EFFECTIVE INTEGRATION OF NASA STEM CURRICULA IS ALLOWING STUDENTS TO APPRECIATE EARTH SCIENCE CONCEPTS

Nazrul I. Khandaker
CUNY York College

Stanley Schleifer
CUNY York College

Krishna Mahabir
Grover Cleveland High School

Newrence Wills
CUNY York College

Matthew Khargie
CUNY York College

How does access to this work benefit you? Let us know!

Follow this and additional works at: https://academicworks.cuny.edu/yc_pubs

Part of the Aerospace Engineering Commons, Aviation Commons, Curriculum and Instruction Commons, Educational Methods Commons, Engineering Education Commons, Geology Commons, and the Science and Mathematics Education Commons

Recommended Citation
Khandaker, Nazrul I.; Schleifer, Stanley; Mahabir, Krishna; Wills, Newrence; and Khargie, Matthew, "EFFECTIVE INTEGRATION OF NASA STEM CURRICULA IS ALLOWING STUDENTS TO APPRECIATE EARTH SCIENCE CONCEPTS" (2016). CUNY Academic Works.
https://academicworks.cuny.edu/yc_pubs/171
EFFECTIVE INTEGRATION OF NASA STEM CURRICULA IS ALLOWING STUDENTS TO APPRECIATE EARTH SCIENCE CONCEPTS

KHANDAKER, Nazrul I., Geology Discipline, Earth and Physical Sciences, York College of CUNY, 94-20 Guy R. Brewer Blvd, Jamaica, NY 11451, SCHLEIFER, Stanley, Geology Discipline, Earth and Physical Sciences, York College of CUNY, 94-20 Guy R. Brewer Blvd, Jamaica, NY 11451, MAHABIR, Krishna, Science and Robotics Depat., Grover Cleveland High School, 2127 Himrod Street, Ridgewood, NY 11385, WILLS, Newrence, NASA MAA Project (York College), York College (CUNY), 94-20 Guy R. Brewer Blvd, Jamaica, NY 11451 and KHARGIE, Matthew, Physics, York College (CUNY), 94-20 Guy R. Brewer Blvd, Jamaica, NY 11451, nhkhandaker@nyruxn.edu

NASA Minority University Research and Education Project (MUREP) Aerospace Academy - MAA is a national, innovative activity designed to increase participation and retention of historically underserved and underrepresented K-12 youth in the STEM disciplines, particularly earth science and human exploration (HEO). HEO is dedicated to informing and educating the public about NASA’s plans for a new era in space exploration. Utilization of NASA satellite images, online climate education, space mathematics and other earth science-related resources is allowing students to conduct basic research and prepare themselves for a New York City-wide science competition. In addition to offering school children a solid grounding in STEM and increasing the involvement of parents in their children’s education, MAA at York fulfills many other important community needs. The majority of our MAA parents are immigrants and ESL people who greatly benefit from the program in terms of obtaining critical STEM education opportunities for their kids. The MAA Family Café allows them to locate, source, easily navigate and retrieve pertinent information and opportunities such as specialized high school admission, SAT, math and science tutoring, College Now Program, and most importantly online NASA educational resources for enhancing their understanding of STEM both for themselves and their kids. Family Café is certainly a venue where parents are also becoming STEM conscientious citizens and they often acknowledge the magical impact MAA did on their kids.

Noticeable impacts demonstrated by many MAA students include higher performance in math and science tests, positive interest, renewed motivation, and curiosity. Pre-service teachers from the college also work for the program, thus in part fulfilling their fieldwork requirements and becoming better trained science teachers. Pre-service teachers are strongly encouraged to attend MAA classes, participate in STEM activities, and often guide students in the completion of tasks. With this close collaboration, pre-service teachers acquire an essential pedagogical component on formulating their own STEM activities and constructing a good lesson plan to achieve maximum effectiveness.

NASA MAA STEM Outreach Grant Funded This Project.