HOBART REDEVELOPMENT COMMISSION -

EDUCATIONAL & WORKER TRAINING GRANT PROGRAM

Applications are due by October 3, 2016, at 4:00 PM to the Director of Development, Denarie Kane, 414 Main Street, Hobart, IN 46342. dkane@cityofhobart.org 219-942-5517

All questions are to be directed to Ms. Kane as well. The RDC encourages your questions since this is a new grant program.

Five hard copies and one electronic copy are required. Incomplete applications will not be considered by the Grant Committee or the RDC.
Include in the grant application submission the following information.

1) Name of Organization or Individual Seeking Grant (*the Applicant*).
   School City of Hobart (SCOH)
2) Contact information for Applicant (*include Name/Title of Contact Person, E-mail, Phone #, Fax #, and Mailing Address)*
   Dr. Peggy Buffington, Superintendent for School City of Hobart
   Email: peggyb@hobart.k12.in.us,
   Phone: (219) 942-8885
   Fax: (219) 942-0081
   Mailing address: 32 East 7th Street
   Hobart, IN 46342
   Christopher King, Director of Technology
   Tammy May, Technology Professional Development Coordinator
   There is not a separate grant administrator.

3) Legal Status of Applicant.
   Local Educational Agency (LEA)/Government Not-For-Profit Organization

4) Please provide a concise summary of the Applicant's purpose and identify the governing body *(Board of Directors, School Board, etc.)* Provide a website address if such exists.
   According to the School City of Hobart (2015) School Improvement Plan:

   Vision for Student Learning:
   The School City of Hobart Community will foster intellectual curiosity, natural abilities, critical thinking, and literacy in students while developing respectful and responsible citizens who are excited about the challenges of tomorrow, confident in their ability to chart the future, and dedicated to the pursuit of lifelong learning.
   Mission:
   The primary mission of the School City of Hobart and the Board of School Trustees is to continually provide effective community schools.
   A. Our Schools Equip Children for Adulthood
   Effective Community Schools adequately equip young people for adulthood in the 21st century. Our students must be prepared both for

employment and for day-to-day living in a complicated and rapidly changing world. This necessitates that our schools provide students with the intellectual tools necessary for life-long learning. Among these tools must be: skills to facilitate participation in a democracy, communication skills, critical thinking, and other flexible learning skills as well as the ability to work both individually and in a team situation. It is expected that these skills be developed through all curricular areas.

B. Our Schools Address the Needs of Individual Students

Effective Community Schools address the needs of individual students and focus on individual development. Students bring to the schools a great diversity of interest, aptitudes, motivations and learning styles. Our schools must be able to address this diversity by identifying individual needs, responding with appropriate teaching strategies, flexibly meeting these needs and recognizing each individual student's ability to contribute to the school community.

C. Our Schools Are Community Schools

Effective Community Schools are necessary to a healthy community. Our schools must always recognize their affirmative duty to the entire community, including families, government, business and industry, other institutions, civic groups and individual citizens. Our schools must draw from the strengths of this community to identify and accomplish their goals.

D. Our Schools Are Committed to Success

Effective Community Schools fully utilize the resources of the entire school community (administration, teachers, support personnel, families and students) in all aspects of school life. Our schools cannot succeed without the committed involvement of all.

The school district's governing body is the School City of Hobart School Board.

5) Explain the program or expense that the grant will be funding and include the dollar amount of the grant request.

The grant will allow SCOH to bring Project Lead the Way (PLTW) programs to the elementary and middle school levels in the school system. SCOH offers some PLTW courses at the middle and high school levels. The grant would allow PLTW to be started at the elementary level, in grades 3-5, and for PLTW Computer Science courses to be added at the middle school level.

