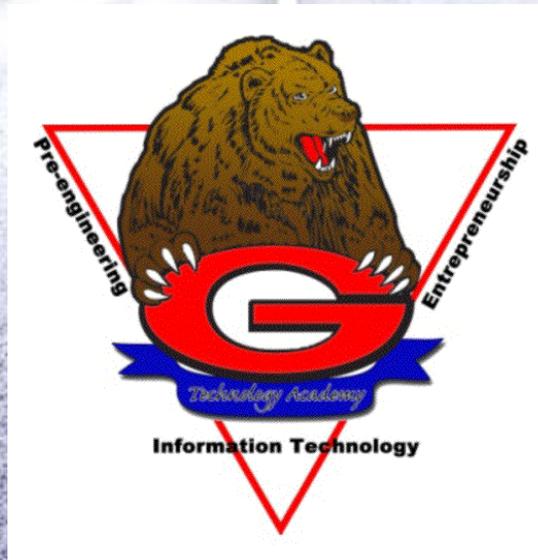


# **The Grassfield High School Governor's STEM Academy**



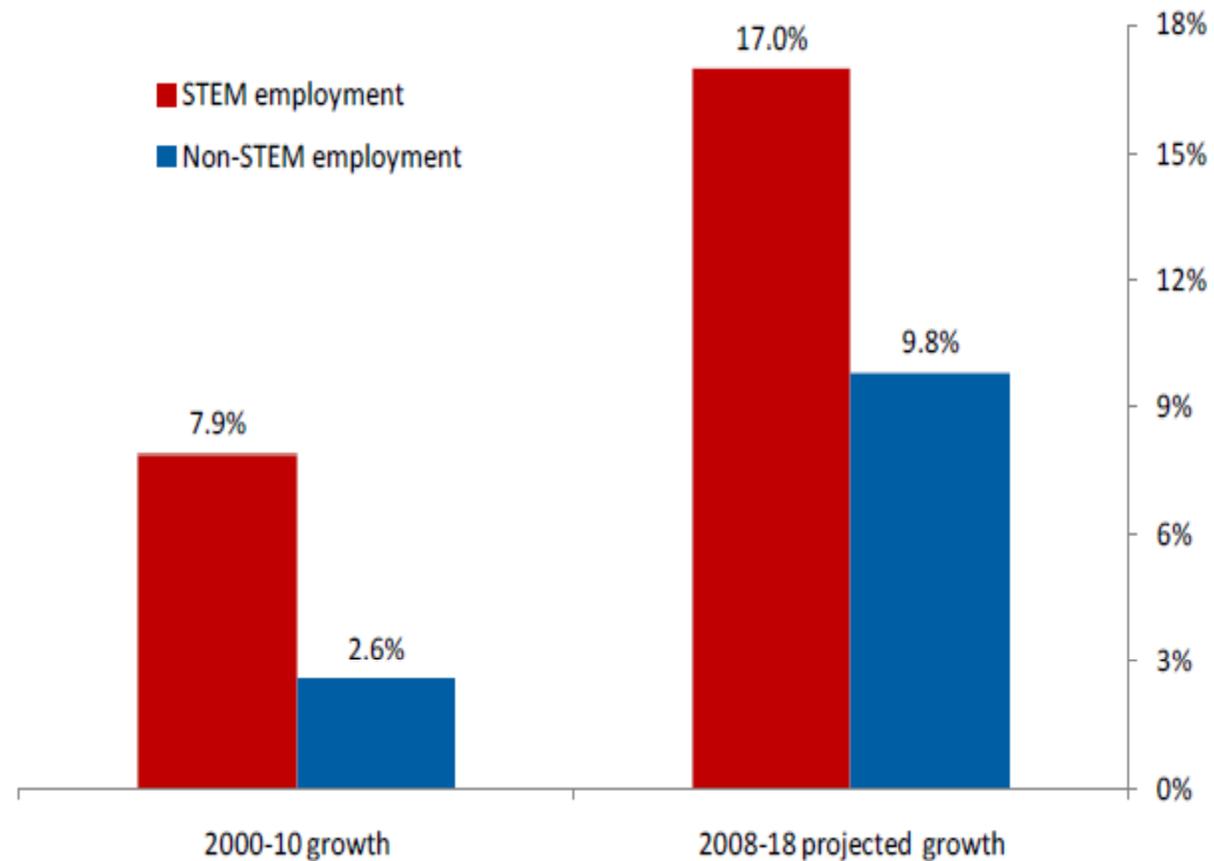
## **The Road to Success**

**Presented by: Karen D. Black - April 26, 2012**



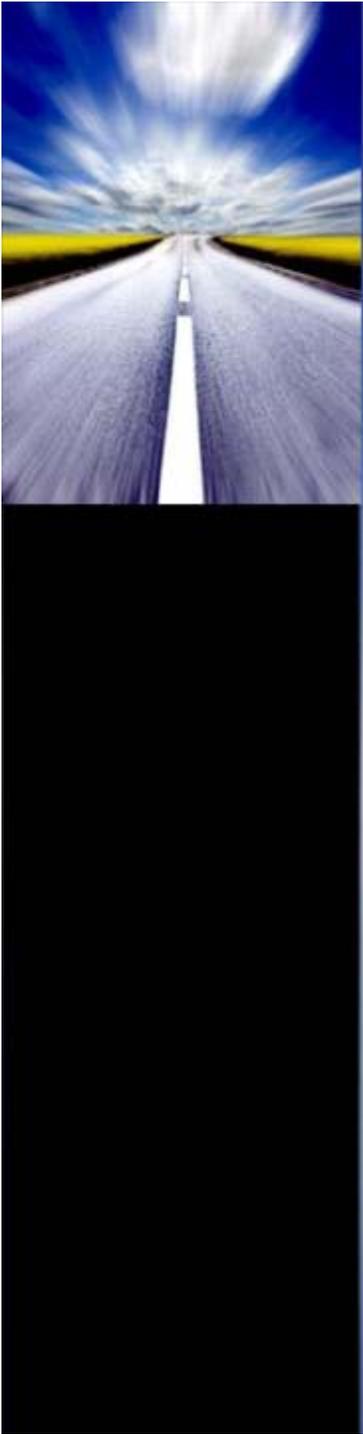
# Rationale

## Recent and Projected Growth in STEM and Non-STEM Employment



Source: ESA calculations using Current Population Survey public-use microdata and estimates from the Employment Projections Program of the Bureau of Labor Statistics.





# The Governor's STEM Academy

- Will be an exciting new adventure in learning.
- Will be a four-year program.
- Will operate as a school-within-a-school.



# The Governor's STEM Academy Mission

To provide students with STEM-enriched 21<sup>st</sup>-century technological skills and knowledge necessary to succeed in postsecondary education and the work force.



# Governor's STEM Academy

Program features:

- Rigorous and relevant curriculum
- Highly trained, industry certified instructors
- State-of-the-art equipment, software and vendor specific curriculum



# STEM Teaching Philosophy

- Student-centered learning environment
- Teachers as “coaches”
