

VIRGINIA
STEAM
ACADEMY

Where intellect and innovation converge for students

2014 ANNUAL REPORT

An Investment in
Virginia's Future

March 2015

“The Virginia Chamber of Commerce supports Virginia STEAM Academy. Workforce development and education is Blueprint Virginia’s #1 priority issue, in recognition that a highly talented and educated workforce is the lynchpin of maintaining and elevating Virginia’s economic competitiveness.”

— Virginia Chamber of Commerce



■ LETTER FROM BOARD CHAIR AND PRESIDENT/CEO

Virginia STEAM Academy: An idea whose time has come

Dear Friends,

On behalf of the Virginia STEAM Academy Board of Directors, it is an honor to share our first annual report with you. Until now, we have communicated through our newsletters and website.

Four years ago, Judy Stewart recommended replicating an innovative high school model that, when fully implemented, could change how we inspire and meet the educational capabilities for STEAM-interested and highly able youngsters in Virginia, regardless of zip code. Fortunately for us, we quickly found a group of like-minded thinkers who, upon hearing the concept, had the courage and will to invest in its development. Many joined as a result of a luncheon sponsored by TowneBank in early 2012. It featured Chancellor Todd Roberts of the nation’s first, publicly-accessible, statewide academy for exceptionally able and STEM-interested students, North Carolina School of Science and Mathematics (NCSSM), located in the Raleigh-Durham Research Triangle. The Virginia STEAM Academy continues to innovate on the trailblazing programs of NCSSM and other exemplary academies. Our ever-expanding group of supporters didn’t give up when the money was tight or when the detractors and distractions grew. In fact, our champions’ courage, enthusiasm, and guidance continue to propel us upward and onward. Many of you reading this letter are among them. Thank you. YOU MATTER.



This might be a good time to talk about our name. We sometimes get asked why we departed from STEM and use STEAM. We seek to create a distinctive living and learning experience for our faculty and students that blends the content (STEM, humanities, health) within the context of applied learning, real world challenges, sabbaticals, internships, and mentorship opportunities. We hold that deep mastery of content knowledge can occur in multiple environments including and enhanced

by integration with authentic, relevant challenges. We are intentional in our use of the “A” to mean “applied” or “art/design.” Perhaps it is STEM with an A that covers it all. Twenty-first century STEAM leaders will apply knowledge within and across the core STEM disciplines (interdisciplinary and trans-disciplinary), and they will understand and integrate the humanities.

Now a word about our programming. We began with Summer STEAM in 2013. Special thanks goes to the approximately 700 high achieving 6th-8th grade students and their parents from across the Commonwealth of Virginia who, since early in July of 2013 have applied to Virginia STEAM Academy’s cost-free, statewide, week-long, immersive, summer residential academy, Summer STEAM. From that first applicant pool of over 400, the parents of all fifty-six students who were accepted entrusted their exceptional children to spend seven

LEADERSHIP

“Every aspect of the Virginia STEAM Academy is built upon sound principles and standards as expressed in our mission, vision and purpose.”

— Judy K. Stewart, PhD, Virginia STEAM Academy President & CEO

days and nights studying mathematics, encryption, physics, and leadership. We promised parents that their children would be our children. With them, Virginia STEAM has cultivated an environment of family with emphasis on teaching and nourishing the whole child. We became a community: we learned, we listened, we grew, and we changed based on constant input and recommendations from students, parents, staff and faculty. The second year the Summer STEAM offering expanded locations and grew deeper and richer in sessions, student participants (123), courses and outside experiences.

We have been chasing excellence as a community of learners and leaders from Day One. Parents’ and students’ thirst for innovative, inspiring exposure to STEAM fields has allowed us to pilot, evaluate and improve upon our summer academies, which has, in turn, informed the work of our Teaching, Learning, Student and Faculty committees. Read more about the contributions our partners, working together with other thought leaders and knowledge experts, make to the design, delivery, measurement and continuous improvement of STEAM-related curriculum, instruction and assessment guidelines, ethical leadership and adolescent development. This process assures that every aspect of the Virginia STEAM Academy is built upon sound principles and standards as expressed in our mission, vision and purpose.

We started this letter celebrating the support and hard work of so many who helped elevate the Virginia STEAM Academy from page to purpose. Thank you for your many contributions, not the least of which is the support for trying another way; one that builds on the good in our current educational systems and leads the way with innovative and specialized engagement for the new century of learners. We must empower young scholars to negotiate this new world with excellence, joy, purpose, resilience, wonder, and empathy. Your involvement, your experience, your belief and your support, both financial and intellectual, are genuinely appreciated. Without it, we would not be able to say Virginia STEAM matters.

We end with an ask: We ask you continue to invest your time, talent, and treasure in Virginia STEAM Academy. A statewide, public access Academy for Virginia’s exceptionally able and STEAM interested young scholars is an idea whose time has come.

Yours in joyful learning,



Caroline Martin, RN, MHA
Co-founder & Board Chair



Judy K. Stewart, PhD
Co-founder, President & CEO




Himal Bikmal is a young boy with autism and the brother of Saket, a Virginia STEAM Academy Summer STEAM Ambassador and Citizen-Leader. Himal likes to paint and enjoys different colors on canvas. Ambassador Saket, with his father, has created a platform to promote the artistic talent of people with special needs. In Ambassador Saket’s desire to “pay forward” his experience at Summer STEAM, he has committed a portion of the proceeds from Himal’s work to Virginia STEAM Academy. Please visit www.zenaviv.com to support young artists with special needs, the entrepreneurial and giving spirit of a Summer STEAM Ambassador, and the Virginia STEAM Academy.



