.

Complete list of authorized NSS logos: http://www.nss.org/awards/banner/logos.html

Images (below)

Unless otherwise labeled, all images are **Credit: Enterprise In Space**

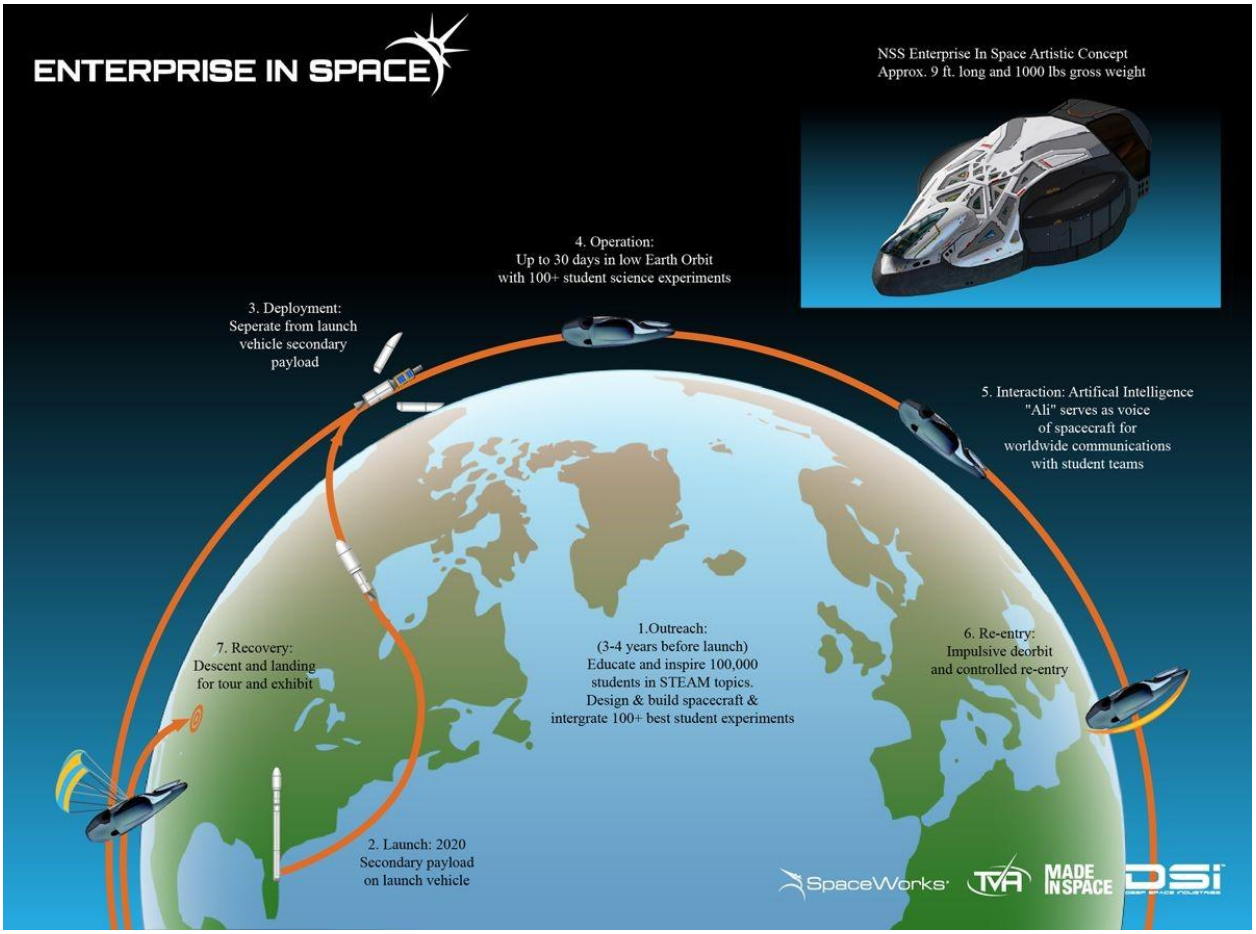

Diagram: An outline of the Enterprise In Space program from launch, to orbit, to re-entry. 1. Outreach: (3-4 years before launch) Educate and inspire 100,000 students in STEAM topics. Design & Build spacecraft & integrate 100+ best student experiments. 2. Launch (2020): Secondary payload on launch vehicle. 3. Deployment: Separate from launch vehicle secondary payload. 4. Operation: Up to 30 days in low Earth Orbit with 100+ student science experiments. 5. Interaction: Artificial Intelligence “Ali” serves as voice of spacecraft for worldwide communications with student teams. 6. Re-entry: Impulsive deorbit and controlled re-entry. 7. Recovery: Descent and landing for tour and exhibit.
Image Credit: EIS

(Left to Right) Alice Hoffman, EIS Program Manager; Michael Snyder, Chief Engineer of Made In Space; and Lynne Zielinski, EIS Education Program Manager holding a 3D printed engineering model of the *NSS Enterprise* orbiter structure. **Image Credit: EIS**

There are more images available for Enterprise In Space. If you have specific requests, please do contact us!