- Relevant curriculum featuring real-world experience
- Hands-on learning
- Emphasis on higher-level thinking skills

# Governor's STEM Academy

## Objectives

- The student will be able to
  - Successfully complete a state-approved, sequential program of study that focuses on technological skills and STEM knowledge.
  - Extend knowledge through internships, mentorships, and job shadowing, that create partnerships with community, business, and industry.

# Governor's STEM Academy

## Objectives

The student will be able to

- Meet or exceed objectives on the Virginia Standards of Learning tests.
- Attain industry certification and or postsecondary credit in STEM fields of study.
- Participate in the Governor's Early College Scholars Program.

# Performance Measures

- GPA
- SOL Scores
- AP pass rate
- College Credits received
- Number of industry certifications earned
- CTE completer data
- Dropout rate
- Percentage of students attending college
- Scholarships awarded
- Successful employment
- Exit Survey and Longitudinal Study

# Career Cluster Choices

Marketing

Information Technology

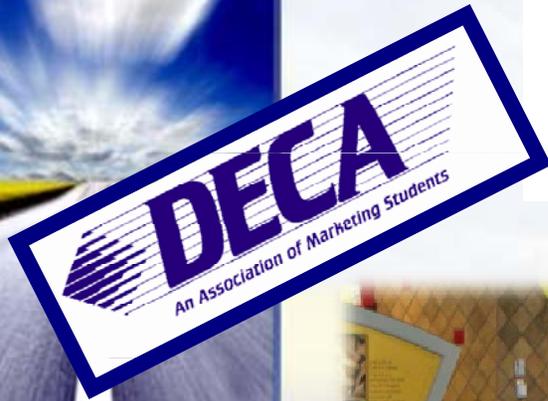
Science,  
Technology,  
Engineering, and  
Mathematics