■ DONATE. VOLUNTEER. ENGAGE. MATTER.

Meeting a Need

Virginia is in an enviable position. Numerous studies suggest the Commonwealth is poised to offer upwards of 400,000 STEM-related jobs as early as 2018. And yet, Virginia is challenged to respond to this opportunity.

CHALLENGES	SOLUTION OPTION
<div>(1) deficit of knowledge workers in the pipeline;</div> <div>(2) wide disparity in student STEAM opportunities across school divisions;</div> <div>(3) limited early and ongoing exposure to STEAM</div>	<div> <i>Where intellect and innovation converge for students</i></div>

To meet the challenge, a small group of expert stakeholders met in November 2010 and formed the “Virginia Science Technology Engineering and Applied Mathematics Academy, Inc”—the *Virginia STEAM Academy*. As individuals, members of the founding Steering Committee brought to the table expertise in education, operations, and non-profit board leadership. Collectively, the Steering Committee represented varied experiences and perspectives from fields such as K-12 and higher education; local, state, and international business; science and engineering; and government.

Over the next four years, the Virginia STEAM Academy evolved into a statewide, non-profit, charitable organization with a clearly articulated mission and vision. Encouraged by the example of more than a dozen publicly-accessible, statewide, boarding, and STEM-focused high schools already in existence across the country, the group undertook efforts that resulted in establishing a strong, statewide-representative board and advisory members; acquiring resources; locating a campus home; developing a framework for curriculum, instruction, and assessment; and defining the profile and selection criteria for Virginia STEAM Academy faculty, staff, and students. – Excerpt from *STEM education for high-ability learners: Designing and implementing programming*. Prufrock Press (in press).

Virginia STEAM Academy’s **mission** is to develop future generations of creative, ethical, and imaginative STEAM leaders who understand and integrate the humanities into their full development. Our **vision** is to be the state’s premiere public educational offering, committed to significantly expanding the level of science, technology, engineering and mathematics teaching and learning to measurably and positively impact the Commonwealth of Virginia’s economic future. And our **purpose** is to attract more

HIGHER EDUCATION

“...[W]e will see more students studying STEM majors in Virginia colleges and the state of Virginia will see good return on its investment as graduates start or contribute to businesses in STEM related industries.”

— Colonel Troy J. Siemers, PhD, Professor and Head, Applied Mathematics, Virginia Military Institute

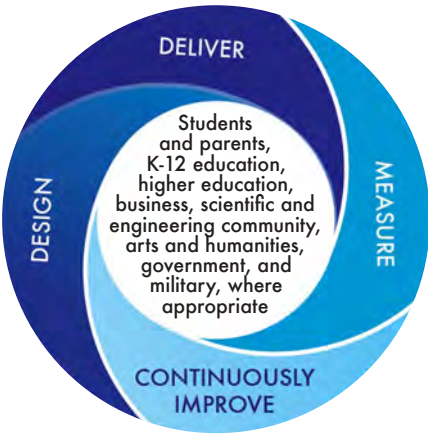
students to STEAM disciplines early in their academic careers, accelerate learning for highly able students, and positively impact the Commonwealth of Virginia's economic future.

As a multi-dimensional, statewide, and publicly-accessible initiative, Virginia STEAM Academy has four components:

- 1 a statewide, boarding high school for Virginia's exceptionally able and STEAM interested students
- 2 summer boarding academies intended to inspire and expose rising 6th–8th grade students from across the Commonwealth to STEAM content, applied learning, and leadership-developing activities
- 3 high-quality professional development, and
- 4 online, on demand learning for students and educators

Incorporating a consortium leadership model

From its founding, Virginia STEAM Academy leadership has been committed to a consortium leadership model. This model brings together thought leaders from multiple arenas to advance and enrich Virginia STEAM Academy.



Virginia STEAM Academy is privileged to have **six official university partners:** College of William and Mary, School of Education; Virginia Polytechnic Institute and State University; Old Dominion University; Virginia Military Institute; Norfolk State University; and Radford University; **five science and engineering partners:** NASA Langley Research Center; Thomas Jefferson National Accelerator Facility; National Institute of Aerospace; Virginia Modeling, Analysis and Simulation Center; and Peninsula Technology Incubator; **one health system partner:** Riverside Health System; and a host of K-12, business, and arts and humanities champions and collaborators.

Virginia STEAM Academy leverages the unique assets of these institutions and other contributing institutions in service to exceptionally able and interested students and educators throughout the Commonwealth of Virginia.

Designing state-of-the-art programming

What makes Virginia STEAM Academy's initiatives unique is the emphasis on interdisciplinary, immersive, and internationally-benchmarked learning with like-minded, like-motivated peers, exceptional faculty, and business, science and engineering industry leaders. Furthermore, as a **publicly-accessible institution, Virginia STEAM**

Academy is open to any Virginia student with ability, interest, and motivation, regardless of zip code. Virginia STEAM Academy seeks to mirror the demographics of the commonwealth, as permitted by law. As such, it offers an inclusive environment in which boys and girls of all income levels, ethnicities, and geographies can thrive. More to the

point, Virginia STEAM Academy ensures we nurture an exceptionally well-prepared high school graduate who can enter higher education and the workplace with the knowledge, skills, creativity and leadership needed to thrive. And while it is true nearly every student in the commonwealth has access to a regional governor's school, it is not true that such access is without challenge (e.g., distance/transportation) or of the same rigor and opportunity (e.g., Thomas Jefferson High School for Science and Technology in Northern Virginia provides an exceptional program that consistently ranks #1 or in the top tier among public high schools in the nation...but it's only available to a select few in Northern Virginia).

