

BVEF Innovative Academic Grant Application

Submit one signed electronic copy by the April 27, 2020 deadline.

Blackstone Valley Education Foundation

Attention: Erika Baum

670 Linwood Avenue, Suite 5

Whitinsville, MA 01588

ebaum@BVEducationfoundation.org

Grants are awarded to those member school districts whose proposals best articulate a plan that includes ONE or more of the following:

- Connection between academic preparation and career readiness
- Collaboration with schools, businesses, and community
- Catalyst for career, employability, or skill development

Proposals should NOT include purchase of materials, programs, or equipment unless there is a well-articulated connection to student outcomes.

OF PARTICULAR INTEREST to the Blackstone Valley Education Foundation is a request that:

- Promotes skill development for or knowledge about STEM (Science, Technology, Engineering, & Math)
- Provides career awareness for grades Pre-K through 12th grades
- Sustains or strengthens career readiness initiatives that tie into current academic subjects

Priority will be given to those requests that strive for matching or additional funds from their local or other foundations or from other school initiatives to build capacity.

Grant Amount: up to \$1,000

**For more information on your district membership, please contact your school administrator.

DEADLINE: Monday, April 27, 2020

- Complete all sections. Responses that are clear and concise, thoughtful, and efficient are greatly appreciated.
- There should be a clearly articulated tie to program/student outcomes.
- State clearly if the SAME programming is being proposed under more than one grant type.
- Repeat grant funding will be capped at two years.

Thank You!

Email address *

ebaum@bveducationfoundation.org

Amount Requested *

\$1,000

Total Cost of Project *

\$3,200

Number of Students Served *

800

Proposal Author(s) Email Address(es) *

Erika Baum, ebaum@bveducationfoundation.org Holly McNeil,
hmccneil@bveducationfoundation.org

School Address

640 Linwood Avenue, Whitinsville, MA 01588

Project Name and Location *

Middle School Makerspace

School Administrator Electronic Signature and Date *

Barry Smith March 3, 2020

Academic Outcome/Project Goal(s): What should students be able to do/know/practice? *

After numerous discussions and brainstorming sessions, we have decided that the teachers and students in our school need a Makerspace room to pursue their projects. We have discussed with our principal to repurpose an existing classroom for this project. The grant funding would be used to purchase a die cutter machine. A die cutting machine is a device to cut materials. It supports the NGSS (Next Generation Science Standards) cross cutting concept to develop and use models, the MA STE framework Guiding Principles for Effective Science and Technology/Engineering Education III (Rigor) Investigation, experimentation, design, and analytical problem solving are central to an effective science and technology/engineering program, and MA Framework for Science, Technology and Engineering -Technology and Engineering standards ETS1 (define design problems, develop and optimize solutions) ETS2 (Materials, tools and manufacturing) ETS3 (analyzing technological systems and how society uses them). These subtopics of science and engineering are about using knowledge to solve real world problems. Students need to shift their focus from memorizing facts to putting their knowledge to use through experiential learning, i.e. programming a robot and figuring out through trial and error how to have it complete a task, design a 3-D prototype with balsa wood, envisioning its parts going together through a simulation before assembly, iterative testing of a model through a feedback loop. The school has committed to equipping the room with large table workspaces, storage cabinets, craft supplies, science materials and research computers. The room would be setup over a weekend with community/ parent helpers being led by the two teachers applying for the grant. Teachers at the middle school would sign out this Makerspace

sort of how we sign out the computer lab in our buildings. This space will be ideal to host guest speakers to conduct labs/ student demonstrations for our students.

How does this project meet the intent of grant funding? Projects should include ONE or more of the following: connection between academic preparation and career readiness; collaboration with schools, businesses, and community; and catalyst for career, employability, or skill development. *

This project would add so much to the middle school community. It would be an additional space for presentations. The smaller intimate setting will spark rich conversation and allow us to book more professionals to share their expertise with the students. With a makerspace lab, we will reach out to the community and host guest speakers for small setting lab demonstrations. We will invite local businesses to set up and present STEM career opportunities. (Machinist from Woonsocket Glass Fabricators, Graffiti Works Graphic Designer, Unibank Presentation on Ethical Hacking, Core Mark Production Line, Riverdale Mills Corporation on Assembly.)

Does the project promote skill development for or knowledge about STEM (Science, Technology, Engineering, and Math)? *

This project will foster the areas of Science, Technology, Engineering and Math. It will be a resource hub for the supplies needed, a sort of brain gym for innovation through bridge building, Robotic Obstacle courses, along with the numerous labs conducted in our academic departments. We have hosted speakers / presenters in the past and have concluded that a more intimate lab setting would better suit the needs of the visitors and the students. For example, a student from MIT came and spoke to the kids in the auditorium. That large setting with limited table space and spatial distance from the speaker didn't meet the needs of the intended visit. A smaller more private setting would foster creativity and allow students to engage in meaningful discussion.

What measures will be used to evaluate the effectiveness of your project? (1-2 Google Slides showcasing project are due no later than April 8, 2021 to ebaum@bveducationfoundation.org) *

In the Spring we can submit the "sign out" calendar to show the various subject areas and diverse uses for the global resource this grant will supply to Sample Middle School. That sign up will also indicate the STEM resource needed (Robots, Die Cutter, supplies) so we can track and replenish the supplies. We have set a professional goal to bring in at least one speaker each academic quarter next year.

Project Start Date *

[July] [1] [2020]

Project End Date (projects must be completed during the proposed school year) *

[January] [4] [2021]

How will this project be sustained? *

The makerspace will be a permanent classroom in our building. We have a vision of this space growing each year with additional equipment and resources. A 3D-printer, Robotics Lab, and other studio activities.

Does this project connect career learning to a current academic subject? *

This project supports the career interests and possible paths of our students. Our hope is that the experiences they have in this room will spark an interest in applying to the numerous Career Academies at Sample High School (Engineering, Business, Art, Communication, and Health Science areas) and/or an interest in applying to the local vocational school in the valley.

Include a separate page for budget, indicating all anticipated expenses and revenues. *

Files submitted:

Budget - Erika Baum.pdf