NCSSM Data

- 27 acre campus
- 470,000 sq. feet
- 6 residence halls
- FY 2011 Budget:
  - 93% state funded (VA STEAM Academy proposes 50-50 public-private funding)
  - $18.6 million state approp.
  - $1.4 million NCSSM Foundation
NCSSM Services

- NCSSM serves students from each of N.C.’s 13 Congressional Districts
- Residential Program
- Interactive Video Conferencing and Online Programs
- Enrichment and Professional Development
NCSSM Student Enrollment

Residential Enrollment (Grades 11-12):

- 2011-2012 = 680 students
- 2011-2012 = 1289 applicants for 350 11th grade spaces

Online and IVC Enrollment (Grades 11-12):

- 2011-2012 = 700 students
NCSSM Profile 2010-11

- Mean SAT 1361 (combined math and reading)
- Class took 575 AP exams; 57% were 5’s, 96% scored 3 or better
- 3 of 4 AP Scholars for North Carolina over the past 2 years
- 12 students earned the top merit based scholarships at UNC-CH, NC State and Duke
- 2 of 4 winners in NASA’s Conrad Spirit of Innovation Competition
- Semi-finalist in Siemens Competition in Math, Science and Technology
- Students performed 22,000 hours of community service in 2009-2010
NCSSM provides students with outstanding opportunities for problem-based learning in college level, academic courses in math, science, applied sciences, and the humanities.

NCSSM provides students with outstanding opportunities to apply their learning through research and mentorship.

NCSSM provides students with outstanding opportunities to apply their learning through academic competitions and entrepreneurial activities.
The Residential Advantage

- Promotes personal responsibility
- Promotes and encourages collaboration far in excess of the typical school day
- Provides extensive leadership opportunities for students
- Promotes diversity and cultural understanding
- Prepares students socially for college
NCSSM Outreach

- Largest provider of K-12 distance education programming in the state
- Interactive Video Conference Courses-for-credit to more than 500 part-time students in 29 schools across N.C. (2010-2011)
- *NCSSM Online* offers 18 honors courses to more than 180 N.C. students
- Academic enrichment programming to nearly 2,500 students at 45 schools across N.C. (2010-2011)
- Professional development to more than 4,000 N.C. educators since 1992
Opportunities Lead to Results

- NCSSM students annually take home top awards at the most prestigious national and international science and math competitions:
  - Intel Talent Search
  - Siemens Competition
  - Conrad Spirit of Innovation Awards
  - National Science Olympiad
  - National Ocean Science Bowl
  - Physics Olympiad
  - USA Biology Olympiad
  - Singapore International Math and Science Competition
Opportunities Lead to Results

- Greater than 70% of NCSSM’s 2011 graduates attend college in North Carolina.

- 57% of NCSSM graduates enter STEM related professions (four times the national average).

- NCSSM alumni volunteer over 140,000 hours of community service each year.

- Nearly 60% of NCSSM graduates live in North Carolina, generating an estimated economic impact of approximately $500 million annually (NCSSM Economic Impact Study, 2010).
NCSSM alumni are working at some of the top companies in North Carolina including:

- Fueling North Carolina’s Economy

- NCSSM alumni are starting companies that will help drive North Carolina forward:

  - redhat
  - IBM
  - Wells Fargo
  - Duke Energy
  - Google
  - appia
  - motricity
  - rPath
More information: www.ncsssm.edu
Where intellect and innovation converge

Judy K. Stewart, PhD and M. Caroline Martin, RN, MHA, Co-Founders
VA STEAM Academy would have three components

1. Public, residential academy for 1,000, 9th-12th grade Virginia students who show talent in science, engineering, or mathematics

2. Middle school summer residential academy for highly able students in science, engineering, or mathematics

3. Incubator/laboratory for integrated, K-12 STEAM curriculum and pedagogy for students and teachers across the Commonwealth using:
   - high quality, face-to-face and digital professional development
   - online, on demand classroom instruction
Key elements

• Internationally-benchmarked and comprehensive curriculum
• Sustained apprenticeships with STEAM businesses and scientific partners
• Co-curricular and extra-curricular offerings
• Would accept 250, 9th graders each year
• Any rising 9th grader would be eligible to apply
• Open and selective admissions process
• 13:1 student: teacher ratio
• Explore articulation agreements with partner colleges and universities
• If local and state dollars follow the student, expect no additional cost to state
2011 Contacts

Business and Philanthropy

• TowneBank
• W.M. Jordan
• Zel Technologies
• Microsoft
• ExxonMobil
• Rolls-Royce
• Beazley Foundation
2011 Contacts, Contd.

Public, K-12
• Superintendent Linda Shifflette, Hampton City Schools
• Superintendent Dave Stuckwisch, Portsmouth City Schools
• Superintendent James Merrill, Virginia Beach Schools

Higher Education
• College of William and Mary
• Tidewater Community College
• University of Virginia
• Virginia Tech
• University of Maryland-Baltimore County
• Approaching Old Dominion University
2011 Contacts, Contd.

Other

• Former Del. Glenn Oder, executive director, Fort Monroe Authority
• North Carolina School of Science and Mathematics
• Illinois School of Science and Mathematics
• Center for Excellence in Education
• Approaching regional Tech Councils
If awarded $200,000 planning grant, we would...

• Match it 2:1 with private funds
• Study all aspects of the VA STEAM Academy design:
  – Governance
  – Per pupil cost, funding model, sustainability plan
  – Faculty and administration recruitment, retention, and promotion
  – Student selection criteria and process
  – Curriculum, instruction, assessment, and professional development
  – Apprenticeship model, standards, and outcomes
  – Building, grounds, and site configuration
If awarded $200,000 planning grant, we would…

- Report back to the General Assembly in one year with full proposal for the Virginia STEAM Academy
  - Ensure 50-50 public-private funding
  - Invite every local school division to participate at the Virginia STEAM Academy
  - Leverage the concentration of STEAM-related businesses and scientific R&D centers in Hampton Roads (e.g., NASA Langley, Langley Air Force Base, National Institute of Aerospace, Jefferson Lab, Newport News Shipbuilding, Virginia Modeling Analysis and Simulation Center)