SUMMER STEAM

Summer STEAM, Virginia STEAM Academy's signature summer program intended to inspire and expose rising 6th-8th grade students from across the commonwealth to STEAM content, applied learning, and leadership development, has proven a remarkably successful statewide effort. Since piloting Summer STEAM in 2013 and expanding to two locations in 2014, Virginia STEAM Academy has received over 700 applications and graduated 187 Summer STEAM Student Ambassadors. Ambassadors represent the Commonwealth. Summer STEAM Ambassadors are among Virginia's most able and interested STEAM students. For many, this is their only opportunity to experience the rigor and relationships that evolve out of an immersive living-learning laboratory with like-minded, like-motivated peers, exceptional faculty and staff. Grant funding from the Virginia General Assembly, businesses, and private donors allows Virginia STEAM Academy to offer Summer STEAM at no cost to parents.

Summer STEAM 2015 offers two, week-long, residential sessions. Students selected to attend Summer STEAM 2015 will choose from eight course offerings at Old Dominion University or Radford University. Course offerings include Math Reasoning and Computer Engineering; Mathematical Patterns in Nature; Wonders of Water; Rockets, Ships and the Material Science Behind Them; Introduction to Nanoscience; Cyber Security; Life Sciences Quest/Agricultural Life Sciences; and Mathematical Modeling. Students spend five hours each day in their core courses, followed by leadership training, field trips, and recreation.

An additional eight rising 9th grade Summer STEAM Ambassador Citizen-Leaders are selected to serve as assistants to the teaching assistants. These young scholars serve as role models to the rising 6th-8th grade students and enjoy one hour each evening of dedicated entrepreneurship training.



At Summer STEAM 2013's closing ceremony, a parent pulled Virginia STEAM Academy Co-founder, President and CEO Judy Stewart aside. She said, "When I brought my son to Summer STEAM, I told him to remember to raise his hand only once or twice. 'Don't stand out,' I told him." Stewart, shocked, asked why the mother would give her son such advice. "You and I know that kids like my son aren't always treated well," the mother said. She described how it has been her experience that exceptionally able youngsters are often teased or mistreated on the playground, in the bathroom. She cautioned her son based on her experience. Then she said, "My son called me mid-way through the Academy. He was so excited. He told me about his classes and the friends he was making, rock climbing and swimming. Then he said, 'And by the way, Mom, I can raise my hand as much as I want.'"

This is the essence of Virginia STEAM Academy – a safe, inclusive, nurturing living-learning environment for Virginia's exceptionally able and STEAM-interested students regardless of zip code.

SCIENCE AND
ENGINEERING

"We support Virginia STEAM Academy because we recognize the urgent need to develop STEAM leaders early and continuously. These youngsters are not only our future workforce, they are our future discoverers."

– Janet H. Tyler, Science Education Manager, Thomas Jefferson National Accelerator Facility

STUDENT

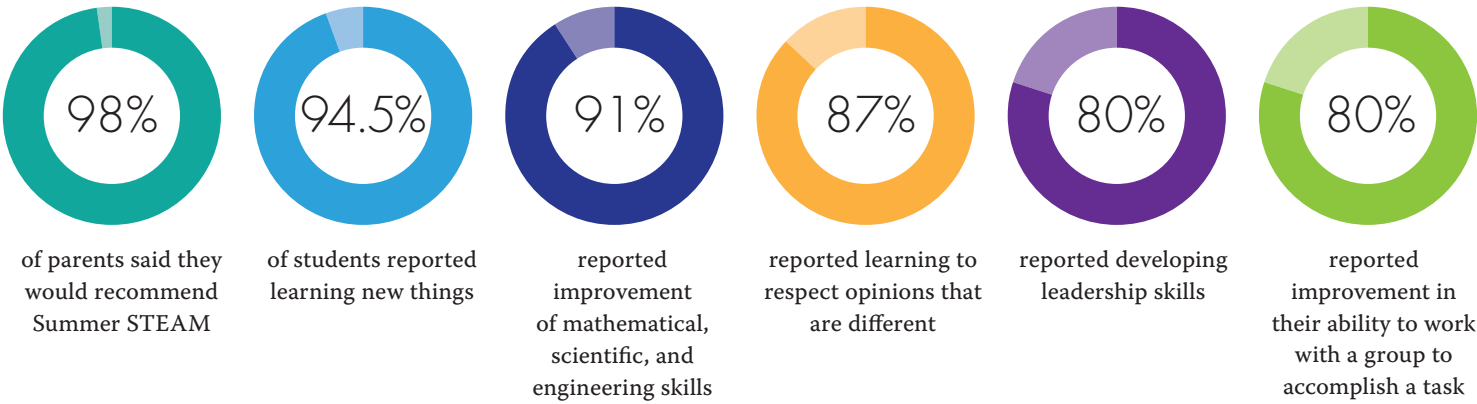
"No one will be like the teachers I had this week."

– Summer STEAM Student Ambassador

Now in its third year of offerings, rising 10th grade Citizen Leaders are eager to stay engaged with Virginia STEAM Academy. These Citizen-Leaders seek more responsibility and mentorship opportunities. Virginia STEAM Academy, through its partnership network, is working to make such opportunities available.

With funding, Virginia STEAM Academy aims to expand Summer STEAM 2016 to include multiple, week-long residential academies at sites throughout the Commonwealth, including a girls only Summer STEAM session.

