



# Muscogee County School District

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## For Immediate Release

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## NEWS RELEASE

### MCSD Teachers Fly High for Weightless Science

**(Columbus, GA)**-Four Muscogee County School District teaches venture to NASA Johnson Space Center's Ellington Field in Houston, Texas to conduct weightless, hyper-gravity experiments. Team Lead, Luther Richardson (Columbus High), Laura Solomons (Columbus High), Brenda Howell (Hardaway High School), and Matt Hanes (Northside High School) will test their experiments aboard an aircraft modified to simulate a reduced-gravity environment.

The aircraft will fly approximately 30 roller-coaster-like climbs and dips during experimental flights to produce weightless and hyper-gravity periods ranging from 0 g to 2 g. Teams will perform the experiments aboard a microgravity aircraft, which produces weightlessness eighteen to twenty-five seconds at a time by executing a series of about thirty parabolas – a steep climb followed by a free fall – over the Gulf of Mexico. During the free falls, the teachers gather data in the unique environment.

“We are excited that our program provides once-in-a-lifetime opportunities for aspiring scientists and engineers and teachers to study and understand their craft,” said Doug Goforth, Program Manager. “Teachers will gain useful skills to take back to the classroom by participating in the program through collaborative planning and teamwork.”

The MCSD teacher team will arrive Friday, July 30, 2010, at Ellington Field in Houston where astronauts complete training. Monday, August 2 – Friday, August 6, 2010, the

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team will go through physiological training and fly their experiment. During reduced gravity flight, the experiment will test the ability of a free floating apparatus, called a Cubesat, to find and center itself on a known source using a control moment gyroscope built by a student team. This type of autonomous system alignment would have many applications to space science technology including holding perfect alignment of an astronaut's Personal Satellite Assistants to perform work inside or outside the space craft. Another potential application would be small satellites aligning with other small satellites to maximize communication links at a much cheaper cost than the larger satellites. Following the flight, the team will evaluate findings, draw conclusions, and provide the results to NASA.

For more information about the Reduced Gravity Student Flight Program, visit the web site <http://microgravityuniversity.jsc.nasa.gov>, or e-mail [communications@mcsdga.net](mailto:communications@mcsdga.net).

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