Bosch Community Fund
(Robert Bosch LLC)
Application for Grant Funding

Applicant Completed Data.

Boone County Schools, a project of Horizon Community Funds of Northern Kentucky

Application Status	Submitted
Proposal Due Date :	6/30/2020

Contact Information

Please review the contact information we have on record for your organization (and your fiduciary organization if applicable). If your contact and/or organization information needs to be updated, you can do so by clicking the User 🏛 or Organization 🏛 links located in the menu on the left side of the portal. *Please save your proposal before clicking these links or you will lose any unsaved edits*.

Current Organization Information on File

Organization Name	Boone County Schools
Street Address	8330 US Highway 42
City	Florence
State	KY
Phone	
Email	
Tax ID	
Primary Contact	Bill Hogan
Primary Contact Title	
Primary Contact Email	bill.hogan@boone.kyschools.us
Primary Signatory	
Primary Signatory Title	
Primary Signatory Email	

If your Fiduciary information needs to be updated or you need to add a Fiduciary, proceed to the Fiduciary section of the proposal.

Current Fiduciary Organization Information on File

Organization Name	Horizon Community Funds of Northern Kentucky
Street Address	50 E.Rivercenter Blvd
City	Covington
State	KY
Phone	
Email	
Tax ID	
Primary Contact	Nancy Grayson
Primary Contact Title	
Primary Contact Email	
Primary Signatory	Nancy Grayson
Primary Signatory Title	
Primary Signatory Email	

Fiduciary Section

Does your organization use a 501(c)-3 as a fiduciary? If so, please list your fiduciary organization information below.

Yes

	Fiduciary Organization Information
Organization Name	
Street Address	
Street Address 2	
City	
State/Province	
Postal Code (Zip)	
Country	
Tax ID	

BOSCH COMMUNITY FUND

Fiduciary Organization Information

Phone

Email

Website

Fiduciary Signatory Name

Fiduciary Signatory Title

Fiduciary Signatory Email

Fiduciary Signatory Phone

Application Section

Project Name: Bosch Educational Engineering

Type of Support: Project Support

Project Start Date: 7/1/2020

Project End Date: 6/30/2021

Overall Project Amount: $2,100,000.00

Amount Requested: $630,000.00

In what setting(s) will your program operate? Choose no more than four: Within the school day, Out-of-school time (before and after school programs and evening/weekend events), Summer program, Teacher training

If you selected more than one program setting, which is the primary program setting? Choose only one. Within the school day

Students to be served by the program (choose all that apply). Kindergarten - 3rd grade, 4th - 8th grade, 9th - 12th grade

If known, please indicate the number of students to be served in that particular grade range.

Number of kindergarten - 3rd grade students: 5000

Number of 4th - 8th grade students:	5500
Number of 9th - 12th grade students:	1000

Does your program target a specific student demographic? (Choose all that apply): Students of color, Female, Economically disadvantaged

Does your school qualify for Title 1, Part A (Title 1) of the Elementary and Secondary Education Act? Yes

Do students at your school receive free and reduced meals? Yes

If yes, what percentage? 30%

If applicable, please indicate the number of teachers to be served by the program: 30

Please indicate the expected outcome(s) of your program. Only do this for the number of outcomes you are actually tracking.

Outcome(s): Youth gain exposure to STEM, Develop interest and attitudes of youth toward STEM, Increase youth knowledge and skills in STEM, Increase underrepresented populations in STEM, Administrators/teachers learn STEM content and integrate into curriculum

Please describe what this grant will support, the key components and the overall purpose of your program (up to 1200 characters, approximately 200 words):

In the next school year the Bosch Grant funds will be used for the following programs or to support additional learning for staff and students in the following ways:

Grant County will use the money to continue to enhance the programming they have in PLTW Engineering programs at Middle and High Schools. The programs have increased over the past two years based on the support from Bosch, and Grant will continue to provide professional development for staff and buy additional supplies that are needed to increase numbers in the program.