Selected Articles

“One of the most wonderful things about EIS is the way that it brings together people from all around the globe, from all walks of life, together for the cause of space education and the advancement of space technologies” - Christopher Bryan Jones, *Ad Astra Spring 2015*

"[EIS is laying] the foundation for an educational program that will train the next generation of engineers and astronauts that will take us to the Moon, Mars, and beyond." - Michael Molitch-Hou, *3D Printing Industry* “Not only will 3D printed components be integral to the construction of this craft, but undoubtedly education regarding the technology will be fascinating and valuable for students as well, as they are

exposed to one superior example of today's uses for this technology." - Bridget Butler Millsaps, *3DPrint.com*

F.A.Q.

What is the Enterprise In Space program?

A program sending into and returning from orbit an NSS "Enterprise" orbiter with 100 student experiments aboard as a science and space education program for all ages. A celebration to the enduring works of the great visionaries of science and science fiction, and to all the ships in history which have shared the name Enterprise. A years-long program sending into and retrieving from orbit an approximately 8-foot NSS "Enterprise" orbiter containing student experiments as a science and space education program for all ages.

What is the National Space Society?

The NSS is an independent, educational, membership, non-profit organization dedicated to the creation of a spacefaring civilization. NSS is widely acknowledged as the preeminent citizen's voice on space, with thousands of members and supporters, and over 50 chapters in the United States and around the world. The Society publishes Ad Astra magazine, an award-winning periodical chronicling the most important developments in space. To learn more, visit www.nss.org.

How much will all of this cost?

It will cost you only $20 to fly your name into space. Our team of experts has prepared a complete budget covering all aspects of the program, from design and construction, through three rounds of student experiment funding, to insured launch and retrieval, of $63 million. There are numerous companies who have expressed interest in funding a large portion of this cost through sponsorship and/or in-kind donations of hardware in exchange for our testing new technologies. We look forward to providing you updates on our fundraising and sponsors.

What will your orbiter be made of?

The ENTERPRISE IN SPACE orbiter will be built and launched by established aerospace companies and recognized educational institutions. EIS intends to engage an engineering analysis and preliminary design firm of the overall vehicle. This will be a major aerospace subcontractor with experience in educational outreach including undergraduate, graduate, and high school internship/mentoring programs. They will complete the conceptual design of the orbiter and subsystems, define the re-entry and recovery system concept, and develop conceptual engineering drawings. The orbiter will then be bid to a primary contractor. During the development process, ENTERPRISE IN SPACE will show regular updates detailing as much of the design and building as we are allowed to. There are some laws that restrict certain information about orbiters/satellites which we must adhere to (US ITAR restrictions), but we will be as open as possible at all stages of the program.

In addition, the orbiter will incorporate as many new technologies as possible. These technologies may include materials that are 3-D printed, nano-technologies, new materials, and other innovative concepts.

One of the EIS team's goals is to honor the visionary ideas and concepts of science fiction and create the reality of some of these amazing ideas.

How much does it cost to fly a student experiment into space?

Enterprise In Space will be flying the winning student experiments into space for free! There is an extreme need for inexpensive space flight payload opportunities for student science experiments, especially experiments that can be orbited and safely returned to Earth. The EIS team anticipates that it will fly over 100 experiments from all age groups, disciplines, and student groups worldwide to win a berth on this orbiter. There will be no cost for flying an experiment. However, the cost of building an experiment that will fly into space is the responsibility of the winning teams and is dependent upon a number of factors: The type of experiment, the size of the container, and the overall weight. Containers and electrical interfaces will be supplied by EIS, while the experiments themselves will be supplied by the students.

How are you planning to get your orbiter up into orbit?

By rocket, of course! The orbiter will be flown into orbit as part of a secondary payload. We have been offered a free launch to be announced in July 2016.

When is the launch scheduled for?

We are hoping to launch by 2021.

How long will your orbiter be in orbit?

One week minimum, depending upon a number of external factors.

How are you planning on returning your orbiter?

The orbiter will have heat-shielding (to diffuse the heat of re-entry and protect the orbiter) and a parachute (to slow the rate of descent) as it is guided back to Earth. There may also be some new technologies utilized to bring the orbiter back and the development of these technologies will depend on the final design chosen from the orbiter design contest.