The PLTW Launch program is the name of the K-5 curriculum. This program brings a standards-aligned, project-based curriculum to students in elementary school in which students will explore a variety of topics from science, math, and computer science. Students actively complete projects in which they explore solutions to real-world problems and practice the skills that lead to careers in the engineering,

bio-medical, and technology fields. The PLTW Launch modules align to Indiana's Academic Standards for Computer Science and Science.

Bringing PLTW curriculum to the elementary level will allow students to meet Indiana's Academic Standards while gaining essential skills in the STEM areas of Science, Technology, Engineering, and Mathematics. The program will encourage students' curiosity, problem solving skills, and interest in these areas, including Computer Science.

The PLTW Gateway program is the name of the grade 6-8 curriculum. SCOH already offers some PLTW curriculum at the middle school level. This grant will allow the computer science curriculum to be added to the current offerings. The middle school PLTW Computer Science curriculum is divided into two levels. Level one teaches students to create an app, while level two teaches text coding, using the language Python, and creation of an app that crowdsources and analyzes data.

In order to offer these courses, SCOH will need to purchase hardware, software, curricular, and consumable materials. The full grant amount of $30,000 is requested in 2016 as well as $30,000 in 2017 to help SCOH bring PLTW computer science programming to the school children of Hobart. The actual expense will be greater than that, based on the materials lists provided by PLTW. SCOH will cover the additional expenses.

6) Explain in detail how the grant funds will be spent.

The grant will allow SCOH to offer new or expanded PLTW curriculum at the elementary and middle school levels. SCOH will need to purchase the PLTW curriculum for the programs as well as technology hardware and software components. This includes the middle school PLTW Gateway program and 6 training modules in the elementary PLTW Launch program. Due to the expense of the program, we are looking to provide teaching and learning in 6-week module rotations in grades 3-8, which is approximately 1800 students. The modules will be purchased in grade level groups and scheduled in rotations through each classroom to give each child an opportunity.

Training will also be needed for the teachers of the program, which is included in the budget. SCOH makes excellent use of training dollars by implementing a Train the Trainer model where a few teachers receive the training, then go on to train others in the corporation.

Budget Breakdown

PLTW Launch (K-5)		
Equipment and Supplies (6 Modules)	~1300 students shared	$6,110.00
Professional Development		$750.00

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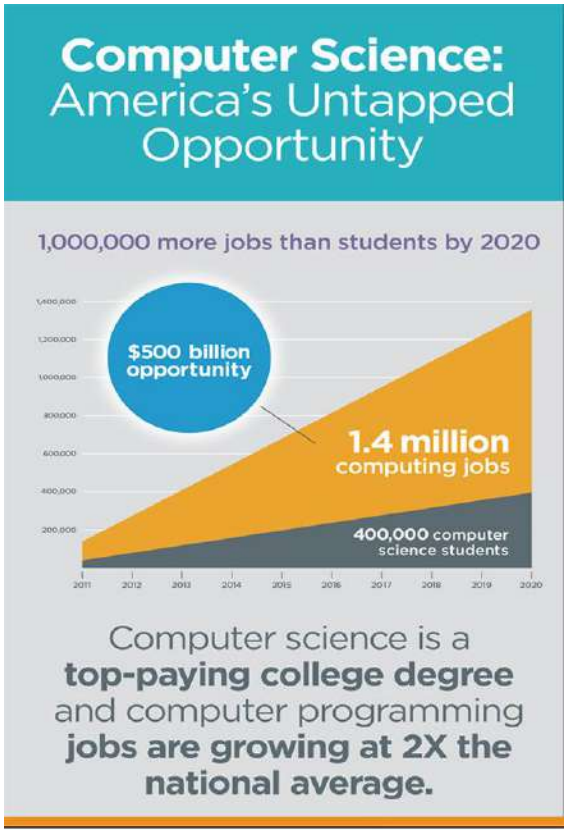
Annual Participation Fee		$750.00
Lenovo Tablet 2	50	$9,000.00
Subtotal		**$16,610.00**
PLTW Gateway (6-8)		
Automation/Robotics Equipment and Supplies	32	$11,267.75
Professional Development		$1,300.00
Annual Participation Fee		$750.00
Subtotal		**$13,317.75**
Grant Coverage Total		**$29,927.75**
SCOH Cost		
PLTW Gateway Laptops (Probook 440 or equiv)	32	$17,600.00
PLTW Gateway Lenovo Tablets	32	$5,760.00
Total Project Cost		**$53,287.75**



7) Explain when the grant funds will be spent, include start and stop dates.

