



ARCHDIOCESE OF NEWARK

SECRETARY FOR CATHOLIC EDUCATION/SUPERINTENDENT OF SCHOOLS

Archdiocese of Newark STEM Expo Program

Entering the Third
Millennium proclaiming
in faith and love the
mission of Christ the
Redeemer!

September, 2016

Dear Parent/Guardian

Welcome to a new school year that also marks the beginning of an exciting new Archdiocesan-wide STEM Expo program! Please plan now to set aside some time on March 25, 2017 to join us and the students of the Archdiocese in an Expo designed to showcase the amazing work that they will be doing this year as part of this new program! Our new STEM Expo program is designed to take STEM education into the real world on a global level. Our focus on “Global Challenges, Local Solutions” embodies many aspects of STEM, social justice issues, global citizenship, collaboration, and communication. We hope to empower students and to engage the community by showcasing a range of solutions and technologies designed by our young people to reflect Catholic concerns about social justice and stewardship. It is part of our mission to prepare the students of today for the challenges of the future. And it embodies the imperative that we all share as educators and guardians – to prepare young people to care for each other and for the planet that is our shared home.

This program will involve students in grades 5-8. From late September through January, students will be working on projects that they will be designing in groups in their classrooms. The challenges that the projects will be designed to focus on are based on the United Nations Sustainable Development Goals. The Goals represent a commitment by over 170 countries to create a more equitable and sustainable world by the year 2030. They transcend national boundaries and show our young people that we can all work together to build a better world. Some of the issues highlighted in the Sustainable Development Goals are:

- ~ Climate change
- ~ Hunger and food needs of a growing world population
- ~ Reliable access to energy and light
- ~ Education for all
- ~ Resilient housing that can withstand disasters
- ~ Infrastructure and transportation issues
- ~ Access to clean water
- ~ Health issues
- ~ Responsible consumption
- ~ Care of the Earth’s natural resource
- ~ Equity and a better standard of living for all

All of these global issues will require solutions that are engineered. Student projects will be centered on the use of the Engineering Design Process and the STEM fair program will support the inclusion of more engineering and innovation in STEM courses. Students will be asked to consider a specific region to focus their work on, providing the opportunity for the inclusion of social studies, geography, and an understanding of other cultures. They will engineer a solution to the challenge that keeps the end-user in mind. In a nutshell, they will be asked to become 'expert' about a specific challenge, follow a process to develop a solution, and then communicate their ideas. We are confident that you will be amazed at the creativity, empathy, and collaboration that will be evident in all of the projects that the students will create! They will be proof that we can all be part of the solution and that every journey begins with a single step.

Each participating school will hold a school STEM fair in January or February and projects at that level will be judged. The top projects from each school will be exhibited at the Archdiocesan level at a STEM Expo extravaganza on March 25th at the Archdiocesan Youth Retreat Center in Kearny. That event will celebrate the efforts of all the involved schools to support STEM education with a global view. The message of the day will be that we can meet all of these challenges if we work together to build a better world! All members of our school communities are invited to attend and a number of invited guests and experts will also be present.

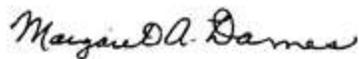
This year will be our pilot year and your child's school has been invited to be part of the first cohort of 32 schools. A wide range of resources, support, and training for school personnel is being provided. The project will begin in mid to late September, with time allotted for group work on a weekly or bi-weekly basis. The UN is asking for a global effort to educate young people about the Sustainable Development Goals during the week of September 18th and has designated that program "The World's Largest Lesson". Teachers will be using some of these resources in class to introduce the program. Please take some time to take a look at this engaging and informative website (<http://worldslargestlesson.globalgoals.org/>).

Most of the project work will occur in school and will be designed to support better understanding and application of some core curricular subjects. Classroom teachers may use some components of the project for assessments as part of a move toward more active, project-based learning. Throughout the program, students will be learning about project management, problem solving, and group collaboration and communication.

Guidance and direction for this program is being provided by the Archdiocesan Schools Office and is coordinated by ProjectEngin (<http://www.projectengin.com/>), a STEM education consulting firm with national and international experience. ProjectEngin has run a similar program in Rhode Island and can assure you that you will be impressed by the commitment, excitement, and optimism that your child will bring to this project. They will become articulate experts in terms of the science, math, and cultural understanding that will underlie their work. We know that you will come away from your school STEM Fair and from the Archdiocesan STEM Expo with a sense of hope for the future and that you will be completely amazed by the talent, vision, and caring evident in the work of all of our students!

Please support us in this new initiative! Everyone involved is working hard to insure that it is an impactful and content-rich learning experience. Visit your school's STEM Fair and join all of us on March 25th at the Archdiocesan STEM Expo to celebrate the promise and potential of our young people to create a just and sustainable future for all!

Sincerely yours,



Margaret A. Dames, Ed.D.
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