What happens once the orbiter is retrieved?

After the orbiter is retrieved, the student experiments on-board will be returned to the students and teachers, who will analyzed and report on the data. The orbiter itself will go on an international tour with some of the Enterprise In Space staff. At each of these tour venues, some of the experiment results will be presented and displayed. The orbiter, teachers, and students will visit many conventions and special events, some created specifically for this purpose. The orbiter's final destination will be a permanent placement in a museum, like the Smithsonian Air & Space Museum (pending an approval process), where everyone will be able to come and see it. If you donated to become a virtual crew member, you will be able to see your name listed alongside the display, as part of our history-making virtual crew.

Leadership

Shawn Case
Founder and Chairman of the Board of Advisers

Mr. Case founded Enterprise In Space in 2010 as a means of galvanizing space-focused and STEAM education. By launching a spacecraft into Earth orbit carrying over 100 student experiments onboard and establishing an online curriculum for educators worldwide, he believes that he will be able to inspire the next generation of engineers, astronauts, and all-around critical thinkers that will get humanity to Moon, Mars, and beyond. Since the program's inception, Mr. Case has managed to take onboard some of the most qualified space veterans to get EIS off the ground, as well as sign on large companies and organizations that will provide critical support in the successful construction and launch of the EIS spacecraft.

Alice Hoffman
Program Manager

As President of her own company, Hoffman Management Partners, LLC, since 1998, Alice has hired and managed great teams of people and companies to achieve the goals of her clients and to promote sustainable design and construction. Alice has successfully managed dozens of large, complex, multi-faceted design and construction projects, including the $6.2Billion Chicago O'Hare airport expansion, the $660M Chicago Bears' Soldier Field adaptive reuse of a historical building to an NFL football stadium in 20 months, the shortest time ever achieved for a fully-functional major league stadium in the US, as well as multiple new and renovated office, retail and hospital projects in New York City and Long Island. She has Civil Engineering undergraduate and Management Masters degrees from MIT. Alice is volunteering with the EIS team as a tribute to Gene Roddenberry's vision, as expressed through the original Star Trek series, whose lessons of women being part of a team to overcome all obstacles and achieve worthy, moral goals inspired her to survive the early death of her parents, to succeed at MIT, and to make her projects successful with integrity. She has Civil Engineering undergraduate and Management Masters degrees from MIT.

Haroon B. Oqab
EIS Project Manager

Haroon B. Oqab is an aeronautical engineering professional with project management experience in complex non-profit endeavors. He is a graduate of The University of Western Ontario with two bachelors of science and two masters of engineering degrees. Following the space program from an early age and finding inspiration in the achievements of humanities' space exploration efforts, he is an avid space advocate, actively participating through public talks, international conferences, and competitions engaging the next generation of leaders. He serves as the as the National Technical Program Manager for the Canadian Space Society, managing, facilitating, and developing multi-disciplinary programs with a portfolio of projects involving smallsats, solar sails, propulsion physics and space-based solar power. He is a member of the Professional Engineers of Ontario and sits on the local executive committee.

Larry Nemecek

EIS Promotions Manager

Best known as author of the classic “Star Trek: Next Generation Companion” and longtime editor of official ST Communicator magazine and Fact Files, Larry has also released three editions on CD of his hundreds of hours of remastered archival Trek interviews as the “Trekland: On Speaker” series. Currently, Larry is pursuing a career in voiceover work, and is producing his “The Con of Wrath” true-event documentary, based on Star Trek fandom’s most “glorious failure”—the Ultimate Fantasy arena show of 1982. Along with story credit for the “Prophecy” episode of Voyager, appearances in docs like “Trek Nation” and “The Green Girl,” and working as a producer at the old original startrek.com, Larry still writes his “Fistful of Data” column for Trek Magazine, guest-blogs at startrek.com, and appears frequently at conventions, on podcasts and in CBS Star Trek Blu-ray documentaries and audio commentaries.

Lynne F. Zielinski

EIS Education Program Manager

National Space Society Director, Public Affairs Vice President, and Education & Outreach Chair, Lynne F. Zielinski has a bachelor’s degree in physics from the University of Colorado and a master’s degree in physics from Northeastern Illinois University. An award winning retired physics, astronomy, and space science teacher of 32 years from Glenbrook North High School in Northbrook, Illinois, Lynne has been engaging students in NASA programs since 1987. She has overseen more than 60 nationally placed and NASA Center winners and is the founder of the Glenbrook Aerospace Development Get-away Experiment Team (GADGET), a student STEM organization.