Boone County will use the money in two of the high schools to continue to increase programming of PLTW and STEM related courses for students who have an interest or aptitude to work in the STEM field. Both high schools desire to continue growing the programs to increase students graduating with credentials and course work that will enable them to be candidates for STEM fields in post-secondary institutions or apply for positions at regional businesses. Boone will also use to increase the number of students who are taking dual credit classes at local universities. Boone will offer more students to attend post-secondary institutions through a Bosch Scholarship. The first year Boone offered the scholarship the participants were a blend of students who have a desire in pursuing an Associates Degree in a STEM field.

Kenton will be using the funds to continue holding summer educational programs to heighten educators and student awareness of current practices and skills needed int he manufactoring sector. They will expand offering in the Gateway to Technology classes in grades 6-8 in their middle schools. They will also work with the elementary schools to start the PLTW elementary Launch program.

How will you measure whether you have achieved these outcomes? What data will you collect and how will you collect it? Please describe (up to 3000 characters, approximately 500 words):

1. Currently in Boone County our High Schools have a total of 300 students enrolled in these courses. We hope to grwo that number to 500 by 2021. In addition, Grant County has 100, and they hope to increase by

250. Kenton has 340 and they hope to increase to 550. This data is reported int he Technical Educations Database System and is collected through the schools Infinite Campus system. The data reported annually on the schools report card.

2. Increase the number of IT, computer science, and engineering courses in Boone, Grant, and Kenton County from 26-59. This information is also viewable on the school database system.

3. Through specific recruiting efforts we hope that the populations of students these classes will mimic the general demographics of the "at risk", minority, and female populations. At present in our Boone and Grant County there are 40% students that qualify for free and reduced lunch, we have roughly 11% minority populations, and nearly 50% of students are female. In our few engineering and IT classes currently populations do not mirror the district populations and they are underrepresented. Kenton County started the Women's Engineering academy (WEA) in 2015. The current enrollne tis 70 with the goal to grow to 150.

4. By 2022 we hope to have 75 students graduate while still in high school with Associate Degrees with an emphasis in STEM related subject matter.

5. The distribution of scholarship will be through an application process with female, minority, and "at-risk" students given priority access to such funds. If successful the scholarship will be entirely delivered to this underrepresented population.

6.Teachers who participated in externships will mentor at least 25 students in thier school after receiving externship money with a careful recruitment of underrepresented populations. We hope to have 50 students at each school participate in mentorship programs. In addition, these teachers will provide support for students taking dual credit course work.

Please cite any research and/or sources that were used to support the development of this program. If you do not have any research and/or sources, please explain any reasons or rationale you have for the development of this program (up to 3000 characters, approximately 500 words):

Getting students excited about STEM related careers has posed a challenge for NKY. By building early interest in the Elementary and middle schools Schools through robotics, PLTW Launch and Gateway to Technology programs Grant, Kenton, and Boone County have developed young student's interest in this work. However, generating high school student interest has been a more difficult task. We believe our early experiences with Project Lead the Way and other well-vetted programs is a significant step in the right direction. By providing tuition scholarship as an incentive to encourage students to work through the difficult aspects of this program we expect interest in STEM fields to grow. Research on Project Lead The Way, Dual Credit and Externships all indicate that a combination of these three initiatives at this time will result in more students in STEM related careers.

While there is limited research on the impact of teacher's job shadowing as an effective tool for generating student interest we have known that job shadowing, particularly in the manufacturing industry by learners, is an effective work preparation practice (Frawley, 2009). In Northern Kentucky the KY FAME organization initiated a successful teacher externship program that has been showcased as a national model and is currently used in 15 regions throughout Michigan.

In addition to teacher experience, a viable curriculum is crucial in generating student interest in STEM. Project Lead the Way has shown to be particularly strong in generating interest in motivating students to pursue STEM degrees and provide teachers with professional development and continuous support (Hess et. al 2016).

Perhaps the most exciting part of this initiative is that we will have the potential to see the impact of teacher externships, Project Lead The Way, and other initiatives in generating interest in STEM careers and majors while the students are in high school. Over the last 3 years the districts has worked with three local colleges to make the attainment of an Associate Degree possible while in high school. An ocean of research has strongly suggests that many dual credit experiences, especially of key courses, results increased degree attainment (Museus et. al 2007, An 2012).

By combining these efforts we believe we will have significant impact on our region and improve student lives.