PLTW licensing and equipment procurement will occur in October of 2016, and training teacher trainers will run throughout November and December to prepare for a curriculum rollout. The PLTW curriculum will begin 2nd semester starting in January 2017. During spring 2017, the teacher trainers will begin working with other teachers who will be fully trained during the summer of 2017.

8) Provide a short title for the grant request.

BRICKIES STEM UP!

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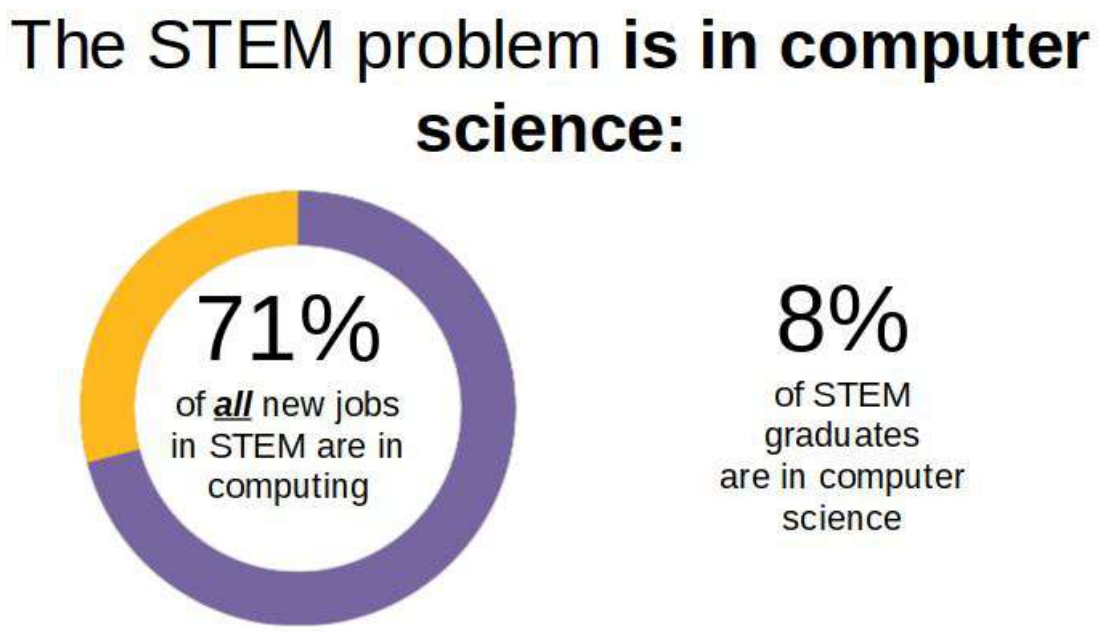
9) Calculate and/or explain the Return on Investment for the grant funds.

This program will bring a large return-on-investment to the City of Hobart. Research has shown that offering computer science to elementary-aged students increases interest in the subject (Lambert & Guiffre, 2009). SCOH graduates college and career ready students, and this grant will promote more students entering the fields of computing and technology. This will directly benefit the city of Hobart as more residents have an interest in computing and are therefore able to support the ever-increasing technological demands of modern business. Computer programmers are needed in a wide range of businesses in all areas of the country (Code.org, 2016), and SCOH sees the need to train computer programmers, which will benefit the City of Hobart as the modern workforce is developed.



Source: Bureau of Labor Statistics, National Center for Education Statistics as cited in Code.org (2016).

