

NEWS RELEASE

FOR IMMEDIATE RELEASE:

October 17, 2016

Eight McKinney High School engineering students are awarded a NASA contract to design, build and launch a reusable high powered rocket and engineering payload

McKinney, Texas - October 17, 2016 - The McKinney High School Flying Lions Rocketry Team has been awarded an eight-month unfunded NASA contract to design, build and launch a reusable high powered rocket and engineering payload to an altitude of one-mile above ground level and recover both. The team will travel to NASA's Marshall Space Flight Center in Huntsville, Alabama in April as one of only 18 high school teams selected for the program. At NASA the MHS Flying Lions will compete in engineering design, target altitude, team spirit, model rocket display and webpage design. The NASA Student Launch program also includes 42 teams from major engineering colleges and universities from around the nation.

Members of the Flying Lions Rocketry team competed last Spring at the Team America Rocketry Challenge (TARC) in Washington DC. The team finished in the top 25 in the Nation, and as a result, they were invited by the NASA Student Launch Program Office to submit a proposal for the NASA contract. On October 14th the team received notification that their proposal was accepted, and NASA is awarding them an eight-month unfunded contract to design, build, test and launch a reusable high powered rocket and engineering payload.

The mission designed by the team will launch a fragile payload one-mile above ground level and return it safely to a specific location designated by NASA. The team proposed a launch vehicle that is 8-feet tall, 6-inches in diameter, weighs over 20-pounds and will reach one-mile in 15 seconds while traveling over 650 miles per hour. The launch vehicle will carry an Unmanned Aerial Vehicle (UAV), designed and built by the students, that will be deployed from the launch vehicle with the fragile payload attached. Then without human intervention, the UAV will distinguish between three landing zones, find the correct landing zone assigned to the team by NASA and land safely. The fragile payload and landing site will not be disclosed to the team until they arrive at the launch site in April.

The project uses real engineering processes and tools. The students will model the designs in computer mechanical design software, create engineering drawings, run and analyze computerized flight simulations, solve complex math problems using algebra, trigonometry, geometry, calculus and statistics, submit test reports, and build and launch subscale and full-scale test vehicles while presenting and defending their findings to a group of NASA engineers over the course of the eight months. These reviews are similar to the NASA engineering design lifecycle process and includes design, testing, manufacturing, safety, schedule, budget, financing and educational engagement information through the progression of the project. Upon completing all of the contract deliverables and a successful Flight Readiness Review, the team will be invited to share their designs and fly their mission at the NASA Marshall Space Flight Center in Huntsville Alabama on April 5th through the 9th in front of a crowd of over 1,000 distinguished guests from NASA and other aerospace companies.

High School Senior, Ms. Kathryn Lehocky, the team's Project Manager says *"The team is very excited to be awarded this contract. We are flying a very difficult mission, and we are competing against some of the best schools, colleges and universities in the United States. We have a highly motivated and talented team of future engineers that are looking forward to the challenges."* The McKinney High School NASA team is made up of eight young women and men from McKinney High School Engineering club.

- Ms. Kathryn Lehocky - Mission Director/Program Manager
- Ms. Alex Macias - Safety/Propulsion
- Mr. Eric Beights - Launch Vehicle/Flight Dynamics
- Mr. Alex Lehocky - UAV Avionics/Software
- Mr. Kyle Myscich - Flight Systems/UAV Structures
- Mr. Jason Beights - Fragile Payload/Manufacturing
- Mr. Mitchell Palmer - Ground Support/Vehicle Recovery
- Mr. Harrison Chilton - Flight Conditions/Data Collection

Please follow the McKinney High School NASA team and the three McKinney High School Team America Rocketry Challenge teams on Facebook (MHSEngineeringClub), Twitter (@TARCFlyingLions), Instagram (tarcflyinglions) and their website (<http://mhsengineeringclub.com>). To learn how to help the teams raise \$40,000 for the MHS Engineering club through individual and business sponsors please contact the MHS Engineering Booster club at MHS.EngineeringBoosterClub@gmail.com

The NASA Student Launch is a research-based, competitive, experiential exploration activity. It strives to provide relevant, cost-effective research and development of rocket propulsion systems. The project offers multiple challenges reaching middle schools, high schools, colleges and universities across the nation. For more information, please go to <http://www.nasa.gov/audience/forstudents/studentlaunch/home/index.html>

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