**CHOICE**

# Marketing Cluster

## Marketing Management Pathways



Plan of Study

Entrepreneurship

Internet Marketing

Global Marketing  
and Commerce

Advance Global  
Marketing and  
Commerce

Leadership  
Development

Dual Enrollment  
Intro. To Marketing  
Management



According to the Virginia Employment Commission, the management industry is expected to grow over 10 percent between now and 2018.



# Information Technology Cluster

## Programming and Software Development Pathway

Plan of Study

Keyboarding  
IT Fundamentals  
Programming  
Advanced  
Programming

Computer  
Information  
Systems

Database Design  
and Management  
Advanced  
Database Design  
and Management

Dual Enrollment  
Computer Science

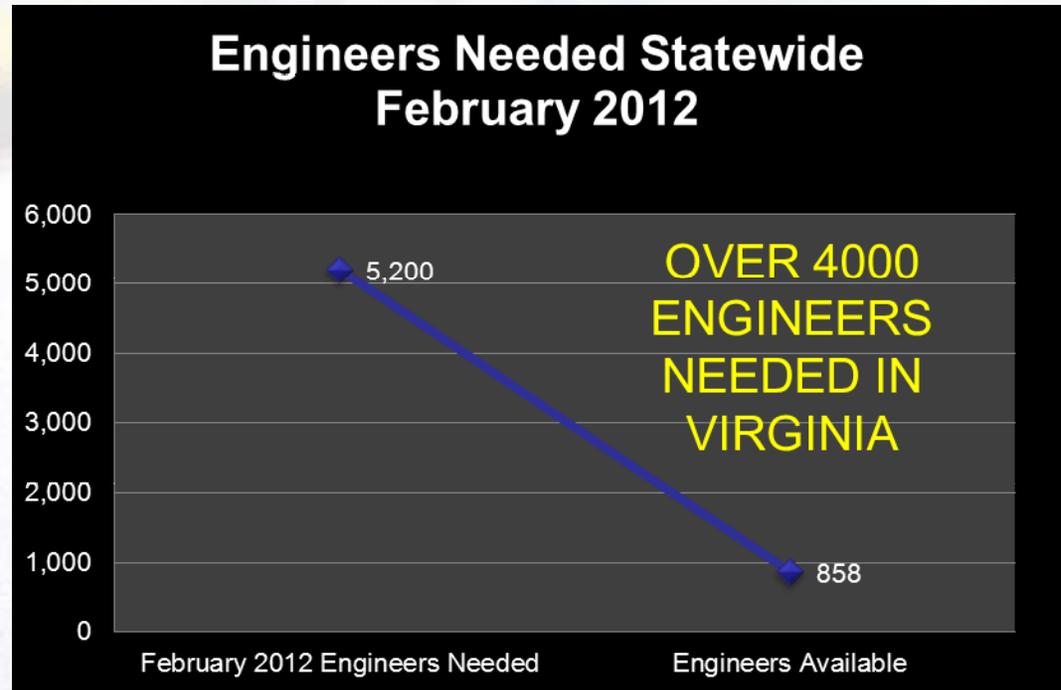


According to the Virginia Employment Commission, the computer system design industry is expected to grow by 43.3 percent between now and 2018 in the state.