GADGET students under Lynne’s management have flown active and passive experiments on six Space Shuttle missions, nine sub-orbital NASA rockets, a NASA C-9 & two Zero-G aircraft reduced gravity flights, three NASA high-altitude balloon flights, and a Zeppelin, with four additional experiments performed in the NASA 2.2 second microgravity drop-tower. Lynne and her GADGET students have conducted educational outreach for K-12 students and teachers at state and national workshops and conferences, and her GADGET students have collaborated on NASA experiments with students and teachers in three states and in Israel, Portugal, and Morocco.

Francis Dellutri

EIS Deputy Education Manager

Frances is a middle school science teacher and has brought her varied experiences in science-related careers to the classroom. She has been nominated for the Presidential Award for Excellence in Teaching Science and Math and has been awarded scholarships from Princeton University and Argonne National Laboratories. She is active in the Yerkes Observatory outreach program to students and teachers. Her philosophy in teaching to bring cutting edge experiences to students to prepare them for global connections. Frances holds a B.A. in Chemistry, an M.B.A, and a M.A.T.

Fred Becker

EIS Chief Engineer

Fred Becker is a lifelong space advocate who has worked within many space organizations to promote space. In 2010, Mr. Becker was elected to a two-year term as a Regional Director on the NSS Board of

Directors. As a systems engineer, Fred has worked on many key space programs including Space Shuttle,
Space Station, X-33, Atlas, Delta, Pegasus,Taurus, Spitzer Space Telescope, Lunar Prospector, Pluto New Horizons, Mars Reconnaissance Orbiter, and Gravity Probe B. He was part of mission control for the first Shuttle flight and has made one flight aboard the NASA Zero-G Aircraft. During his career, he has worked at three of NASA's major centers: JSC, MSFC and KSC. Fred is joining this project because he sees it as a way to make a connection between space and science fiction communities and thereby to make space more exciting to the public. Gene Roddenberry sparked his imagination when watching the original broadcasts of Star Trek. He designed his own version of a starship in 1968.

Advisors

TECHNICAL ADVISORS

Kirby Ikin – Chairman National Space Society Board of Directors Flight Insurance

Michael Mealling – Founder/CEO – Astrogistix.com, Contractor – Georgia Institute of Technology, Editor – Rocketforge.org

Ross Tierney – Founder Horizon SAS (Space AccessSystems), Owner & Senior Coordinator – DIRECT Launcher Owner – Launch Complex Models

John Cortes – 2nd Prize winner on design contest

William Doyle – Value Spring Technology

Sal Gerardo – Co-founder of Value Spring Technology

Taffy Holiday – COO of Value Spring Technology

Joseph Romm – Ph.D, Founding Editor of ClimateProgress.org

Jonathan Lapin – Chief Designer

EDUCATION ADVISORS

Rajiv Uttamchandani – Astrophysicist, Professor, and Director STEAM Education Initiatives at the New York Film Academy, Los Angeles, CA.

Floyd T. Holt - President/CEO- The American Science and Technology Center

Kathleen Schmidt – Ph.D.

ART & DESIGN ADVISORS

Adam Howard – Visual Effects

Andrew Probert – Consulting Senior Illustrator Star Trek: The Next Generation

Jim Plaxco – Digital Artist & Photographer Owner Artsnova

Tobias Richter – CGI & Graphics Illustrator

Tim Gagnon- Talented multi-media artist who has worked NASA officials on new mission and project emblems.

Ali Ries – Artist

Dragan Radic – Production & Promotion

Craig W. Frey, Jr – CGI & Graphics Illustrator

Jon Ramer – Space Art

Stanley Von Medvey – Winner of EIS orbiter contest

Brad Hoplock – Computer Animation and Motion Graphics

Mark Rademaker – CGI & Graphics Illustrator

MEDICAL / BIOLOGICAL ADVISORS

Olafur Palsson – Professor of Medicine University of North Carolina at Chapel Hill School of Medicine

PROMOTION ADVISORS

Janet Ivey – Janet's Planet on PBS and online
Dan Madsen – Consultant Her Universe, Fan-Based Media Consultant – Madsen Consulting
Stephen Ryan – Designer R/C Enterprise 1701-D Slope Soaring Glider, EIS Prototype Modeler
Jeff Ferguson – Host JeffTrek Radio
Gary Barclay – Admiral Chief of Public Affairs Starfleet Command (USA)
Isaac Santiago – Acting Ambassador Starfleet Command Region 2 (Puerto Rico & Caribbean), EIS Promotions – Latin America, the Caribbean, Spain
Liam Ginty – NSS/Voices From L5 Podcast
Christopher Jones – Editor In Chief of Metropolis
Karl Koeller – Promotions

MUSIC ADVISORS

Brion James – Famous Music Composer
Troy Mathisen – Music Production
Melvin Brannon – Booker T and The MG's