

**CALIFORNIA STATE LIBRARY
FISCAL YEAR 2015-2016
LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA)
PITCH AN IDEA GRANT APPLICATION**

ELEMENT 1: BASIC INFORMATION (please see application instructions for additional information)

Applicant Information

- | | |
|---|--|
| <p>1. Library/Organization
Contra Costa County Library</p> <p>3. Internet Web Site Address
www.ccclib.org</p> <p>4. Project Coordinator Name & Title
Jessica Hudson</p> <p>6. Business Phone Number
925-646-6423</p> <p>8. Mailing Address
PO Box or Street Address
1750 Oak Park Blvd</p> <p>9. Check the Appropriate Library Type
 <input checked="" type="checkbox"/> Public Library <input type="checkbox"/> Academic <input type="checkbox"/> K-12 <input type="checkbox"/> Multi-Type <input type="checkbox"/> Special/Other</p> | <p>2. Library's DUNS Number
78473657</p> <p>5. Email Address
JHudson@ccclib.org</p> <p>7. Fax Number
925-646-6461</p> <p>City
Pleasant Hill</p> <p>State
CA</p> <p>Zip
94523</p> |
|---|--|

Project Information

- 10. Project Title** STEAMbank: Connecting and Tracking Student Participation in Community-Based STEAM Programs
- 11. LSTA Funds Requested** \$100,000
- 12. Cash Contributions** \$0
- 13. In-Kind** \$60,683
- 14. Total Project Cost** \$160,683
- 15. California's LSTA Goals** (*Check one goal that best describes the project*)
- | | | |
|---|--|--|
| <input type="checkbox"/> Literate California | <input type="checkbox"/> Content Creation/Preservation | <input type="checkbox"/> Community Connections |
| <input checked="" type="checkbox"/> 21 st Century Skills | <input type="checkbox"/> Bridging the Digital Divide | <input type="checkbox"/> Ensuring Library Access for All |
| <input type="checkbox"/> 22 nd Century Tools | <input type="checkbox"/> Information Connections | |
- 16. Number of persons served** (*The number of persons who use or will benefit directly from this project*) 1,750
- 17. Primary Audience for project** (*Select all that apply.*)
- | | |
|--|--|
| <input type="checkbox"/> Adults | <input type="checkbox"/> Pre-School Children |
| <input type="checkbox"/> Families | <input type="checkbox"/> Rural Populations |
| <input type="checkbox"/> Immigrants/Refugees | <input type="checkbox"/> School Age Children |
| <input type="checkbox"/> Intergenerational Groups (Excluding Families) | <input type="checkbox"/> Senior Citizens |
| <input checked="" type="checkbox"/> Library Staff , Volunteers and/or Trustees | <input type="checkbox"/> Statewide Public |
| <input type="checkbox"/> Low Income | <input type="checkbox"/> Suburban Populations |
| <input type="checkbox"/> Non/Limited English Speaking Persons | <input type="checkbox"/> Unemployed |
| <input type="checkbox"/> People with Disabilities | <input type="checkbox"/> Urban Populations |
| <input type="checkbox"/> People with Limited Functional Literacy | <input checked="" type="checkbox"/> Young Adults and Teens |
- 18. This signature certifies that I have read and support this LSTA Grant Application.**

Library Director Name: Jessica Hudson **Title:** County Librarian

Mailing Address
(*if different from above*) 1750 Oak Park Blvd **City** Pleasant Hill **Zip** 94523

Library Director Signature: _____ **Date:** _____

ELEMENT 2: PROJECT BACKGROUND AND SUMMARY (please see application instructions for additional information)

Describe how this project was identified as a need, how it relates to your library's strategic plan, what will be accomplished if this project is implemented, and how you will know whether your project is successful. Summary should relate to activities in the timeline (Element 4) and include statistical info to support the project.

The STEAMbank project addresses several action areas identified in the 2014 State Superintendent's STEM Task Team report, "INNOVATE: A Blueprint for Science, Technology, Engineering, and Mathematics in California Public Education", including increasing public awareness of, access to, and number of STEM experiences through community partnerships and informal, formal and digital pathways. We further extend into Arts programming which also meet Common Core and Career Technical Education standards.

