



# Building Bridges to a Better Future

Preparing DC Students to be College and Career Ready

# Welcome to the 2<sup>nd</sup> Annual Tiger Woods STEM Career Conference

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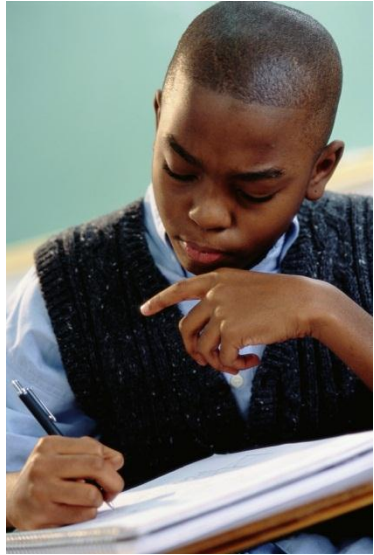


# Office of the State Superintendent of Education

**As the State Education Agency for DC,  
the OSSE sets statewide policies,  
provides resources and support, and  
exercises accountability for ALL public  
education in DC.**



# What is College and Career Ready?



- Independent thinking
- Strong content knowledge
- Respond to demands of audience, task, purpose, discipline
- Comprehend as well as critique!
- Value evidence
- Use technology and digital media strategically and capably
- Understand other perspectives and cultures

# STEM

SCIENCE

Natural World

## Science





# What's the big deal about STEM?

“The nation’s capacity to innovate for economic growth and the ability of American workers to thrive in the modern workforce depend on a broad foundation of math and science learning, as do our hopes for preserving a vibrant democracy and the promise of social mobility that lie at the heart of the American people.”

There will be 94,000 STEM related job vacancies to fill in the District of Columbia by the year 2018.

# 21<sup>st</sup> Century Careers in DC

**Figure 3: Priority Career Sectors in the District of Columbia<sup>44</sup>**

Science, Engineering, Math, & Technology	Information Technology	Business Management & Administration	Architecture & Construction
Law, Public Safety, Corrections, & Human Services	Marketing	Transportation, Distribution, & Logistics	Finance
Education & Training	Health Science	Arts, AV Technology, & Communications	Hospitality & Tourism

Half of the priority Career Sectors are directly related to STEM, but most will require knowledge of STEM subjects.

# How is OSSE providing support to move STEM forward?

- Provide resources to support parents and families.
- Adopting and Implementing College and Career Ready Standards
- Developing pathways to learn and excel in 21<sup>st</sup> Century Careers
- Providing support to level the playing field for college entrance and access.



# Connecting with Parents and Families



We Need Your  
**FEEDBACK**



# **Next Generation Science Standards**

Together with the Common Core State Standards in Mathematics and English Language Arts, the Next Generation Science Standards hold the promise of transforming science education and preparing all DC students to succeed, in education, work, and their daily lives.

# Supporting 21<sup>st</sup> Century Learning

## Science and Engineering Practices

- Students practice being scientists and engineers in their classrooms!

## Disciplinary Core Ideas

- Students study big ideas in the Sciences

## Cross Cutting Concepts

- Students will be making connections across all science content areas

# What changes should we see in the classroom?

- Teachers work to develop student's abilities to think, speak, and act like scientists.
- Students are designing experiments and conducting research that address problems in the real-world.
- Students are active participants in their learning.
- Focus on college and career readiness and developing students resiliency in STEM subjects



# Creating Pathways to Future Careers

**The District's CTE program serve as a pipeline that connects students to postsecondary education and opportunities for a successful career.**





# What are the Options?

**Figure 1: Career Clusters Offered in the District**

<b>AMC</b>	Arts, Media, & Communication
<b>BES</b>	Biotechnology & Environmental Science
<b>BFM</b>	Business, Finance, & Marketing
<b>CD</b>	Construction & Design
<b>ENG</b>	Engineering
<b>HMS</b>	Health & Medical Sciences
<b>HSE</b>	Human Services & Education
<b>HT</b>	Hospitality & Tourism
<b>IT</b>	Information Technology
<b>LPSS</b>	Law, Public Safety, & Security
<b>MS</b>	Mortuary Sciences
<b>TRANS</b>	Transportation