Research Cited:

An B (2012). The Impact of Dual Enrollment on College Degree Attainment: Do Low-SES Students Benefit? Educational Evaluation and Policy Analysis Month 119_ 1

Bertram, V. M. (2014). One nation under taught: Solving America's science, technology, engineering, & math crisis. New York, NY: Beaufort Books.

Frawley, T. A. (2009) Job shadowing introduces the realities of manufacturing. Tech Directions. 68 (8). p. 15-17.

Museus, S. D., Lutovsky, B. R., & Colbeck, C. L. (2007). Access and equity in dual enrollment programs: Implications for policy formation. Higher Education in Review, 4, 1–19.

Will this grant support the continuation of work already underway or will it support work new to your organization? Please describe (up to 1800 characters, approximately 300 words): :

This work will allow us to dramatically expand the reach of work we initiated in Kenton, Boone, and Grant County Schools in small pockets. According to district wide career surveys, with the exception of Health Care related sciences, students in our region demonstrate little interest in STEM careers. Due to early large start up costs, initial lack of qualified instructors, and changes in state funding, our districts have likewise not been able to scale Project Lead The Way and other STEM course work like we planned. However, our students have been successful in the classes and in Kenton, Grant, and Boone County we have more students wanting to take the classes than available seats. Project Lead The Way, the Track program for IT and Computer Science, and the Aerospace curriculums offer our teachers a rigorous, guaranteed, and viable curriculum. We believe this funding will allow us to build demand and triple our reach.

Working with Gateway Community and Technical College we can allow students to earn Associates Degrees easier than before as classes in Project Lead The Way will carry dual credit with colleges. When we pair these opportunities with our early college initiative. We believe this grant will produce 75 High School students with Associate's Degrees in Science that represent female and other underrepresented populations. Students at the few schools with the robotics PLTW will have a chance to attend another school or supplement for engineering classes at Gateway. Currently high school students have access to all college classes for $54 a credit hour. The scholarship money from this grant combined with other state funds will ensure relatively free tuition and serve as a catalyst to have more students pursue the stem route.

Photos

If you would like to upload a photo, please use the + sign in the Other Documents section. If you have more than one photo, please use the same + sign to add additional files. By providing photos to the Bosch Community Fund you confirm that you have obtained all necessary copyright and publicity rights for Bosch to use the photo in its own promotional materials, and that you agree to defend and indemnify Bosch against any claims to the contrary.

Required Documents

The following documents are *required* in order to submit your proposal:

- Board Roster
- Request Budget

Please add these documents using the green + sign next to the document type listed below. Your documents will appear in the Uploaded Documents box below after you save you proposal.

Other Documents

Additional documents related to your request may be uploaded using the Uploaded Documents box below.

Please add these documents using the green + sign in the upper right corner of the box. Remember to select a document type from the dropdown box in the upload window.

UPLOADED DOCUMENTS
📄 Boone County Bosch Grant Application Rationale 2020.docx
Added by Bill Hogan at 10:52 AM on June 29, 2020
📄 Bosch Grant - KCSD Round Three 2020-21.pdf
Added by Bill Hogan at 10:35 AM on June 29, 2020

UPLOADED DOCUMENTS

Bosch Grant budget proposed 2020.xlsx

Request Budget
Added by Bill Hogan at 10:35 AM on June 29, 2020

Bosch Grant Board List.xlsx

Board Roster
Added by Bill Hogan at 10:27 AM on June 29, 2020

Bosch Community Fund

Request for Grant Funding

Budget Form

Itemized Project Costs	Total for Project	Amount Requested from BCF
Kenton County - Teacher Externship (2020)	$10,000.00	$10,000.00
Kenton County - Student Internship (2020)	$1,920.00	$1,920.00
Kenton County - Teacher Training (2020)	$8,000.00	$8,000.00
Kenton County - Launch Teacher Training (2020)	$28,080.00	$28,080.00
Kenton County - Summer Program (2020)	$16,000.00	$16,000.00
Grant County - PLTW Equipment (2020)	$4,000.00	$4,000.00
Boone County - Scholarship (2020)	$123,000.00	$123,000.00
Boone County - PLTW Equipment/Training (2020)	$19,000.00	$19,000.00
TOTAL Project Costs	$210,000.00	$210,000.00