There are many opportunities for informal STEAM learning and enrichment outside the classroom - through library and museum programs and events - but no tool exists for students and teachers to easily find and incorporate these programs and places into their curriculum and to track student participation in these informal learning experiences that ultimately influence lives and career choices. Contra Costa County Library (CCCL) has been working with the California State University East Bay Institute for STEM Education, Lawrence Hall of Science, and school districts and libraries in San Ramon, Oakland, Livermore, Dublin and Pleasanton to discuss 1) what such a STEAM discovery & tracking tool would look like; 2) what functionality would be required to serve the needs of all partners involved; and 3) how such a tool could not only improve awareness of and participation in these library and museum programs, but allow participants to track their participation in programs that meet particular Common Core and Career Technical Education (CTE) standards, and report on that participation for credit or career related endeavors.

Required functionality includes: 1) participating STEAM program providers, including Contra Costa County, Oakland, Pleasanton and Livermore public libraries and the Lawrence Hall of Science, can tag their programs and events by the Common Core and/or CTE standards they meet and other relevant learning characteristics such as beginner to advanced tiers; 2) participants can keep track of and report on their STEAM experiences over the length of their student lives; 3) participating organizations including libraries, museums and schools can track and report on these statistics for their educational outcomes; and 4) while not technically a 'functionality', it is recognized that for the program to succeed, school districts must agree to incorporate the tool into their curriculum and register all of their students in a particular grade range. To start, this program will target grades 9-12, and later expand to K-8.

STEAMbank will provide libraries, museums, educational organizations, and industry partners in career preparation efforts an online tool to add and maintain their programs and events in a one-stop database and which students and teachers will use as part of their curriculum. STEAMbank will provide a means to increase awareness of learning opportunities for students across both formal and informal settings including after school and classroom-based programs as well as summer enrichment activities, and help students engage and envision themselves in STEAM career pathways.

All students in grades 9-12 in participating school districts, including San Ramon, Oakland, Livermore, Dublin and Pleasanton, will be registered in the system at the start of the school year. Profiles and tracking will be based on student ID/Cal-PASS accounts. Students can use the system to report on their participation in STEAM enrichment activities to add to their academic portfolios or to share at internship interviews, and use these learning experiences toward class and extra credits.

This project's success will be measured by the number of and participation in library and museum STEAM programs. Libraries and museums will be able to promote their programs to students who are encouraged, at school, to use the service, thereby extending the reach and awareness of our programs. It will incentivize libraries to develop and offer more and varied STEAM related programs. STEAMbank will allow libraries to point to real world outcomes based on library program participation. With STEAMbank incorporated and promoted in the classroom, it is envisioned that students will discover new interests and new places - like libraries and museums - where they can have fun learning and use the history of their participation in these programs to illustrate their commitment to STEAM education outside of the classroom, and broaden their opportunities for continuing their STEAM education or STEAM-related careers.

CCCL has a proven track record in developing successful technology-based tools such as Discover & Go (www.discoverandgo.org) and enki Library (enkilibrary.org) that foster partnerships between libraries and museums and publishers and extend the benefits of these tools and partnerships to all California libraries. STEAMbank project partners will include Oakland Public Library, Pleasanton Public Library; Livermore Public Library; CSU East Bay Institute for STEM Education/Gateways; The Lawrence Hall of Science; the school districts for San Ramon, Oakland, Livermore, Dublin and Pleasanton; and Tri-Valley ROP. The software will be developed in July-September, while community content partners are sourced, new programs are developed and added to the database in October. The system will be tested in November and December and ready for implementation in January 2016. Planning for a mobile app will also take place during the project for future Phase 2 development.

Like other CCCL-developed web services, upon proof of concept, this product will be opened up for use by all California libraries, museums and school districts.

This project supports CCCL's Strategic Plan goals for successfully promoting the library's value, programs and opportunities to the community; and for championing community engagement in literacy and reading to enrich lives.

ELEMENT 3: PLANNING AND EVALUATION (please see application instructions for additional information)

Please answer each area concisely and completely. **For section A-F limit to four pages.**

A. Project Intent (Check only one that best describes the project)

Institutional Capacity

- Improve the library workforce
- Improve the library's physical and technology infrastructure
- Improve library's operations

Information Access

- Improve users' ability to discover information
- Improve users' ability to obtain information resources

Lifelong Learning

- Improve users' formal education
- Improve users' general knowledge and skills

Human Services

- Improve users' ability to apply information that furthers their personal, family, or household finances
- Improve users' ability to apply information that furthers their personal or family health & wellness
- Improve users' ability to apply information that furthers their parenting and family skills

Employment & Economic Development

- Improve users' ability to use resources and apply information for employment support
- Improve users' ability to use and apply business resources

Civic engagement

- Improve users' ability to participate in their community
- Improve users' ability to participate in community conversation around topics of concern

B. Project Purpose – Short statement which answers the questions: we will do what, for whom, for what expected benefit(s).

