



**NASA WLMR DESIGN CHALLENGE  
NAMES  
GREENWICH CATHOLIC SCHOOL  
SIXTH GRADE STUDENTS AS TOP TEN FINALISTS  
IN NATIONAL COMPETITION**

GREENWICH, CT – April 8, 2010- Five Greenwich Catholic School Students from the school's Sixth Grade class were named one of ten teams nationwide as Finalists in the NASA WLMR (Waste Limitation Management and Recycling) Design Challenge. The challenge asked students from 5<sup>th</sup> to 8<sup>th</sup> Grades nationally to form teams of up to six students with a teacher mentor and create a sustainable water recycling system for the moon. The GCS team included the following students: Jorge Gonzalez, Matthew Briggs, Robert Fucigna, Erik Hoffer and Jackson Day, with Mrs. Deborah Phillips acting as the teacher mentor.

To enter the competition, the students had to design and test a complete water recycling system for future use in an outpost on the Moon. Working in four phases, small teams of students create a simulated wastewater stream consisting of common chemicals that together simulate the wastewater generated in a lunar outpost. The teams immediately analyze the properties of the simulated wastewater using basic tests and then create a prototype system that can recycle that waste stream. The teams test the purified water stream using the same tests and compare the results to the initial tests to determine the effectiveness of their recycling system. Finally, the teams present their results to the judges. Full details about the competition can be found at [MLMR.NASA.gov](http://MLMR.NASA.gov)

Greenwich Catholic School frequently uses NASA as a resource for their Science, Math and Engineering initiatives in the Upper School and were notified earlier this week about their honor. On April 7th, seven judges interviewed the students via conference call to evaluate the students entry (bios of the judges are at the end of the release). The top three winners will be announced on May 1<sup>st</sup>.

"We are extremely proud of this wonderful achievement by our students," says Mrs. Patrice Kopas, principal of Greenwich Catholic School. "Today's students are our future engineers, astronauts and scientists and we are pleased to see their creativity and hard work honored by NASA."

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### About the Judges

Jay L. Garland Chief Scientist, Dynamac Corporation, Kennedy Space Center

Dr. Garland has spent over 20 years working with regenerative systems to provide life support for NASA's long duration space missions. He has led research and development projects related to solid waste and wastewater recycling technologies for both space and Earth applications.

John Hogan Physical Scientist, NASA Ames Research Center

Dr. Hogan is an environmental scientist that conducts research and technology development for human life support systems for long duration space exploration. His main areas of focus include waste management, air revitalization and systems analysis.

Andrew Jackson Associate Professor Dept. Civil & Environmental Engineering, Texas Tech University

Dr. Jackson's research program includes a variety of water recycling topic, including NASA's advanced life support integrated water recovery system and examining an efficient and cost effective combination of wind power and desalination technology. Dr. Jackson is the Associate Editor of Air, Water and Soil Pollution, editorial board member of Environmental Toxicology and Chemistry, and a member of committees for the Association of Environmental Engineering and Science Professors and the Institute of Aeronautics and Astronautics.

Karen D. Pickering Exploration Life Support Water Recovery Systems Lead, NASA Johnson Space Center

Dr. Pickering has worked with spacecraft water recovery systems since 1995. She has experience in technology development of biological water recovery systems, membrane systems, and photolytic systems.

Tony Rector Senior Research Engineer, Hamilton Sundstrand-Space Land and Sea

Tony Rector has involved with water treatment, water processing and ECLSS hardware past 10 years. He has extensive experience in the development of biological and physiochemical water treatment systems. Mr. Rector holds a masters degree in Environmental Engineering and has authored numerous papers in his field.

Deborah Shearer Principal, College Park Elementary School, LaPorte, Texas

Ms. Shearer is a former elementary and middle school science teacher and NASA intern at the Johnson Space Center's Teaching From Space Office. Shearer is the co-author of NASA's Rockets Educator Guide original and recently revised editions and the author of commercial children's science books.

Gregory Vogt Senior Project Manager, Baylor College of Medicine Educational Outreach Program

A former classroom science teacher and science museum director, Dr. Vogt established the Teaching from Space Office at the Johnson Space Center and led the development of numerous printed and video educational products. He is a co-author of the NASA Rockets Educator Guide and the author of many children's science books.

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## **About Greenwich Catholic School**

Greenwich Catholic School (GCS) is a Roman Catholic, co-educational day school located at 471 North Street in the heart of Greenwich. GCS includes Kindergarten through 8<sup>th</sup> grade students as well as a 3 year old program called Little Angels and a Pre-Kindergarten program for 4 year old children. To schedule a tour or receive an admissions packet, please call 203-869-4000, ext. 102 or email at [admissions@gcsct.org](mailto:admissions@gcsct.org). [www.greenwichcatholicschool.org](http://www.greenwichcatholicschool.org)

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Contact: Lisa Lori – 917-543-5053