



OPERATION IMPACT

AFTER SCHOOL PROGRAM

The Buffalo Soldiers Association of West Point (BSAWP) has partnered with the West Point Chapter of the National Society of Black Engineers (NSBE) to establish an after school program, **Operation Impact**, at Highland Falls Intermediate School. We aim to increase and sustain public and youth engagement with STEAM, paying particular attention to underrepresented and underserved populations in the Highland Falls community.

Our goals are to: • **INSPIRE** students to be creative thinkers, problem solvers, and team builders • **BUILD** partnerships between schools, students, and the National Society of Black Engineers • **PROMOTE** public awareness and a broader understanding of Science, Technology, Engineering, Art and Math (STEAM) • **CULTIVATE** an educational space that broadens students understanding of STEAM and military educational opportunities and professions.

The Operation Impact After-School program will conduct 6 monthly hands on activities designed to engage, motivate and inspire students to excel academically and consider the STEAM disciplines in their post-secondary plans and careers.

Target Audience: 20-30 5th through 8th grade students interested in socializing with peers, learning more about STEAM, interacting with West Point Cadets, and conducting STEAM experiments after school.

Days and Times: One Thursday/Friday a Month from November to April, from 4:00 pm to 5:30 pm (90 mins) Students will served food from 3:15- 4:00 pm. At 4pm- STEAM activities begin.

Planned Activities: Students will have the chance to participate in STEM activities, as well as study and be inspired by ART. Review STEM curriculum (See Appendix A)

Outcomes: Students will increase their knowledge of Rockets, Robotics, Bridge Design, Sustainability Stimulation, Renewable Energy, Data Science, and Art.

We envision a world where all students have access to quality STEAM learning activities; equipped with the knowledge and skills to study STEAM fields, earn degrees, and succeed professionally. Operation Impact bolsters STEAM instruction and prepares students to think deeply, become leaders, and solve the most pressing challenges facing our nation and our world.

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APPENDIX A- STEM CURRICULUM

November 8, 2017 3:45PM

Rockets/Propulsion

Students build and launch model rockets in order to discover fundamental principles of nature for themselves: Helping them in their academic progress by sparking critical thinking skills and better research and observation techniques.

NOVEMBER 30, 2017 3:45pm

Civil Engineering/Bridge Design

Students design and construct model Bridges in order to uncover the economic drivers for engineering projects and develop self confidence in their ability to apply math and physics to real world cases

December 6, 2017 3:45PM

Robotics

Students build and program Vex Robots in order to apply iterative problem solving approaches to real and ongoing design challenges

FEBUARY 23, 2018 3:45 pm

Sustainability Simulation

Students participate in a sustainability simulation exercise in order to demonstrate the impact of their individual actions on the world around them. Also highlights some significant economic factors in the Engineering Decision making process

MARCH 29, 2018 3:45 PM

Renewable energy

Students construct portable wind turbines in order to visualize the importance of conservation as well as the opportunities and the challenges of large scale renewable energy sySTEMs

APRIL 12, 2018 3:45 Pm

Data Science

Students conduct a text analytics exercise utilizing multiple social media applications in order to conceptualize the use of mathematics and statistics in understanding the world around you.

Contact: 845-859-9143 | Correspondence@BuffaloSoldiersofWestPoint.org
<http://www.buffalosoldiersofwestpoint.org/operationimpact>