We will build a discovery and tracking tool for STEAM programs outside the classroom where a) students will be incentivized to participate in informal STEAM programs and be able to easily identify their participation in these programs throughout their student lives and report on that participation to further their STEAM education or career paths; b) libraries and museums will be able to promote and extend awareness of and participation in their STEAM programs, and for the first time, be able to report on real-world outcomes based on program participation; c) the project will incentivize libraries and museums to develop more and varied STEAM programs and events; d) schools will be able to stimulate interest in STEAM-related career paths through fun, informal community-based STEAM programs that attract kids interest early and often throughout their learning lives; and e) they will be able report on and study learning outcomes based on participation.

C. Anticipated Project Outputs – Measures of services and/or products to be created/provided.

A webtool to promote, register attendance and track participation will be built.

The webtool will be branded and marketed to participating students.

Four library systems and at least one museum will develop and promote at least 2 STEAM programs each for teens on STEAMbank during the course of the grant period. One partner, Gateways East Bay STEM Network, has committed to four programs during the grant period (12+ programs).

10 trainings (2 per school, 60-75 minutes long) for teachers in participating school districts; 200+ teachers trained.

5 trainings offered for participating library/museum staff; 50+ staff trained

1500 students will fully register profiles in STEAMbank (Students in grades 9-12 are as follows: San Ramon USD, 9,631; Oakland USD, 12,096; Livermore USD, 3,9912; and Pleasanton USD, 4,903).

1000 students will participate in at least one library or museum STEAM program.

500 students will indicate this is the first time they participated in a library or museum program.

Online 'transcripts' documenting event participation across the year will be available to all students who created a profile.

D. Anticipated Project Outcome(s) – What change is expected in the target audience’s skills, knowledge, behavior, attitude, and/or status/life condition? How will you measure these outcomes? (for examples see attachment B of the application instructions)

25% of students who participate in STEAMbank and attend programs they discovered through the tool will report an increased interest in STEAM subjects as a result of their attendance. This will be measured through pre- and post-surveys (sampling of population served).

50% of students in the participating school systems who are registered by their schools will attend more extracurricular STEAM programs as a result of the STEAMbank tool. This will be measured through pre-and post-surveys.

Though we expect more outcomes as a result of this project, because much of the project year will be spent in developing, testing, and implementation of the tool, the data to support these outcomes will not be available during the initial 12-month period.

E. Briefly describe how this project will be financially supported in the future.

STEAMbank addresses needs of K-12 school districts and community colleges to document students' participation in work based learning opportunities and addresses the needs of the Gateways East Bay STEM Network to show the uptake of STEM learning opportunities in out-of-school settings. Given the need for this data for accountability reporting, it is anticipated that project partners will help sustain STEAMbank in future years. It is also believed that all regions of the state have such needs, and that they might also be willing to contribute to ongoing maintenance and development costs. CCCL supports the project and plans to continue that support into the future of the platform.

F. Activity Information. Activities are action(s) through which the intent or objective of a project are accomplished. Four activity types have been identified, each with select methods to help you describe how you will carry out this project. Indicate activity types that require a significant commitment of resources to the project (representing 10% or more of total project resources).

- I. **Instruction** - Involves an interaction for knowledge or skill transfer and how learning is delivered or experienced. *(Check all that apply and provide a description including whether the format will be in-person, virtual, or both)*
- Program - Formal interaction and active user engagement (e.g., a class on computer skills).
 - Presentation - Formal interaction and passive user engagement (e.g., an author’s talk),
 - Consultation - Informal interaction with an individual or group of individuals (library staff or other professional) who provide expert advice or reference services to individuals, units, or organizations.

Description: Library staff will provide training at each of the participating school districts (San Ramon, Livermore, Pleasanton, Oakland, and Dublin), providing two trainings per school. Trainings will focus on the STEAMbank site, how to register students, and the programs that are populating the site, as well as how to work with library and museum staff to link curriculum to STEAM programs offered. The programs will be held at the schools' administrative site offices and we plan to invite teachers from the relevant grade ranges as well as administrative staff who are assisting with the project's development. Museum staff and partner library staff will also be offered training at their administrative or main site locations. This training will focus on how to add their programs to the STEAMbank database, how to tag those programs for discovery, and how to reach out to their local schools for collaborative curriculum and program development. Teachers will be expected to show their students the site, demonstrate its use, and encourage them to use the site for learning opportunities outside of school. All the students will be pre-registered (basic information) and students will be encouraged to fully complete their profiles within the system.