# STEM Cluster

## Engineering and Technology Pathway



### Plan of Study

Intro. To  
Engineering  
Design

Principles of  
Engineering

Digital  
Electronics

Aerospace

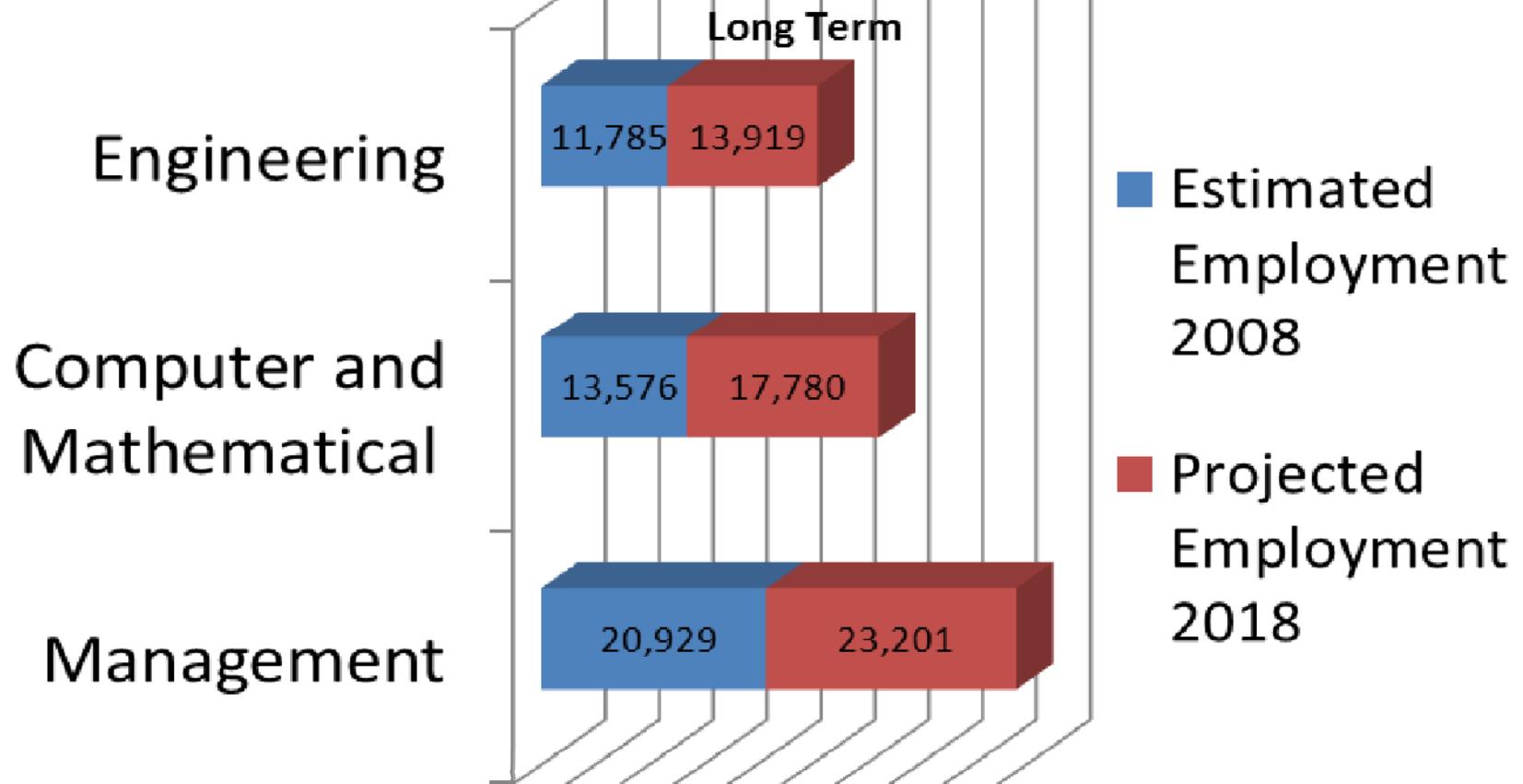
Civil Eng. and  
Architecture

Engineering  
Design and  
Development

According to the Virginia Employment Commission, as of February 22, 2012, there is a need for more than 5,200 engineers statewide. The number of potential candidates available to fill these positions is 858 statewide.

