



STELLARXPLORERS

SPACE STEM PROGRAM

A STEM program of the
Air & Space Forces Association



StellarXplorers is a STEM program of the Air & Space Forces Association, created to introduce and inspire high school and middle school students toward careers in aerospace, aviation, and other science, technology, engineering, and math disciplines critical to our nation's future.

The StellarXplorers National Space Design Competition

The StellarXplorers National Space Design Competition is a space system design competition that challenges teams of students (grades 9-12) to solve orbit planning, satellite component, and launch vehicle selection scenarios presented in a series of online rounds. Teams must use the provided scenario (system's mission and constraints) to provide the best solution to a typical space design problem.

To prepare, students are provided with specific training in the use of industry-standard system simulation software – Systems Tool Kit (STK). Teams are also given access to an online textbook as a curriculum supplement and study resource for online quizzes given during the competition, as well as practice scenarios. **No prior experience is required to participate.**

Teams must consist of an adult Team Director (usually a teacher) and two to six students from an approved organization (high schools, scouting units, JROTC, Civil Air Patrol, etc.). **For more information about registering, visit <https://stellarxplorers.org/registration/>.**

The competition takes place during the school year (October – February). All teams are guaranteed three online rounds of competition before eliminations begin. The top 10 scoring teams from the Semifinal Round qualify for an all-expenses-paid trip to the National Finals Competition in April (location TBD).

StellarCamps – Summer Camp Program

StellarCamps are fun space system design camps for 6-12 grade students. Participants can learn about various aspects of space system design, and there is **no prior experience required!** StellarCamps focus on the teamwork and collaborative problem-solving methods associated with sending objects to space, including satellite coverage, determining payload, and how to use Systems Tool Kit (STK) – an industry standard software used by professionals.

During the 5-day camp, students learn about orbits, history of space exploration, basic principles using Systems Toolkit (STK), satellites, rockets, and much more. They'll take part in many hands-on activities and practice exercises to review concepts covered in the curriculum, in addition to fun icebreaker and teambuilding activities.

On the final day of each StellarCamp, students have the opportunity to participate in a mini-competition scenario to challenge the skills obtained over the course of the week.

Any organization can register to host a camp for their local students!

Learn more at www.stellarxplorers.org | Contact info@stellarxplorers.org

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