- II. **Content** - Involves the acquisition, development, or transfer of information and how information is made accessible. *(Check all that apply and provide a description including whether the format will be physical, digital, or both)*
- Acquisition - Selecting, ordering, and receiving materials for library or archival collections by purchase, exchange, or gift, which may include budgeting and negotiating with outside agencies (i.e. publishers, vendors) to obtain resources. May also include procuring software or hardware for the purposes of storing and/or retrieving information or enabling the act of experiencing, manipulating, or otherwise interacting with an information resource.
 - Creation - Design or production of an information tool or resource (e.g., digital objects, curricula, manuals). Includes digitization or the process of converting data to digital format for processing by a computer.
 - Description - Apply standardized descriptive information and/or apply such information in a standardized format to items or groups of items in a collection for purposes of intellectual control, organization, and retrieval.
 - Lending - Provision of a library’s resources and collections through the circulation of materials (general circulation, reserves). May also refer to the physical or electronic delivery of documents from a library collection to the residence or place of business of a library user, upon request.

- Preservation - Effort that extends the life or use life of a living or non-living collection, the individual items or entities included in a collection, or a structure, building or site by reducing the likelihood or speed of deterioration.

Description: A web tool for the curation of library, museum and other community-based STEAM programs will be developed. Descriptive tools, including Common Core and Career Technical Education standards will be used to tag or describe library and museum STEAM programs. Other descriptive information that would prove helpful for tracking and or identifying programs will also be researched and if determined useful, be deployed (e.g. identifying program grade levels and tiers from beginner, intermediate and advanced educational outcomes). A taxonomy will be developed for libraries and museums to use when entering their programs into the system. CCCL staff will also review additions to the STEAMbank catalog and will assist with/update entries to best allow for discovery.

- III. **Planning & Evaluation** - Involves design, development, or assessment of operations, services, or resources and when information is collected, analyzed, and/or disseminated. *(Check all that apply and provide a description)*
 - Retrospective - Research effort that involves historical assessments of the condition of a project, program, service, operation, resource and/or user group.
 - Prospective - Research effort that projects or forecasts a future condition of a project, program, service, operation, resource, and/or user group.

Description: We will work on development of a Phase 2 for this project, which will include development of further functionality for the tool; development of a mobile app; expanding our partnerships beyond our region; development of methods/instruments for assessment.

- IV. **Procurement** - Acquiring or leasing facilities; purchasing equipment/supplies, hardware/software, or other materials (not content) that support general library infrastructure. *(Provide a description)*

Description:

ELEMENT 4: GRANT TIMELINE/ACTIVITIES (please see application instructions for additional information)

Show each major project activity and when it will be started and/or completed throughout the project. The timeline should correspond to the activities described in Planning and Evaluation. Please put an X in each pertaining month.

Activity	2015/2016											
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Design and develop a custom-built web-based platform for STEAM related programs	X	X	X	X	X	X						
Identify and develop library and museum STEAM programs for January launch	X	X	X	X	X	X	X					
Identify and develop library and museum STEAM programs for inclusion in STEAMbank				X	X	X	X	X	X	X	X	X
Register participating students					X	X	X					
Test lifecycle for a STEAM program from record creation through reporting					X	X	X	X				
Develop a brand for the STEAMbank product	X	X	X	X	X	X						
Launch STEAMbank!							X					
Identify Phase 2 functionality							X	X	X	X	X	X

ELEMENT 5: BUDGET (please see application instructions for additional information)

The budget should clearly identify the amounts requested and from what sources. (please do not unlock the application form, if additional space is needed contact Mickie Potter at mickie.potter@library.ca.gov)

Budget Category	LSTA	Cash Contributions	In-Kind	Total
Salaries/Wages/Benefits				
CCCL Library Staff	\$0	\$0	\$39,318	\$39,318
CSU Staff	\$0	\$0	\$10,000	\$10,000
Museum Staff	\$0	\$0	\$5,000	\$5,000
School Staff	\$0	\$0	\$3,000	\$3,000
Livermore Staff	\$0	\$0	\$3,365	\$3,365
	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$60,683	\$60,683

Description: 2 CCCL Libns: \$44.53/hr at 80 hrs ea. = \$7125 ; 2 CCCL Lib. Assts: \$35.63/hr at 80 hrs ea. = \$5701; CCCL Lib. Specialist: \$54.80/hr at 200 hrs = \$10960; CCCL Info Sys Progr.Analyst: \$58.94/hr at 200 hrs = \$11788 ; CCCL County Lib: \$93.60/hr at 40 hrs= \$3744. CCCL Libns will conduct trainings and assist with metadata input. CCCL lib. assts will assist with trainings/metadata input. CCCL lib. specialist will assist prog.analyst with overall project management.Time estimates for CSU, Museum and School staff pulled from hours estimated for promotion, additional prog, development, and training time. Livermore staff time: Supv. Libn: \$47.00/hour at 40 hours = \$1880 ; Libn.: \$39.00/hour at 40 hrs = \$1560 ; Lib.Asst : \$37.00/hour at 25 hrs = \$925.