After participating in Summer STEAM 2014



Evaluator E. Hobson, College of William and Mary, October 2014

“We believe that the VA STEAM concept... will have the most impact on girls in Virginia, especially those who, like our daughter, are fortunate enough to begin their experience with VA STEAM as rising 6th graders. The VA STEAM Academy will provide much needed support to students across the Commonwealth of Virginia who have demonstrated an aptitude and potential in STEAM subjects but also will need the publicly-accessible, residential, and immersive learning environment offered by VA STEAM to stay interested in pursuing STEAM subjects and careers.”

– Mrs. Tricia Su Moy, Summer STEAM Parent



BOARDING HIGH SCHOOL

The Virginia STEAM Academy boarding high school will serve as a publicly-accessible, comprehensive, and immersive academy for exceptionally able and interested students drawn from across the Commonwealth of Virginia. When open, any rising 9th or 10th grade Virginia student who meets the criteria may apply, regardless of a family’s income or place of residence in Virginia. There is no tuition fee to attend the Virginia STEAM Academy.

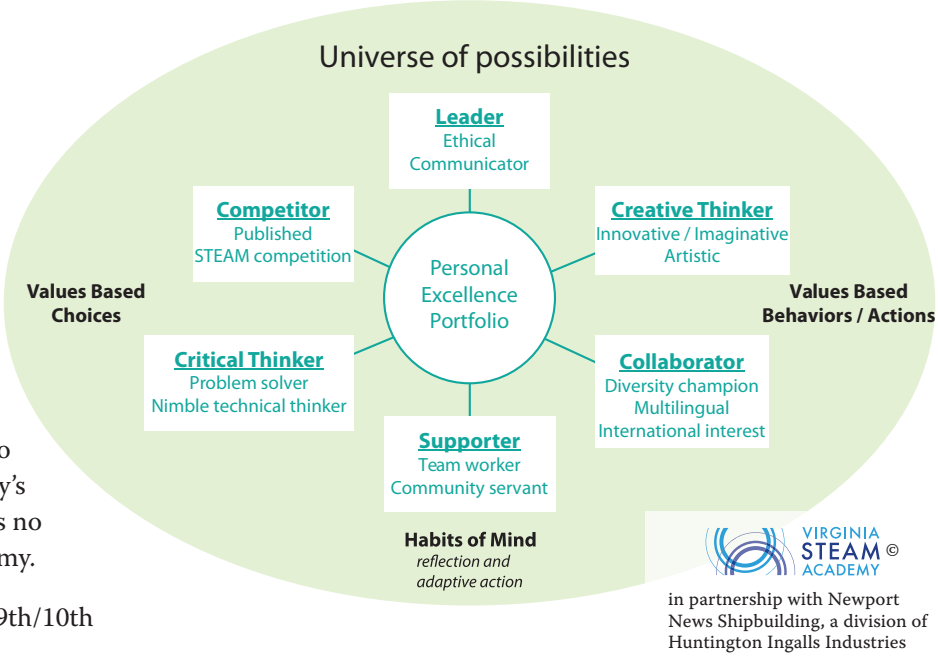
Each year, the Academy will accept a combined 9th/10th grade class.

Students will benefit from a rigorous, internationally benchmarked and 21st century relevant curriculum that tightly integrates STEAM content, applied learning, the humanities, leadership and ethics. The Virginia STEAM Academy curriculum offers (1) advanced and college level courses, and (2) core and elective classes in science, engineering, mathematics, entrepreneurship, wellness (PE), social science, English, world languages, and fine arts. There will be opportunities for interdisciplinary study, creative individual study and research.

Students will earn a high school diploma and pursue advanced college credit; routinely collaborate with their peers, faculty, and field experts to address real-world challenges; experience sustained apprenticeships with partner organizations in STEAM-related occupations; and produce culminating projects that demonstrate STEAM-related outcomes.

The Teaching, Learning, and Faculty subcommittee is developing a robust course outline and faculty recruitment strategy to support the well defined Student Admissions subcommittee work for the boarding high school. In addition, with support from Newport News Shipbuilding, a division of Huntington Ingalls Industries, Virginia STEAM Academy is developing industry standard institutional policies and procedures.

A panel of middle, high school and university experts, STEAM-related curriculum, instruction and assessment experts, thought leaders and knowledge experts in ethical leadership and adolescent development contributed to the design of Virginia STEAM Academy. Moreover, the Academy is its own research project, drawing upon experts from the consortium leadership model to design, deliver, measure and continuously improve its offerings. For example, the Virginia STEAM Academy Teaching



and Learning Curriculum and Outcomes Measures sub-committee is examining exemplary high school curricula against current and predictive industry and university needs and expectations. Hence, traditional and non-traditional assessments, standards, and competitions such as industry certifications, badging, Virginia Standards of Learning, International Baccalaureate, Advanced Placement, SAT, ACT, American Mathematics Competition, Trends in International Mathematics and Science, Programme for International Student Assessment, Next Generation Science Standards, and national and international STEM and non-STEM competitions will inform the formative and summative assessment profile of a Virginia STEAM Academy graduate.

Faculty will be drawn from master certified secondary school teachers, higher education, and business. A significant number will hold masters or doctoral degrees. Teachers will serve as mentor-advisors to students. The student to teacher ratio will be approximately 13:1 in non-lab classes.

Accreditation is being pursued through AdvancEd (formerly the Southern Association of Colleges and Schools). Additional certifications and credentialing will be pursued through the Virginia Department of Education, State Council of Higher Education for Virginia, and industry.

