

Fairfax County Public Schools

**Global STEM Challenges  
Program**



# Program Overview

Based at Edison High School in Fairfax County Public Schools, the Global STEM Challenges Program will be a STEM-focused, interdisciplinary pathway concentrating on authentic global problems.

# Program Overview

- Develop an interdisciplinary curriculum that links to the Grand Challenges of Engineering and
  - Meets the Virginia Standards of Learning
  - Integrates honors level mathematics, science, and engineering courses
  - Provides authentic Project/Problem Based Learning opportunities for all students
  - Links to college and career readiness, global dimension, research, entrepreneurship, and service learning
  - Offers industry certification for all students
  - Integrate computer science throughout the program



# Program Vision

This dynamic and integrated program will exemplify the model for preparing high school students to succeed in both college and careers with the primary goals of:

- Providing student-centered learning based on demonstrated understanding
- Aligning real-world connections to community workforce needs and college and career preparation
- Utilizing varying roles for educators to allow for best practice instruction



# STEM Global Challenges Program

## April 2016 Update



- Developed curriculum framework
- Provided a Global STEM Challenges Program Night with Guest Speakers
- Created new integrated courses
- Recruited high quality teachers with experience in interdisciplinary teaching
- Plan to visit STEM Early College High School in Raleigh, NC in May 2016



# Key Conditions



- Provided flexibility in scheduling of standardized testing
- Developed a collaborative structure to allow for curriculum framework to be developed
- Collaboration and support with the National Academy of Engineering
- Support from FCPS and school based leadership

# Barriers



- Lack of anticipated business support for staffing of resource teachers
- Potential conflict with IB diploma pathway
- Fear of the unknown and three year commitment
- Unknown concerning the VDOE waivers

# What would you do differently?

Secured funding from business or internally for resource teacher positions prior to grant application





# Implementation Timeline

May 2016 - Finalize teachers, student registration, and site visit for teachers

Summer 2016 - Finalize year one of curriculum

September 2016 - Global STEM Challenges Cohort begins first year of program



# How can the Virginia Department of Education Support the Program?



- Allowance of revision of Integrated Science courses
- Flexibility for Science teacher endorsement
- Embedded Computer Science content for tenth credit
- Technology Education courses could receive credit for work based experience
- Option to provide alternative end of year assessments

# Current FCPS Support

- Developed an interdisciplinary project team to collaborate on the planning and implementation of the program.
- Developed the framework for the curriculum



# What's New?



- Structured to allow and promote an integrated curriculum
- Provides students with more real world connections to content
- Teaching content through the lens of the global challenges of now and the future

# Contact Information

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