10) Explain if other funds are secured for the program or expense proposed for grant funding.

The School City of Hobart will match funds received from the grant this year in order to purchase the required equipment needed for the PLTW program. This will include additional device tablets and laptops (see budget above).

11) Explain if there is public outreach and if so, provide details on this effort.

This program offers an excellent opportunity for community outreach to technology or computer-science related employers. One of the major goals of the program is to build a workforce to respond to the future high demand for

technology-related careers. As such, School City of Hobart would be pleased to host guest speakers, helpers, or sponsors from the community.

SCOH currently works with Ready NWI and the Center of Workforce Innovations. This provides an opportunity for spreading the news about this new computer science curriculum across the community to potential employers.

SCOH plans to get families involved in learning computer science alongside their students. Students will be encouraged to participate in the annual SCOH Maker's Faire, which takes place each spring. This will provide an opportunity for students to share their new skills and creations with family and community members. In addition, families will be encouraged to volunteer with any after-school clubs associated with the program as well as at a weekend event called the "Brickie Coder's Bootcamp" aimed at students practicing their computer programming skills with their family members.

12) Explain how the Applicant will measure success related to the grant funded program or expense.

Success will be measured through the number of students enrolled in the programs at the middle and high-school levels as well as after-school clubs at all levels. The classes that will be offered at middle school and high school will be offered as electives that students can sign up for by choice. Therefore, increased numbers of students enrolled in them would reflect the success of the program at all previous levels. The number of students pursuing postsecondary education in technology and computer-science fields will also be measured as an indicator of the success of the program as children who have participated in the additional PLTW courses continue on past high school.

After-school clubs would also be an opportunity to measure success as students would join because they have developed an interest through the academic courses that are offered; therefore, increased participation in these clubs would be an indication of the success of the program.

In addition, SCOH hosts a maker's faire each spring. This is an opportunity for SCOH makers of all ages and products to come together and share what they make. SCOH has had computer science and technology projects entered in the past. A measure of the success of the PLTW programs would be indicated by an increase in the number or percentage of technology and computer science projects entered in the faire. Because community outreach should be a result of this grant, community participation in events such as the Maker's Faire, after school events, and other programs will be measured in order to gauge the success of outreach efforts.

Finally, at Hobart High School we will monitor enrollment into the Computer Science Application and Computer Science Principles classes. The PLTW Launch and Gateway programs will serve as feeder programs into the higher level PLTW courses at the high school level. Beyond School City of Hobart, we will utilize the National Student

Clearinghouse, which provides post-secondary data on graduate students, to monitor and view enrollment and completion of Computer Science programs in college.

13) Identify any partner organizations involved in the grant and explain their role and responsibilities.

The School City of Hobart has partnered with Project Lead the Way since 1999 to bring innovative engineering and design programs to students in Hobart. We will continue to expand this partnership through the grant by providing younger students with the same opportunities in computer science that high school students have been receiving for years.

We also have a strong partnership with the Center of Workforce Innovation in order to provide students with the college and career readiness skills needed to become successful citizens in a dynamic and increasingly technological world. SCOH will invite alumni and Hobart Chamber of Commerce members to speak with students about real-world experiences with computer science.

Purdue University Northwest is our partner for a Walk Into My Future program, which provides STEM related opportunities which will build on those opportunities available to them at the School City of Hobart.

14) Explain why the Applicant is seeking funding for this grant program or expense.

Funding will allow School City of Hobart to offer Computer Science to students at the middle school and elementary levels. Currently Computer Science courses are offered at the high-school level only. Offering Computer Science to younger students will increase foundational knowledge and interest at an earlier age, thereby increasing future and overall skills and success. Offering Computer Science can also increase participation in school, and schools incorporating PLTW Launch have reported fewer tardies and absences (PLTW, 2015).