Among the co-curricular and extracurricular programs to be considered are: Sports (golf, lacrosse, field hockey, tennis, wrestling, and swimming) and Co-curricular (vocal music, debate, drama, campus newspaper, campus government, and community service).

We are exploring instrumental music, along with fine art, as core curricular offerings.



Innovating on a proven concept

Other states have initiated comprehensive, STEAM-focused programs similar to Virginia STEAM Academy. For example, since 1982, the North Carolina School of Science and Mathematics (NCSSM)'s boarding high school has graduated

more than 7,500 students with 60% choosing to live and pursue careers in the state. The state's annual investment of \$20 million has yielded a \$500 million annual return, due, in part, to the fact that NCSSM alums typically earn double the average North Carolinian's salary and NCSSM alums start and lead a number of successful businesses.¹

In Virginia, Governor's Schools and Career and Technical Academies are visible and significant symbols of the commonwealth's support for STEM education to expand student options. The Governor's Academy model reflects a STEM-education strategy described in a study by the National Research Council (NRC) as inclusive STEM schools. The NRC also identified selective STEM schools as a valuable model. Virginia STEAM Academy will fill an educational niche and provide economic opportunity for the commonwealth by selecting "highly talented and motivated students with a demonstrated interest in and aptitude for STEM" from across Virginia.²

Virginia STEAM Academy is building a comprehensive longitudinal database to collect, match, and monitor the progress of Summer STEAM, Citizen-Leader, and boarding high school applicants and participants. In collaboration with its six university, five science and engineering, one health system, and multiple business, K-12, and arts and humanities champions, Virginia STEAM Academy will develop and incorporate a sophisticated mentoring system that pairs talented youth with Virginia STEAM Academy partners and champions throughout the commonwealth. In so doing, Virginia STEAM Academy will help nurture a robust cadre of STEAM-talented citizen-leaders who understand and integrate the humanities, and who seek to give back to their respective communities. All of these youngsters will be touched by Virginia STEAM Academy though they may choose multiple pathways to success, including but not limited to, the Virginia STEAM Academy boarding high school.

¹Karen Dash Consulting, Economic Impact Statement, North Carolina School of Science and Mathematics (2011).
²"What makes for successful K-12 STEM education: A closer look at effective STEM education approaches." Hearing before the Subcommittee on Research and Science Education, Committee on Science, Space, and Technology, House of Representatives, 112th Congress, First Session, Wednesday, October 12, 2011, Serial No. 112-42. <http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg70588/html/CHRG-112hhrg70588.htm>.

SUPERINTENDENT

"I view the Virginia STEAM Academy as an enhancement to our public education system...We need public options based on student interest and ability (not zip code) that enhance the best opportunities our school divisions provide."

— Dr. A. Katrise Perera, Immediate Past Superintendent, Isle of Wight County Schools

INVESTING TODAY IN TOMORROW. IT MATTERS.

Audit Report

Statement of Activities

JANUARY 2011 - DECEMBER 2014

Revenue and Support

Contributions & Grants	\$506,398
In Kind Services	\$200,839
Interest Income	\$31

Total Revenue and Support **\$707,268**

Expenses

Funds Development	\$43,005
Insurance	\$2,173
Legal & Professional Fees	\$42,077
Lobbying Fees	\$17,233
Software & IT Services	\$12,358
Sub-contracted Services	\$120,840
Summer STEAM Academies	\$136,608
Supplies & Other	\$16,151
Taxes & Licenses	\$1,362
Travel & Conferences	\$11,280
In Kind Services	\$200,839

Total Expenses **\$603,926**

Change in Net Assets **\$103,342**

Statement of Financial Position

DECEMBER 31, 2014

ASSETS

Current Assets

Cash	\$49,594
Accounts Receivable	\$20,000
Grants Receivable	\$54,545
Prepaid Expenses	\$703
Total Current Assets	\$124,842
Other Assets- Deposit	\$10,000
Total Assets	\$134,842

LIABILITIES and NET ASSETS

Current Liabilities

Accounts Payable	\$11,500
Deferred Revenue	\$20,000
Total Current Liabilities	\$31,500

Net Assets

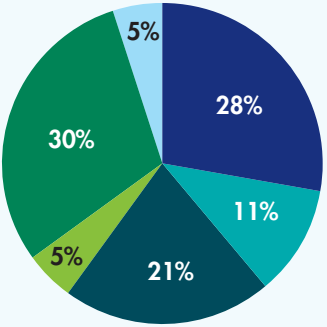
Unrestricted	\$48,797
Temporary Restricted	\$54,545
Total Net Assets	\$103,342

Total Liabilities and Net Assets **\$134,842**

Based on the unqualified opinion of the audit report rendered by Barnes, Brock, Cornwell & Painter PLC.