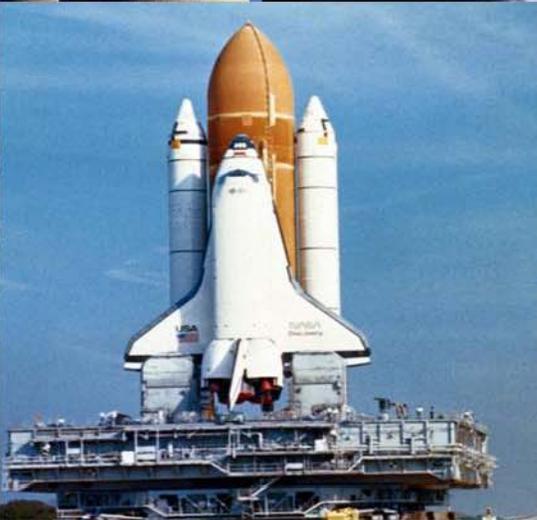
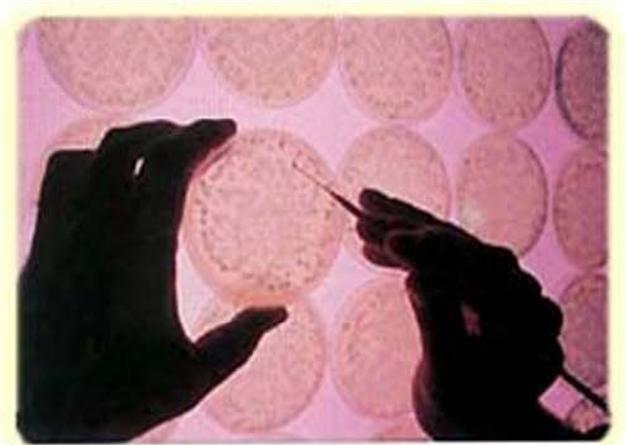
# Economic Demand

## City of Chesapeake Occupation Employment Projections



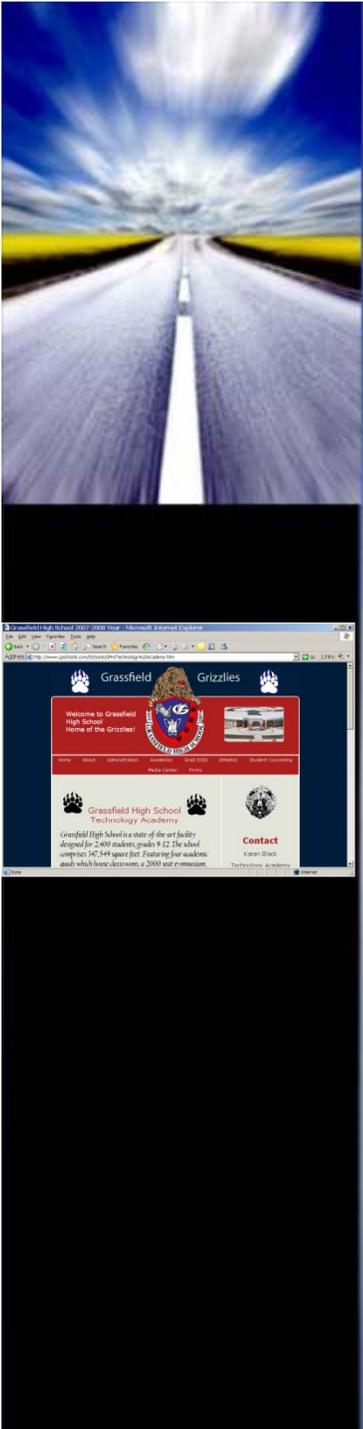
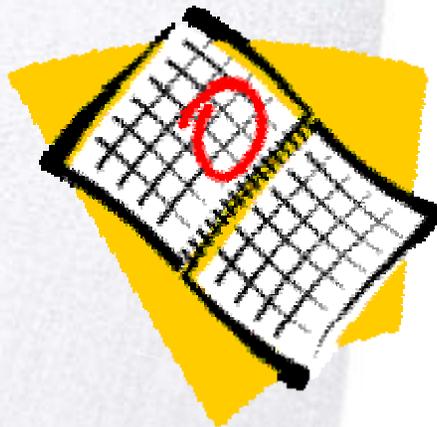
# *Forging new generations of engineers*





# Applications

- Students apply in fall of their eighth-grade year
- Applications will be available on the Grassfield High School Web page and from middle school guidance counselors
- Transportation will be provided



