Astronaut Challenge Sponsors











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Visit **studentastronautchallenge.com** for additional information on the competition and the run-off competition dates and locations.



## STUDENT ASTRONAUT CHALLENGE

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# STUDENT ASTRONAUT CHALLENGE



Florida State University Schools

studentastronautchallenge.com





#### What is the FSUS Space Shuttle Simulator?

In 2009 Florida State University research school (FSUS) received a grant to construct a space flight simulator. The goal of this research project was to:

- Evaluate the effect of virtual immersion on developing student interest in Science, Technology, Engineering and Math (STEM).
- Develop an innovative method for teaching teamwork and problem solving to science students by placing them in real world situations.

After the study was successfully completed FSUS decided to use the simulator to reach a larger student audience. Working with the Department of Education and local businesses, the "State of Florida Student Astronaut Challenge" was created.

#### What is the Student Astronaut Challenge?

The Student Astronaut Challenge is a spacerelated competition comprised of a regional qualifying exam and a four event finals. The finals competition is held annually at the Kennedy Space Center with both middle and high school divisions. Awards are presented in each division to the top three teams in each event and the overall winning team.

#### How do schools qualify?

The run-off competition is held in three Florida and two Georgia sites in September and consists of a 75 multiple choice question test based on the Student Astronaut Challenge textbooks located in the website "Reference Material" menu option.

Students compete as a five-person team, each individually taking a different version of the test. The average score of the team is used to obtain their regional ranking. Fifteen high school and fifteen middle school teams are selected for the finals competition based on their run-off competition rankings.



#### What are the Astronaut Challenge events?

**Event One** consists of a hands-on <u>engineering</u> <u>challenge</u> where students are provided a flight operation related problem onboard a spacecraft. Working as two teams – mission control and Skylab flight crew - they are required to use teamwork and collaboration to solve a series of challenges and reach a solution.

**Event Two** is a physical <u>design challenge</u> to solve a specific space-related issue. Teams submit a typed design proposal due before the finals competition and present their solution, including a prototype model, to a team of judges during the competition.



**Event Three** consists of three rounds (including a semi-final and final) where teams are required to perform the pre-flight operation, launch, orbit and landing of the Space Shuttle Enterprise flight simulator and the operation and responsibilities of the mission control team. During the semi-final and final rounds, students are provided with in-flight emergencies that must be managed to safely complete their mission.

**Event Four** consists of two rounds (including run-offs and finals) where team members, working in pairs, each perform one of three types of landings of the Space Shuttle Enterprise flight simulator and the operation and responsibilities of the mission control team.

#### How can I get involved?

The staff of the Student Astronaut Challenge is continually looking for educational partners and sponsors to support the challenge. If you are interested, please contact any of the program staff listed on this brochure or the **studentastronautchallenge.com** website.

**Students**, please share this information with your teachers.