Programmatic Spending by Category

1/1/2011 - 12/31/2014

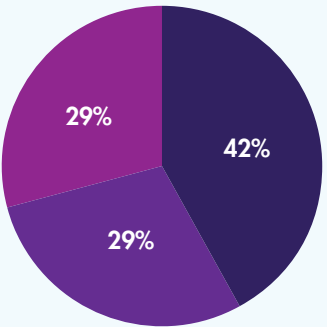


100% = \$603,926

Strategic Planning and Implementation	\$169,679
Legislative & Fund Development	\$64,134
Site, Buildings & Grounds	\$128,154
Teaching & Learning Committee	\$31,161
Summer STEAM Academies	\$180,455
Human Capital Committee	\$30,343

Giving By Category

1/1/2011 - 12/31/2014



100% = \$707,268

Virginia General Assembly	\$300,000
Individuals, Businesses & Foundations	\$206,398
In Kind	\$200,839
Interest Earned	\$31

Combined Giving

JANUARY 2011 THRU DECEMBER 2014
Alphabetical Listing by Category

- \$50,000 plus**
Huntington Ingalls Industries
Virginia General Assembly
- \$20,000 to \$49,999**
Birdsong Charitable Foundation
Hampton Roads Sanitation District
Lewis Family Trust
Towne Bank
- \$5,000 to \$19,999**
BOSH Global Services
Caroline and Brian Martin
Old Point National Bank
Peninsula Community Foundation
WM Jordan Company, Inc.
- \$1000 to \$4,999**
Jaya Tiwari and Charles Armentrout
Mary Ann and John Eure
Ezzell Family Fund and Zel Technologies LLC
North Suffolk Rotary Club
Taylor Education Consulting
Suffolk Education Foundation
Suffolk Community Hospital Foundation
Virginia Space Grant Consortium
Wilbanks Smith & Thomas Asset Management LLC

- all other donations**
Alpha Kappa Alpha Sorority, Rho Eta Omega
Susan Blackman
Eric Blackmon
Cape Henry Rotary
Sherri Crawford
Gwendolyn Defilippi
John Gudgel
William Haley
Ivy Foundation
Jack and Jill of America, Norfolk Chapter
Thomas Jandl
Robert Johnson
Sharon Kelleher
Kathleen Killion
Newport News Rotary Foundation
Peninsula Camp Foundation
Jeff Reynolds
AJ Robertson
Susan and Chris Skully
Smithfield Kiwanis Club
John Thomas
Tammy Wiles

In-kind Giving

The Virginia STEAM Academy would like to thank the following businesses, universities and individuals for graciously providing in-kind guidance, support, goods and services from inception through December 2014.

- Analytical Mechanics Associates, Inc.
Arengée
Barnes, Brock, Cornwell & Painter PLC
Chrysler Museum of Art and Chrysler Glass Studio
College of William and Mary, School of Education*
Wendy Geer
Conrad Haas
Chet Hart
HBA Architectural & Interior Design, Inc.
Huntington Ingalls Industries
Jones, Blechman, Woltz and Kelly, P.C.
McDermottWard
Metro Media Productions
NASA Langley Research Center*
National Institute of Aerospace*

- Newport News Shipbuilding, a division of Huntington Ingalls Industries
Norfolk State University*
Old Dominion University*
Peninsula Technology Incubator*
Radford University*
Saunders & Ojeda, P.C.
Thomas Jefferson National Accelerator Facility *
Virginia Military Institute*
Virginia Modeling, Analysis and Simulation Center*
Virginia Polytechnic Institute and State University*
Virginia Space Grant Consortium
WHRO
Zel Technologies, LLC

*Official Partners of the Virginia STEAM Academy

Board Members

Caroline Martin,
Co-founder and Board Chair

Judy K. Stewart, Co-founder,
Board Member, President & CEO

Jack Ezzell

E. Dana Dickens, III

Grace Chung Becker (elected to Board of Directors 2015)

Summer STEAM Design Team

Jim Batterson, retired NASA engineer

Tracee Carmean, retired vice president and administrator, Education, Riverside School of Health Careers, Riverside Health System

Allison Crean Davis, founding partner, New Legacy Partnerships, LLC

Sally Fisk, past executive director for Institutional Outreach, Thomas Jefferson National Accelerator Facility

Mihyeon Kim, director, Pre-Collegiate Learner Programs College of William and Mary

Tina Manglicmot, coordinator of K12 Math & Science, Curriculum & Instruction, Isle of Wight County Schools

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

*Anne Moore, associate vice president, Learning Technologies, Virginia Tech

Rasha Morsi, director of the Creative Gaming and Simulation Lab, Associate Professor of Engineering, Norfolk State University

C. Michael Ross, principal architect, HBA, Architecture and Interior Design, Inc.

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Lisa Surles-Law, education administrator, Thomas Jefferson National Accelerator Facility

Vern Williams, gifted and talented program math educator, Fairfax County Public Schools

*To review and comment

Standards-Setting Panel Participants

Jim Batterson, retired NASA engineer

Oktay Baysal, dean, Batten College of Engineering, Old Dominion University

Sharon Bowers, educator in residence, Virginia Beach City Public Schools, National Institute of Aerospace

Tracee Carmean, retired vice president and administrator, Education, Riverside School of Health Careers, Riverside Health System

Allison Crean Davis, founding partner, New Legacy Partnerships, LLC

Tracy Cross, executive director, Center for Gifted Education, College of William and Mary

Sally Fisk, past executive director for Institutional Outreach, Thomas Jefferson National Accelerator Facility

Joe Garofalo, associate professor, Curry School of Education, University of Virginia

Meagan Herald, assistant professor of mathematics, Virginia Military Institute

Yolanda Hinton, former Army Science Board Study Manager

Benjamin Knapp, director, Institute for Creativity, Arts, and Technology and professor in the College of Engineering’s Department of Computer Science, Virginia Tech University

Stephen Knisley, professor of mechanical and aerospace engineering Batten Endowed Chair in Biomedical Engineering, Old Dominion University

Page Laws, professor of English and dean of the Honors College, Norfolk State University

*Susan Magliaro, university professor of educational psychology, Virginia Tech University

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

Jennifer McClain, manager, Career Pathways, Newport News Shipbuilding

Rasha Morsi, director of the Creative Gaming and Simulation Lab and Associate Professor of Engineering, Norfolk State University