# The Governor's STEM Academy Opens Fall 2012

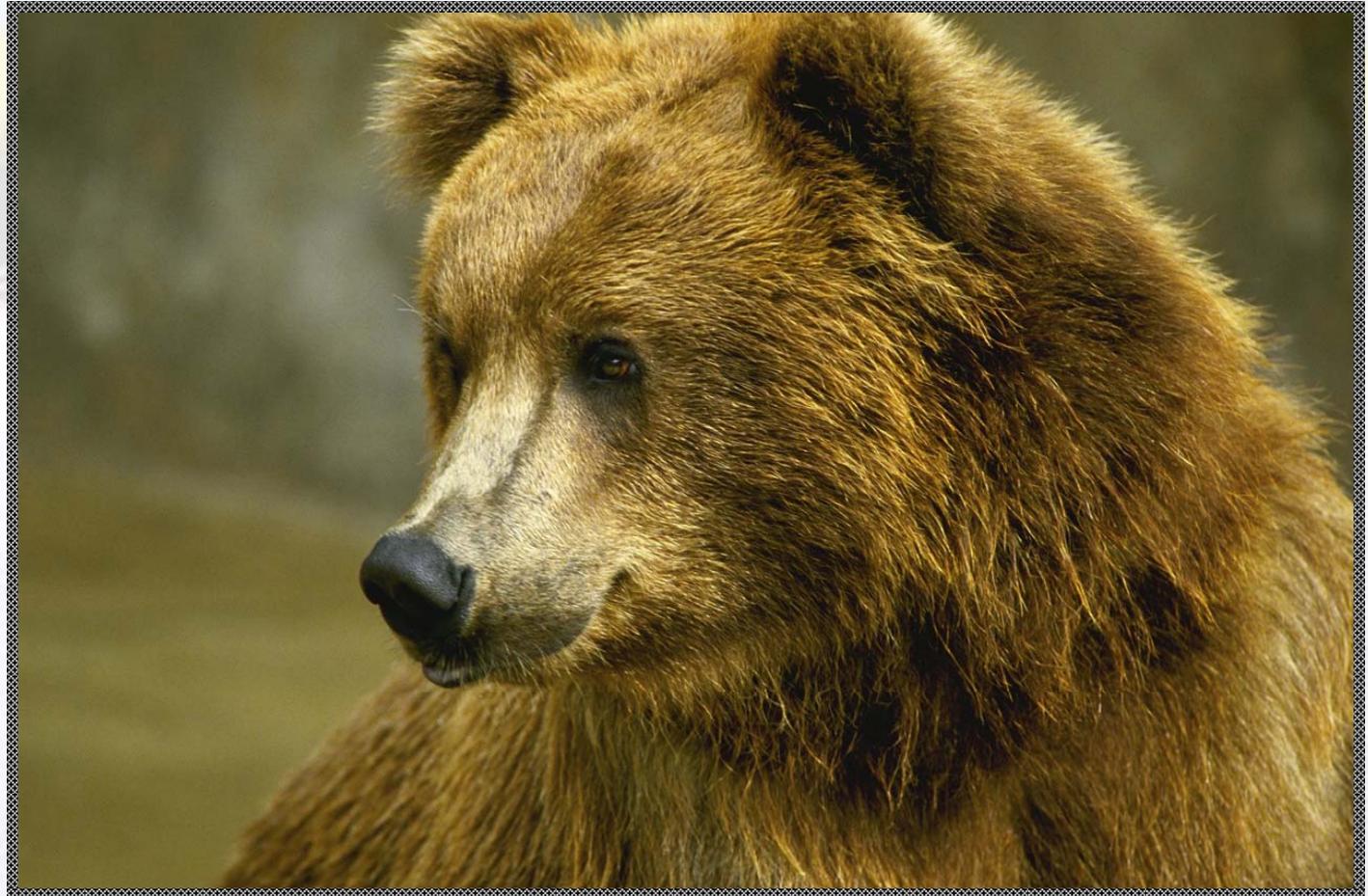


Projected Enrollment  
by Career Cluster  
2012 – 2013

**Marketing**  
**15**

**Information Technology**  
**15**

**STEM**  
**30**



**Total projected four year enrollment: 240 students**

# FUSION



# Online Platforms

# D2L

edmodo





An exclamation point on our energy conservation commitment...







# Chesapeake City Public Schools

The Chesapeake Public School System is an equal educational opportunity school system. The School Board of the City of Chesapeake also adheres to the principles of equal opportunity in employment and, therefore, prohibits discrimination in terms and conditions of employment on the basis of race, sex, national origin, color, religion, age, or disability.

