

Join us for SpaceConnect at the University of North Dakota, where high school students will explore the exciting applications of space agriculture. Engage in hands-on workshops, witness the space projects and missions, and discover career opportunities in Space Ag. This event offers a unique opportunity to learn from experts, witness a Near-Space mission, and connect with NASA astronaut Paul Lockhart, making it an unmissable experience for aspiring space explorers and agricultural innovators.

SpaceConnect is a part of Space Ag conference hosted by Grand Farm.

## Goal

To excite the next generation of agriculturalists by exploring space agriculture applications.

## Details

Date - Thursday, October 24th, 2024 Time - 9:00 am - 12:00 pm Location - Memorial Union, University of North Dakota, Grand Forks, ND Audience - 9th-12th Graders

# What Students Can Expect

- Engage in hands-on workshops and activities
- Tickets to attend the Space Ag conference
- Opportunity to connect with experts from universities, industry, and NASA
- Free lunch

# Sign Up for FREE! <u>https://forms.gle/94bjHaVQEYwS2WqBA</u>

# **BONUS: Meet and Greet with Astronaut Paul Lockhart**

Paul Lockhart is a retired U.S. Air Force Colonel and NASA astronaut who piloted two Space Shuttle missions to the International Space Station, directing six spacewalks and logging over 26 days in space. With over 5,000 flight hours in 30 different aircraft, he now serves as President of PEMDAS® Technologies and Innovations, supporting U.S. military operations. Lockhart's career is marked by numerous accolades, including the Defense Superior Service Medal, and ongoing involvement with organizations like the Museum of the American Revolution.





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# SpaceConnect

## WORKSHOPS:

### **Plant the Moon**

This demonstration will involve a brief explanation about the role microbes play in helping crops grow in space. We can get nutrients from microbes that reduce the payload of bringing fertilizers to space! Students will also learn about experimental design and good data collection. Students will work in groups and collect data for the experiment wherein crops do or do not receive a microbial treatment, and the students will collect data regarding the plant growth, assess formation of root nodules, and chlorophyll content of the plants to determine if the microbes did their job and improved crop growth in the lunar regolith.

Inflatable Lunar Habitat Virtual Tour

will take part in a virtual tour of this innovative habitat.





## **Near-Space Mission**

Join UND as they highlight a Near-Space Mission. This event will allow students to view the launch of a high-altitude balloon that ascends into the stratosphere. Participating students will receive seeds that have gone to the Earth's upper atmosphere, approaching the edge of space. Students will learn about what it takes to launch something to the stratosphere, the effects of space exploration on materials and more in this fascinating discussion.





## **SpaceAg Career Opportunities**

Get access to information regarding internships, scholarships, and other resources and opportunities in the world of SapceAg. Zoe Graham is a NASA Aeronautics Engagement Intern and a Commercial Aviation student at UND. She is a former NASA Langley Intern, and has a passion for getting students involved in STEM!

The Inflatable Lunar Habitat (ILH) is designed to support a crew of four astronauts during a six-month mission on the moon. It features a lightweight, expandable structure that maximizes interior space while minimizing mass, making it ideal for long-duration lunar stays. The habitat includes sleeping compartments, a galley, a bathroom, and laboratory space, providing astronauts with the necessary facilities for living and conducting research in a compact, efficient environment. Attendees at the Space Connect workshop

Questions? Email Dr. Ruchi Bhardwaj (Sr. Program Manager of Education & Research) RuchiB@GrandFarm.com