Laura Nelson, director of science, Portsmouth Public Schools

Michael Ross, principal architect, HBA Architecture and Interior Design

Colleen Seremet, Virginia STEAM Academy Steering Committee member, chair, Standards-Setting Panel, co-chair, Teaching and Learning

John Shifflett, director, Leadership, Technical, and Professional Development, Newport News Shipbuilding

Anne Spence, assistant professor, Mechanical Engineering at University of Maryland-Baltimore County

Dixie Stack, consultant, Teaching and Learning subcommittee

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Lisa Surles-Law, education administrator, Thomas Jefferson National Accelerator Facility

Sharon Webb, math teacher, Thomas Jefferson High School for Science and Technology and past Albert Einstein Fellow, US Department of Energy

Don Williams, technology instructor, Hampton City Schools

*Confirmed Panelist to contribute at a later date

Business Leaders Symposium Participants

PRESENTERS

John Shifflett, director, Leadership, Technical, and Professional Development Newport News Shipbuilding

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

ATTENDEES

Bonita Anthony, Old Dominion University, Jim Batterson, retired, NASA engineer, Tracee Carmean, Riverside Health System, Fred Farris, Virginia Living Museum, Ellen Fifthian, MD, Hampton Roads Educational Consulting, Sharyn Fox, Whitman, Requardt & Associates, LLP, David France, Kimley-Horn and Associates, Inc., Christopher Gareis, The College of William & Mary, Kevin Hinman, Leadership Training International, Yolanda Hinton, Army Science Board, Mary Ann Hoppa, Mitre, Delegate Matthew James, Workforce Development, Christoph Leemann, Gretchen LeFever, Health IT Consortium, Deborah Lohmeier, Burgess & Niple, Diane Moore, Leadership Training International, Peggy Myatt, York County, Linda Rice, Hampton Roads Community Foundation, Todd Roberts, Chancellor of the North Carolina School of Science and Mathematics, Brad Rogers, Moreland Advisors, Inc., Bill Shore, GlaxcoSmith-Kline, Javaid Siddiqi, Deputy Secretary of Education, Office of the Governor, William Warner, retired Newport News Shipbuilding, Jamie Weist, Kimley-Horn and Associates, Inc., Chet Hart, retired Health System COO & CFO

Hampton Roads Advisory Committee

James Batterson, retired, NASA engineer

Sandra DeLoatch, provost, Norfolk State University

Dana Dickens, III, Virginia STEAM Academy, Board of Directors

Jack Ezzell, Virginia STEAM Academy, Board of Directors

Shelly Fitzgerald, executive vice president, BOSH Global Services

Len Fleisig, partner, Willcox & Savage

Dulcie Grabarczyk, parent representative

David Harnage, chief operating officer, Old Dominion University

Mihyeon Kim, clinical assistant professor and director, Pre-collegiate Learner Programs, College of William & Mary

Wayne Lett, retired superintendent, Newport News Public Schools

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

Scott Miller, general manager, America Cloud Services, Microsoft

Tommy Norment, state senator, Virginia General Assembly

Lonnie Schaffer, vice president for academic affairs, Thomas Nelson Community College

Linda Shifflette, superintendent, Hampton City Schools

Rob Shuford, chief operating officer, Old Point National Bank

Judy Stewart, co-founder, board member, and president/CEO, Virginia STEAM Academy

Lisa Surles-Law, science education administrator, Thomas Jefferson National Accelerator Facility

Rashard Wright, designee for Dr. Katrise Perera, superintendent, Isle of Wight County Schools

Human Capital Student Admissions Subcommittee Members and Presenters

SUB-COMMITTEE MEMBERS

Charles “Chuck” Armentrout, retired colonel, past director of manpower, personnel and services, Headquarters Air Combat Command, Langley Air Force Base

Jim Batterson, retired, NASA engineer

Grace Chung Becker, Virginia STEAM Academy, Board of Directors

Tracee Carmean, retired vice president and administrator, Education, Riverside School of Health Careers, Riverside Health System

Charlie Hill, retired executive vice president, Human Resources, Landmark Communications

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

Dave Sawyer, retired educator and superintendent and founder, Thomas Jefferson High School for Science and Technology

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Diana Williams, education advocate

Vern Williams, gifted and talented program math educator, Fairfax County Public Schools

PRESENTERS

Charles “Chuck” Armentrout, retired colonel, past director of manpower, personnel and services, Headquarters Air Combat Command, Langley Air Force Base

Tiffani Bright, informatics consultant and Meyerhoff Scholar alumnae, University of Maryland, Baltimore County

Tracee Carmean, retired vice president and administrator, Education, Riverside School of Health Careers, Riverside Health System

Scott Conklin, director of admissions, Episcopal High School of Virginia

Joann P. DiGennaro, president, Center for Excellence in Education

Charlie Hill, retired executive vice president, Human Resources, Landmark Communications

Letita Mason, director of admissions, North Carolina School of Science and Mathematics

John Sokolowski, executive director, Virginia Modeling, Analysis and Simulation Center

Linda Vahala, associate dean, Frank Batten College of Engineering and Technology, Old Dominion University

Daniel Wubah, provost, Washington and Lee University; past vice president for undergraduate education and deputy provost, Virginia Tech

Human Capital Faculty Subcommittee Members

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Caroline Martin, chair/facilitator, Co-founder and Board Chair, Virginia STEAM Academy

