LA CROSSE PUBLIC EDUCATION
FOUNDATION
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P.O. Box 1811, La Crosse, WI 54601
Telephone: 608-787-0226
E-mail: david@lacrosseeducationfoundation.org
Web: www.lacrosseeducationfoundation.org

Revised 8-19-2015

GRANT APPLICATION COVER SHEET

(see instructions for submission details)

Applicants: Please download, complete, and save this form for electronic submission.

Please check type of grant being applied for (*see instructions for grant descriptions*):

- (CLASSROOM GRANT)
- McGAVOCK FAMILY ENDOWMENT FOR MUSIC EDUCATION
- SWANTZ PROFESSIONAL DEVELOPMENT
- WISH LIST

Name of Person Submitting Request: Linda Watson, Denise Kuethe-Strudthoff

Position or Title: Library/HPL teachers Subject or Grade: 6-8

E-mail Address: lwatson@lacrossesd.org

School Name: Lincoln and Longfellow Middle Schools School Phone Number: 789-6662

School Street Address: 510 9th Street South, 1900 Denton Street School ZIP Code: 54601

Project Title: "S-fun" with Spheros

Estimated Number of People to be Served: 60 - 1200 Brief Description of Population Served:

The High Performance Learners are students who need to be challenged academically.

Duration of Project: From January 2016 To November 2016 (and beyond)

Have you received grant funding in prior years? (If so, indicate which years) Yes. 2014-15, 2013-14

Linda Watson, Denise Kuethe-Strudthoff — 10-29-15

Applicant Signature **Date**

I am aware of this grant application and confirm no other School District of La Crosse funding is available to cover the proposed request. Furthermore, I verify this project supports district, school and curricular goals.

[signature] — 10-29-15

Curriculum Supervisor Signature **Date**

Melissa Murray — 10-29-15

Building Principal Signature **Date**

[signature] — 10-29-15

DoIT Technology Signature (if needed) **Date**

Budget Summary

(Note: If completing in Adobe Reader or Acrobat, the following will auto-complete after completing page 2)

Amount Requested: $ $2500.00 Total Project Budget: $ 2500.00

Overall Budget Detail

(Attach any additional or clarifying documentation as needed.)

Materials/Equipment/Services	Quantity	Supplier	Amount
Education Pack Sphero SPRK Edition	2 packs	Sphero.com	$2,500.00
(Each pack includes 12 Spheros, 12 charging			
bases, guide, free games and apps, power			
cord, and lessons)			
		TOTAL	$ $2500.00

LPEF Request Amount: $2500.00

Other Sources of Revenue

If LPEF is not the only source of revenue for this project, please list the other sources:

Revenue Source	Amount Proposed/Pending	Amount Approved/Received
Due to budget constraints, there are no		
additional dollars available.		
	TOTAL	$ 0

Mail and E-mail Completed Application to: (or send via inter-school mail)	La Crosse Public Education Foundation P.O. Box 1811 La Crosse, WI 54602-1811 **Phone: 608-787-0226** **E-mail: david@lacrosseeducationfoundation.org**

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NARRATIVE FORM

For Classroom Grants, Swantz, McGavock and Wish List Grant Applicants

Applicants: Please respond to the following questions in this document to present your case clearly and concisely. Please save this document as a Word (.doc/.docx) or PDF and submit this completed document with the Cover Sheet and Budget Detail as instructed in the grant submission instructions.

1. **PROJECT SUMMARY:** (Do not exceed one paragraph)
   Briefly summarize the proposed project. Identify the need to be addressed, the project's objectives and the proposed strategy for achieving them.

   As the library/HPL teachers, we believe our High Performance Learning (HPL) students need to be challenged academically in the science and math areas. The Sphero Sprk is a robotic ball that is driven by students using an iPad. Lessons have been created to use the Sphero that instills creativity, math, programming skills, and engineering. These items would provide the mathematical challenge and programming skills students need to learn "the language of tomorrow". The students will also have the ability to write their own codes to make the Spheros perform tasks. Feel free to video the video on the link below to see the Sphero in action. Photos are attached as well.
   http://www.sphero.com/education

2. **PROJECT NARRATIVE:** Please respond to the items below.
   (Do not exceed three pages; all topics must be addressed for an application to be considered.)

   a. Describe the special need or problem the proposed project addresses.

Our HPL math students are accelerated through math classes but many times these classes only address theory and not application lessons. Often students do not see the connection of why they need to learn various math concepts. Spheros provide a hands-on experience through a gaming format and the ability for students to write their own programming. It is especially important to us that this provides an opportunity for our female students get excited over coding and engineering. In addition, the Spheros will be a great follow up connection for various literature we will be reading in class.

   b. Explain how the proposed project is particularly innovative/unique to the SDL, or how it expands on a proven practice in SDL (for instance, by applying lessons learned in one school to another school or a different set of circumstances). Please use supporting data/research as appropriate.

Spheros take the mathematical theory and make it real for students through the programming lessons that are aligned to math and engineering core standards. Specifically, the ratios and proportional relationships, geometry, statistics, and probability. According to the Spheros website, "SPRK lessons give kids a fun crash course in programming while sharpening STEAM and critical thinking skills. SPRK is built for all ages and skill levels, spanning the discovery of shapes and colors to advanced coding and app creation." Currently in our middle school, our engineering curriculum is very limited. According to "Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics," successful STEAM

programs include a large, authentic learning component. The lessons performed through Spheros will provide the authentic learning our students need.

National Research Council. (2011). Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics. Committee on Highly Successful Science Programs for K-12 Science Education. Board on Science Education and Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

c. Are you collaborating with others on this project? If so, please describe.
Yes. The three middle schools library media specialists would be working together to share these Spheros.

d. Describe the objectives of the proposed project in measurable terms, the methods used to implement them and the materials that will be needed. Include a timeline for implementation.

Objectives:

1. To increase an interest in computer programming, math and engineering for middle school students.
2. To provide hands-on learning of computer programming and problem solving activities.
3. When not in use with the HPL students, the Spheros will be available for use in the library as an option for a Maker Space session that could be used by other students in the school.

Implementation:

1. Using a Google Docs form, the middle schools will sign up for times to use the Spheros.
2. December - Purchase Spheros,
   Survey students using the "Engineering and Science Attitudes Assessment". The goal is to see an improved attitude regarding engineering after using the Spheros.
3. January - Library/HPL teachers will introduce Spheros to HPL students.
   February - Give students post survey of "Engineering and Science Attitudes Assessment".
   March - Students can share the Spheros with parents during parent-teacher conferences.

e. Detail how you will determine whether your objectives have been achieved and whether your project is successful. Describe the potential long-range benefits or how others could replicate this effort.

Determining success:

1. By looking at the results of the pre and post "Engineering and Science Attitudes Assessment", the desire is to see an increased interest in engineering and computer programming.

2. When a student writes a program for the Spheros, success will be achieved if the Sphero completes the task designed by the student.

Long-range benefits:

The goal is to excite students towards programming, math and engineering. This may trigger a future career choice for some of the students. We are assuming students will share the excitement about using the Sphero and this will encourage others to visit the library to use the items and/or check out books.

f. If applying for a Swantz Grant, establish the credibility of the proposed speaker, including a brief bio if available. N/A

g. What plans or ideas do you have for publicity or communicating this project with other SDL staff, parents or the broader community? How might LPEF be credited or involved in publicity efforts?

We will use our school Twitter and Facebook pages to share videos of our students using the Spheros. Photos will also be posted on our school web pages. In addition, we would be happy to meet with the local media to feature our Spheros and make sure that the LPEF is be mentioned.