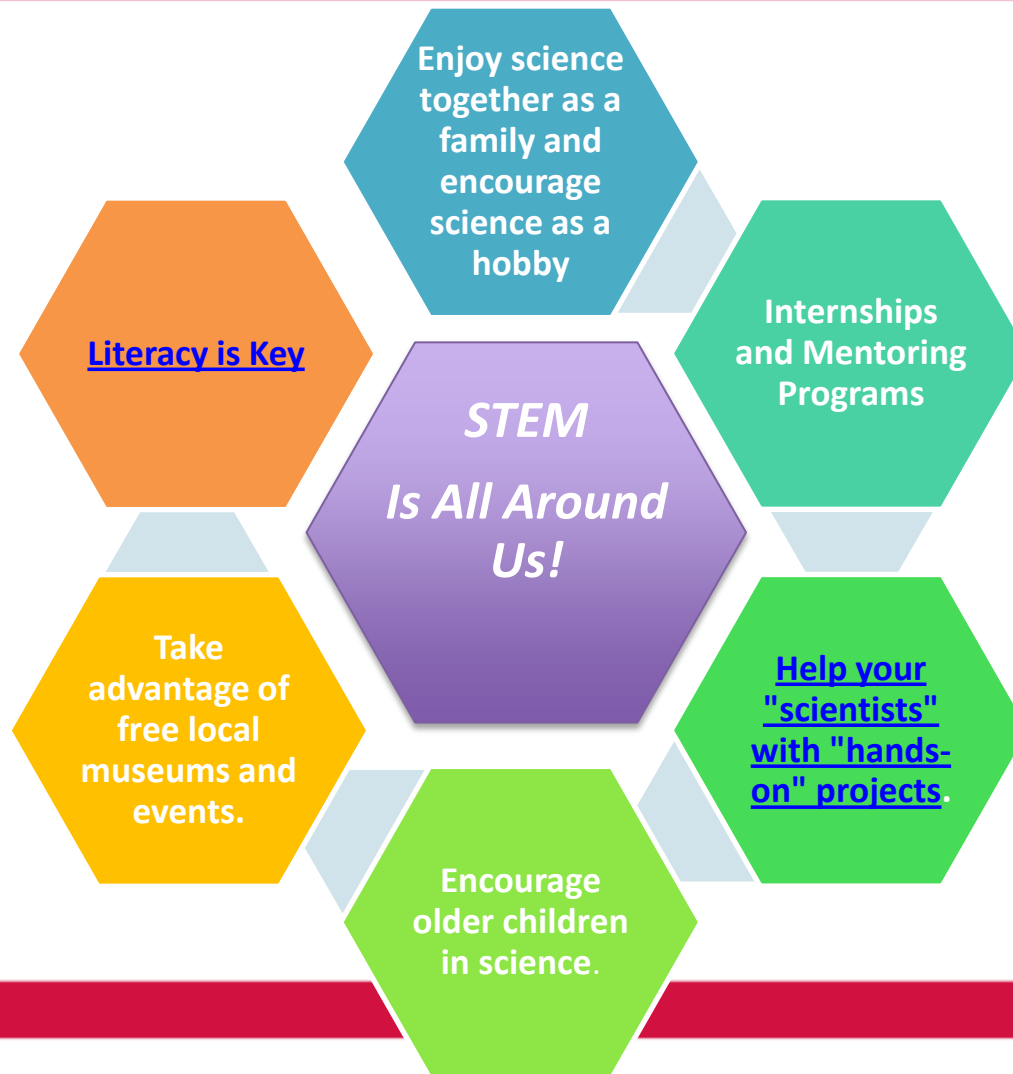


# College Eligible and College Ready

- Dual Enrollment
  - program enables high school students to enroll in approved college courses, taken on a college campus, and earn both high school and college credit.
- [Get Funding for College](#)
- ACT and SAT funding support.



# How can I help my student with succeed in STEM?



# Ways You Can STEM with Your Students

- Give your student plenty of opportunities to count and measure.
  - DIY Projects around the house.
  - Event Planning
- Find creative ways to practice number operations.
  - Back to school clothing or supply budget.
  - Creating a budget.
- Find ways to collect and organize information.
  - Putting different cell phone data plans into a table.
- Find ways to develop reasoning skills.
  - Ask students to develop solutions to issues around the house.
  - Encourage students to participate in internships

# STEM Programs

Type of Program	Organization	Name of Program
Saturday Program	Carnegie Academy of Science Education	Firstlight
Afterschool	First Robotics / Aerospace Engineering/ Marine Science	Robotics , Rocketry NEMO
Online	Code.org	Code.org / Scratch/ ALICE
Internships	US Navy US Army Smithsonian Institution National Building Museum	GEMS – Walter Reed, US Army YES – Smithsonian Natural History Museum National Zoo - Volunteer Design Apprenticeship Program
Mentoring	National Society of Black Engineers American Society of Engineers in Education NOAA Mentors in Medicine Alphas	
Event	DC Organizations USA Science and Engineering Festival	DC STEM FAIR (March USA Science and Engineering Festival (
Contests	Siemens and NSTA	We Can Change the World



# Q & A



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