The STEM Academy at Booker T. Washington: Old Dominion University & Suffolk Public Schools Lab School

College Partnership Lab Schools

Standing Committee Meeting

May 6, 2024





Why the STEM Academy at Booker T. Washington?

Proposes an innovation model:

- Centers on a comprehensive integration of STEM (Science, Technology, Engineering, and Mathematics) education
- Builds hands-on, practical STEM experiences into curriculum
- Enhances student academic proficiency
- Develops critical thinking and problem-solving skills
- Fosters a deeper understanding of core subjects and prepares students for real-world challenges

Goals:

- Introduce students to innovative STEM initiatives in the field (Science, Technology, Engineering, and Mathematics)
- Cultivate a renewed interest among parents, encouraging them to actively seek enrollment for their children
- Optimize the school's potential in fostering a vibrant learning environment for students in STEM disciplines





SABTW Mission

Our mission is to:

- Broaden student horizons and inspire them, with an instilled sense of responsibility and ambition
- Address the needs of low socioeconomic populations by emphasizing the importance of STEM exposure
- Provide innovative, hands-on, dynamic teaching and learning laboratory for students from disadvantaged backgrounds to explore the world of STEM
- Collaborate around research to build and share knowledge of transformative practices





SABTW Vision

Our vision is to cultivate a generation of productive citizens who are prepared for the world - with awareness, understanding, skills, and knowledge needed for success in high school, college and STEM careers – contributing to societal advancement and the narrowing of educational disparities.



SABTW Instructional Focus & Innovations

- Coursework emphasizing the integration of STEM areas into Curriculum
 - Math, Language Arts, Social Studies, Science, Engineering
 - Resource classes; Tech Labs
- Building the next generation of future STEM teachers through *Educators Rising*, beginning Fall 2024
- A robust student-teacher program to prepare future educators for interdisciplinary STEM teaching, through rigorous, field-based residencies and apprenticeships
- Mentoring programs connecting students and teachers with college students, professionals, and regional STEM industry leaders
- Leveraging the iLab as a professional development hub for innovative lesson development and community of practice





Enrollment Projections

2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
120	120	120	120	120





A Day in the Life of a SABTW Student

Sample Lab School Studen				
9:25 AM - 9:40 AM: Arrival and Morning Meeting				
9:40 AM - 10:30 AM: STEM Math Focus				
10:30 AM - 11:20 AM: Language Arts (STEM integrated)				
11:20 AM - 11:50 AM: Lunch				
11:50 AM - 12:15 PM: Recess				
12:15 PM - 1:05 PM: STEM Science & Engineering Focus				
1:05 PM - 1:50 PM: Resource Class I (PE, Technology Lab, Art, Mus				
	1:50 PM - 2:40 PM: Social Studies (STEM integrated)			
	2:40 PM - 3:25 PM: Resource Class II (Maker Space, STEM Lab, Computer Science, STEM Career Exploration, Student Club)			
	3:25 PM - 3:50 PM: Daily Review / Exit Ticket and Pack Up			
	3:50 PM: Dismissal			





SABTW Instructional Focus

Fig. 1

From: Beyond the basics: a detailed conceptual framework of integrated STEM



Interactions between critical characteristics of integrated STEM



SUFFOLK PUBLIC SCHOOLS

Research: Optimizing Impact

- Researcher-practitioner partnerships among ODU Faculty and Lab School Staff
- Design-based research will emphasize data-informed decision making
- Evidence-based models of teacher professional development
 - Professional learning communities will focus on cross-cultural STEM integration and ODU Ecosystem
 - \odot Action research and lesson study will promote learning for pre-service teachers

Evaluation: Establishing a Model

- To what extent to which the Lab School components will be implemented as planned?
- How are the key stakeholders, (students, parents, faculty, teachers, community) impacted by the SABTW?
- In what ways can the Lab School sustainability strategy serve as a model for others?



Support & Industry Partners









Commonwealth

Cyber Initiative

COASTAL VIRGINIA

HAMPTONROADS WORKFORCECOUNCIL

ONE REGION. ONE WORKFORCE. ONE ECONOMY.







BIOMEDICAL RESEARCH





Sustainability Plan



Braided Sustainability Approach: Leveraging our STEM Regional Ecosystem

- Grants
- Development
- Fundraising
- Partnership position-base funding
- Institutional commitment

 Lab School team sets goals, objectives, and outcomes; Initial Lab School including an emerging transition development plan for conclusion of grant funding. Program implementation Project team employs a program evaluation process that includes elements for and sustainability transition plan. planning Funding ends Grant funding and transition ends and plan takes transition plan effect.





Illustrative Itemized Budget

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\$ in 000's	Yr O	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total	Comments
Lab School Operating Costs								
Personnel	545	545	579	587	596	330	3.182	provide details separately
Non-personnel Expenses	175	338	338	338	338	221	1,748	provide details separately
Staff development	50	55	55	55	55	24	294	provide details separately
Equip/Tech/Furniture	180	110	212	248	238	200	1,188	provide details separately
Admin Fee	50	-					50	provide details separately
Total Lab School Operating Costs	1,000	1,306	1,363	1,394	1,428	1,186	6,462	[A]
Annual Enrollment (# of pupils)		120	120	120	120	120	600	based on experienced ramps
Cost per pupil (\$)		\$10,883	\$11,358	\$11,617	\$11,900	\$9,883	\$2,154	
Estimated Lab School Funding								
Planning Grant	200						200	per lab school application
Start-up	1,000						1,000	per lab school application
Operating		840	840	840	840		3,360	per lab school application
Subtotal College Partnership Lab School Fund	1,200	1,400	1,500	1,500	1,500	-	4,560	
Outside Funding								
Local share		761	916	996	1,020	1,045	4,738	illustrative
Grant funding			25	25	25	25	100	illustrative, provide details
Philanthropic funding			25	25	25	25	100	illustrative, provide details
Higher education institution support		152	178	178	178	178	864	illustrative, provide details
Business & industry partner contributions			25	25	25	25	100	illustrative, provide details
Fundraising and development			25	25	25	25	100	illustrative, provide details
Subtotal Other Funding	-	913	1,194	1,274	1,298	1,323	6,002	
Total Funding	1,200	2,313	2,694	2,774	2,798	1,323	10,562	[B]
						Funding Sustainabilit		
						у?	Yes	Funding is greater than costs



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Thank you for this opportunity!