Building interest in and passion for computer science can help students discover pathways to postsecondary education to which they would not otherwise be exposed. By 2025, the Indiana Chamber of Commerce has set a goal that 60% of residents of Indiana have a postsecondary education (Indiana Chamber, 2016). Providing computer science education at all levels will build interest for these needed areas of labor-market shortage.

15) Identify any Hobart and/or Lake County businesses who will benefit directly or indirectly from the program or expense proposed. Explain the benefit in detail.

Any business that uses or depends on technology will benefit from this program. The PLTW focus is to develop critical thinking and engineering skills in students. The computer science programs on which SCOH will focus will expose students to the field of computer science who would not otherwise consider careers in the field. Currently in the United States, there are 500,000 computing job openings, and this number is only

projected to increase moving forward (Code.org, 2016). Businesses that depend on computer science will all benefit from building the much-needed computer-science workforce. In addition, college graduates from the field of computer science earn more over their lifetime on average than the average college graduate (Code.org, 2016). This could lead to improved outcomes for students entering Computer Science and for the City of Hobart. See Code.org's presentation for more details. https://code.org/promote

16) Are there planning documents to support the requested grant program or expense and if so, attach documentation.

PLTW provides standards-alignment documentation, planning documents, and scope-and-sequence models to guide what needs to be taught and when in order for students to progress. These guides have been developed by experts in the field, and they have been used in classrooms across the country. This eliminates guess work which may be associated with developing a program. The program has already been tested. PLTW determines the materials required for the successful implementation of these programs. For example, the PLTW Gateway (middle school) program requires the use of the MIT App Inventor for students to program their own apps.

PLTW Launch Link (Elementary) - https://www.pltw.org/our-programs/pltw-launch
PLTW Gateway Link (Middle School) -
https://www.pltw.org/our-programs/pltw-gateway
PLTW CSI and CSP (This is the existing high school curriculum that elementary and middle-school levels will feed into.)
https://www.pltw.org/our-programs/pltw-computer-science

17) Provide any other information that the Applicant thinks would be beneficial for the RDC to know that would aid in selecting your grant application for approval.

The Gallup poll measures hope for the future and engagement at school. The graphs below show School City of Hobart results. Jobs in computer science are available, with more appearing each year. The engagement aspect of technology is high, and expanding PLTW programs will meet these needs. In today's economic climate, people are afraid of not having a job. Teaching students in STEM related fields where jobs are available gives students hope for the future.

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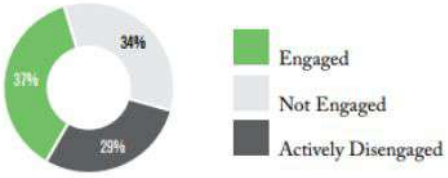
ENGAGEMENT

THE INVOLVEMENT IN AND ENTHUSIASM FOR SCHOOL.

ENGAGEMENT INDEX*

n=1,596



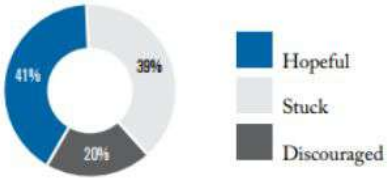
	Your District	U.S. Overall
ENGAGEMENT GRANDMEAN	**3.70 n=1,596**	**3.90 n=867,454**
At this school, I get to do what I do best every day.	**3.30**	3.57
My teachers make me feel my schoolwork is important.	**3.94**	4.04
I feel safe in this school.	**3.95**	3.93
I have fun at school.	**2.99**	3.50
I have a best friend at school.	**4.47**	4.38
In the last seven days, someone has told me I have done good work at school.	**3.32**	3.65
In the last seven days, I have learned something interesting at school.	**3.65**	3.92
The adults at my school care about me.	**3.64**	3.85
I have at least one teacher who makes me excited about the future.	**3.92**	4.13