Equipment (\$5,000 or more per unit)				
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0

Description:

Operating Expenses: Library Materials				
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0

Description:

Operating Expenses: Consultant Fees				
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0

Description:

Budget Category	LSTA	Cash Contributions	In-Kind	Total (B+C+D = E)
Operating Expenses: Travel				
Travel for multiple trainings for library, museum & school staff	\$2,000	\$0	\$0	\$2,000
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$2,000	\$0	\$0	\$2,000

Description: Travel covers mileage from Contra Costa County Library administration to the headquarters of Dublin, Livermore, Oakland, Pleasanton, and San Ramon., twice at round trip is ~450 miles. From Contra Contra County Library Administration to each of the library partner sites, round trip mileage is roughly the same (450 miles). Site visits to the museum partners (Tri-Valley ROP, Lawrence Hall of Science, 300 miles total. Mileage estimate for known travel is 1200 miles (\$690@\$.575/mile), but we estimate additional travel for meetings/trainings with partners who have not been added to the project yet, as well as travel for consultation with other area libraries and museums on implementation of effective, innovative STEAM programs.

Operating Expenses: Supplies/Other				
Materials required for STEAM-related programs	\$3,000	\$0	\$0	\$3,000
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$3,000	\$0	\$0	\$3,000

Description: Materials for additional programs that libraries and museums would create to fulfill STEAM programming requirements. These materials would include items such as robotics or other STEAM project kits, craft kits, software (e.g. Minecraft), Rasberry Pi, 3D printing expendables, etc. As these new programs (we estimate at least 12 new programs) have not been developed yet, we are unable to provide all specifics, but we have budgeted this amount to cover this type of expenditure.

Operating Expenses: Contracted Services				
STEAMbank platform development: Quipu Group	\$70,000	\$0	\$0	\$70,000
STEAMbank web interface design & brand marketing (Quipu)	\$25,000	\$0	\$0	\$25,000
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
Subtotal	\$95,000	\$0	\$0	\$95,000

Description: Quipu is on board for the platform development and web design/marketing, and can work within the grant timeline. These figures are what they have proposed for the project.

Project Total	\$100,000	\$0	\$60,683	\$160,683
Indirect Cost Rate Applied 0 % Indirect Cost	\$0	\$0	\$0	\$0

Check one: (please see application instructions for additional information)

No Indirect Federally negotiated indirect cost rate * Indirect proposed cost rate *

* please attach supporting documentation if required

Description:

Grand Total	\$100,000	\$0	\$60,683	\$160,683
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ELEMENT 6: ATTACHMENTS (please see application instructions for additional information)

If you have additional resources that support your grant, please attach after this page

ELEMENT 7: INTERNET CERTIFICATION FOR APPLICANT PUBLIC LIBRARIES FY 2015/16

(please see application instructions for additional information)

As the duly authorized representative of the applicant public library, public elementary school library or public secondary school library applying for LSTA funding, I hereby certify that the library is (*check only one of the following boxes*)

A. An individual applicant that is CIPA compliant.

The applicant library, as a public library, a public elementary school library or public secondary school library, has complied with the requirements of Section 9134(f)(1) of the Library Services and Technology Act.

B. Representing a group of applicants. Those applicants that are subject to CIPA requirements have certified they are CIPA compliant.

All public libraries, public elementary school libraries, and public secondary school libraries, participating in the application have complied with the requirements of Section 9134(f)(1) of the Library Services and Technology Act. The library submitting this application has collected Internet Safety Certifications from all other applicants who are subject to CIPA requirements. The library will keep these certifications on file with other application materials, and if awarded funds, with other project records.

C. Not Subject to CIPA Requirements.

The CIPA requirements do not apply because no funds made available under this LSTA grant program will be used to purchase computers used to access the Internet or to pay for direct costs associated with accessing the Internet.

Contra Costa County Library
Library/Organization

STEAMbank
Project Name

Jessica Hudson
Library Director Name

County Librarian
Title

Library Director Signature

Date