Tracee Carmean, co-facilitator, retired vice president and administrator, Education, Riverside School of Health Careers, Riverside Health System

Jack Ezzell, Virginia STEAM Academy, Board of Directors

Charles “Chuck” Armentrout, retired colonel, past director of manpower, personnel and services, Headquarters Air Combat Command, Langley Air Force Base

Vicki K. Crisp, LARC-E4 director, Systems Analysis and Concepts at NASA Langley Research Center

Mekbib Gameda, vice president for Diversity and Inclusion, Eastern Virginia Medical School

Christopher R. Gareis, assoc. prof. of educational leadership, College of William & Mary, School of Education

Linnea Haase, math instructor, Norfolk Public Schools

Wayne Lett, retired superintendent, Newport News Public Schools

Cathy Veal, vice president for strategy and advancement, Illinois Mathematics and Science Academy

Vern Williams, gifted and talented program math educator, Fairfax County Public Schools

Michael Ross, principal architect, HBA Architecture and Interior Design

Teaching and Learning Curriculum and Outcomes Measures Subcommittee

Linnea Haase, math instructor, Norfolk Public Schools

John Shifflett, director, Leadership, Professional and Technical Development, Newport News Shipbuilding, a division of Huntington Ingalls Industries

Troy Siemers, department head and professor, Applied Mathematics, Virginia Military Institute

Lisa Surles-Law, education administrator, Thomas Jefferson National Accelerator Facility

Sharon Webb, sub-committee co-facilitator, Albert Einstein Fellow, US Department of Energy; math instructor, Thomas Jefferson High School for Science and Technology, Fairfax County

Sam Wheeler, Albert Einstein Fellow, US Department of Energy; physics instructor, North Carolina School of Science and Mathematics, Durham, NC

Vern Williams, gifted and talented program math educator, Fairfax County Public Schools

Caroline Martin, Co-founder and Board Chair, Virginia STEAM Academy

Jack Ezzell, Virginia STEAM Academy, Board of Directors

Judy Stewart, co-founder, board member, president/CEO, Virginia STEAM Academy

Virginia STEAM Academy Board of Directors



Caroline Martin



Judy Stewart



Jack Ezzell



E. Dana Dickens



Grace Chung Becker

The Virginia STEAM Academy emerged from the vision of co-founders Judy Stewart, PhD, and Caroline Martin, RN, MHA. Stewart is an independent education consultant and President of Taylor Education Consulting, Inc. Her work in the area of education policy research has led to extended contracts with federal education research and development agencies, state departments of education, and local school divisions around issues related to educator quality and quantity. Locally, she has served on several nonprofit boards. Stewart was a member of the Civic Leadership Institute, Class of 2013.

Martin is the retired Executive Riverside Health System/CEO, Riverside Regional Medical Center. Some of her major accomplishments during her tenure include serving as the executive of the Schools of Professional Nursing and Allied Health Education, the creation and management of Riverside’s Wellness Division, Human Resource Development, Child Care and Learning Centers, and oversight of the risk management, safety and protection and accreditation programs. Since her retirement she has served in leadership positions on many nonprofit boards and was named Suffolk Citizen of the Year, 2012.

When the Virginia STEAM Academy filed its original articles of incorporation and applied for its nonprofit 501(c)(3) status, the initial board was comprised of the Co-founders Caroline Martin, president, Judy Stewart, and James Batterson. An original Virginia STEAM Academy Steering Committee member, Batterson has been a K-12 school board member, educator, NASA engineer and strong proponent for early and integrated engineering in the STEM curriculum. Batterson resigned from the board in 2013 but not before the board elected Jack Ezzell. Batterson continues to be an advocate and active advisor (serving on the Virginia STEAM Academy Hampton Roads Advisory Committee).

Ezzell, an early Virginia STEAM Academy champion and Steering Committee member, is Founder and CEO of Zel Technologies, an international firm specializing in provid-

ing advanced technology solutions to critical enterprise problems. Ezzell brings to bear his knowledge of the need for STEAM leaders. He currently serves on the board of directors for Sentara Healthcare and VersAbility (formerly Arc of the Peninsula), where he is former chair, and has served as Rector of Norfolk State University for two terms. Ezzell received WHRO’s 2013 Pioneer Award.

In September 2014, the board welcomed E. Dana Dickens, III to its membership. Dickens, another original Steering Committee member, played a key role in securing bipartisan legislator support for the Virginia STEAM Academy. Dickens is the former Mayor of Suffolk and immediate past President and CEO of the Hampton Roads Partnership. Prior to joining the partnership, he owned and directed First Service Insurance. He was recently appointed to Governor McAuliffe’s Small Business Commission.

In February 2015, the board welcomed Grace Chung Becker. Becker served on Virginia STEAM Academy’s Human Capital Student Admissions sub-committee. Becker’s legal career includes former Acting Assistant Attorney General, Civil Rights Division, U.S. Department of Justice in the Bush Administration; prosecutor, Criminal Justice Division of the Justice Department; Criminal Counsel, U.S. Senate Judiciary Committee; Assistant General Counsel, U.S. Sentencing Commission; and as associate at the law firm of Williams and Connolly. Becker currently works with several non-profits on education policy issues, including the Virginia Governor’s Standards of Learning Innovation Committee. She has served as President of the Fairfax County Association for the Gifted, President of the Thomas Jefferson High School for Science and Technology and a variety of Fairfax County School Board committees.

Board members bring strong expertise in education, operations, government relations, legal and nonprofit board leadership. The board remains committed to expanding to reflect statewide representation.



*Where intellect and innovation
converge for students*

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