HOPE

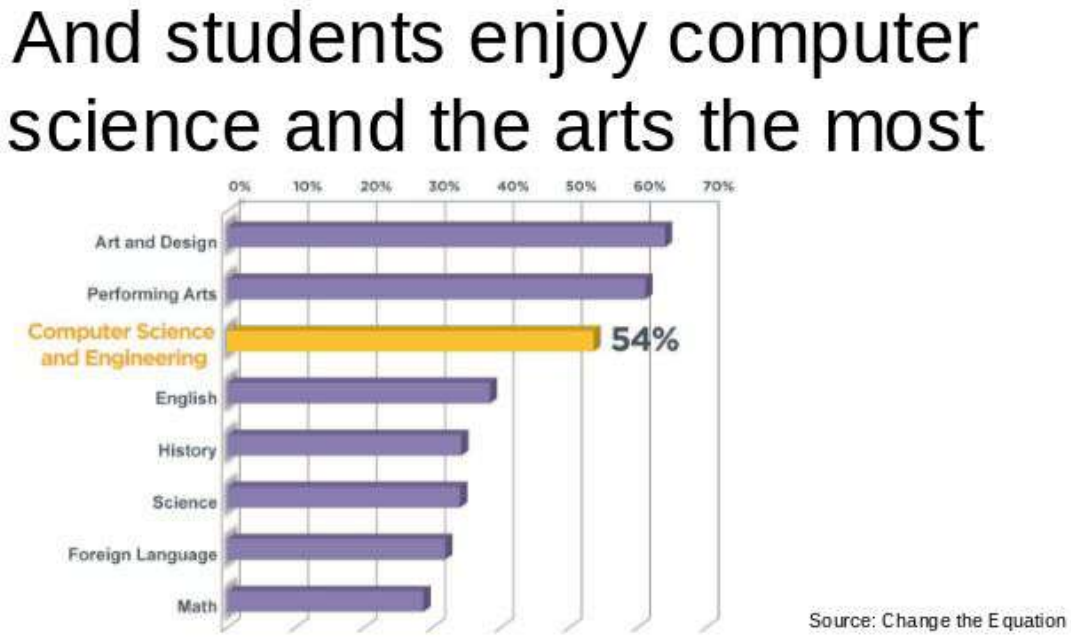
THE IDEAS AND ENERGY STUDENTS HAVE FOR THE FUTURE.

HOPE INDEX

n=1,653



	Your District	U.S. Overall
HOPE GRANDMEAN	**4.14 n=1,653**	**4.25 n=901,714**
I know I will graduate from high school.	**4.68**	4.69
I have a great future ahead of me.	**4.36**	4.48
I can think of many ways to get good grades.	**4.16**	4.21
I have many goals.	**4.10**	4.26
I can find many ways around problems.	**3.82**	3.92
I have a mentor who encourages my development.	**3.30**	3.52
I know I will find a good job in the future.	**4.24**	4.43



Cited in Code.org (2016).

In a study by Change the Equation, Computer Science and Engineering ranked higher than other academic course areas in student interest and enjoyment. Students who are happy and more engaged in school find greater success across all disciplines. Currently students have fewer opportunities to learn in Computer Science and are therefore less engaged. This grant would provide opportunities in the Computer Science and Engineering disciplines where students report more interest and enjoyment.

18) Have you researched and identified other organizations or individuals who are currently providing a similar program or have made a similar expense? Explain why your program or expense is warranted, if a similar program exists, or a similar expense has been made by another organization or individual.

PLTW uses a national K-12 curriculum. SCOH has been using PLTW modules at the high-school and middle-school levels since 1998. The Computer Science modules are new for PLTW, and SCOH can build on the successful previous implementation of PLTW Engineering and Biomedical Sciences modules by expanding into PLTW Computer Sciences at the middle level and by introducing PLTW at the elementary level. Bringing these programs to SCOH will promote computer science to many children who would not be exposed otherwise. The expense is warranted and needed as SCOH builds the technological workforce of the future.

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