

Application

1. One paragraph project summary:

Preschool STEM Discovery seeks to provide young children an introductory experience with scientific concepts and to nurture an exploratory mindset through stories, song and hands-on learning. Children are natural scientists, curious about the world around them and willing to experiment in many different ways. We hope to capitalize on this curiosity, and to provide young children with engaging, active experiences that will foster a scientific mindset and eagerness to learn while simultaneously developing early literacy skills and knowledge related to science content and processes. Preschool STEM Discovery will have two components, both available at the Downtown Library and the Fair Oaks Branch. The first component will be an extended storytime program focusing on science, technology, engineering and mathematics topics. A theme or topic will be explored through picture books, informational materials, song and movement, followed by a hands-on experimentation and exploration component that will reinforce conceptual understanding and develop awareness of the scientific method of inquiry. The second component of the program will extend the learning opportunities beyond the storytime experience. Preschool STEM Discovery Kits will be created and made available for circulation. These curated themed kits will include books, materials, equipment and instructions necessary to explore a scientific concept in the home environment. The Preschool STEM Discovery Kits will be available in both English and Spanish. Both components of Preschool STEM Discovery will empower parents and caregivers to recognize opportunities to observe, discuss and investigate the many scientific concepts that are inherent in everyday life with their preschool aged children, thereby strengthening their position as their child's first and most important teacher.

2. Explain how this project fits with the library's strategic directions:

Redwood City Public Library inspires learning through innovative and visionary programming and services. As our mission statement declares, *we strive to cultivate community by welcoming all people to experience the shared joys of literacy and learning.* Preschool STEM Discovery is in alignment with RCPL's 2017-2018 Service Priority #2, providing opportunities for community members of all income levels and Service Priority # 5, providing all Redwood City children access to quality educational programming. Specifically, it addresses our desires to offer STEM/STEAM programming for children and to enhance early childhood exposure to technology. By participating in Preschool STEM Discovery Storytimes, children and their caregivers will learn in a joyful environment while developing early literacy skills and scientific content knowledge. Children who participate in preschool programming at the library will associate the

library with learning and pleasure and hopefully, will be set on the path to becoming life-long library users. Parents will be appreciative of the opportunity to provide their children with an enrichment activity at no cost. Preschool STEM Discovery will demonstrate our commitment to providing learning opportunities that allow all patrons to feel welcomed and valued as part of our community.

3. A description of the proposed project including the population served and the demographics of that population:

Redwood City Public Library serves a culturally diverse population. According to the 2010 Census, 44% of our service area (Redwood City and Unincorporated North Fair Oaks) is Hispanic or Latino, 9.6% Asian, and 2.4% African American. 63% of our total population is in a very low-income bracket. Many of the children of Redwood City live in non-English speaking households. Educationally, 58% of third graders are not able to read at grade level. An important mission of Redwood City Public Library is to provide children with access to quality educational opportunities. Recognizing that education begins at birth, we strive to promote early childhood literacy development through our programming and materials. Early life experiences are critical to linguistic and cognitive development. We believe that all children, regardless of income or background should be exposed to a wealth of experiences and information in their early years. Through participation in this program, we hope to engage the minds of our young patrons and ignite their curiosity in the world around them while simultaneously developing early literacy skills that will contribute to kindergarten readiness.

4. Goals and objectives of the project:

Program Goals – Preschool STEM Discovery

By offering STEM programming, parents are alerted to the educational importance of science, technology, engineering and math in today's world. Literacy is no longer limited to the ability to read and write. True literacy now requires basic scientific knowledge, the ability to use and understand technology, and the ability to locate and process information from a variety of formats. Early childhood programming that focuses on STEM topics can draw attention to these fields and create an interest in this area of learning.

GOAL: Programming Increase

OBJECTIVE: Provide Preschool STEM Discovery Program for preschool aged patrons and their parents and caregivers. Initial offerings to include twelve Preschool STEM themed participatory storytimes and twelve circulating Preschool STEM themed kits, six in English and six in Spanish.

GOAL: Participation Increase

OBJECTIVE: Provide creative, participatory programming that will appeal to preschool aged patrons and their parents/caregivers. Create interest through targeted marketing to parents of preschool children.

GOAL: Relationship Building

OBJECTIVE: Develop and strengthen relationships between participants, their families and Redwood City Public Library staff.

GOAL: Language Enrichment

OBJECTIVE: Introduce new vocabulary and concepts related to science, technology, engineering and math.

GOAL: STEM Knowledge Development

OBJECTIVE: Provide introduction to STEM concepts and scientific thinking through instruction, modeling, hands on activities and guided exploration.

GOAL: Kindergarten Readiness Skills Development

OBJECTIVE: Provide opportunity to develop and practice kindergarten readiness skills in an informal setting.

GOAL: Parent Education and Empowerment

OBJECTIVE: Provide parents/caregivers with access to STEM materials as well as modeling and educational asides to increase their confidence in promoting their child's interests in STEM topics.

GOAL: Development of Circulating Preschool STEM Discovery Kits

OBJECTIVE: Create and provide Preschool STEM Discovery Kits comprised of books, equipment, materials and guides for extending STEM learning opportunities to the home environment.

GOAL: Duplication of Circulating Preschool STEM Discovery Kits for Fair Oaks Branch

OBJECTIVE: Create and provide Preschool STEM Discovery Kits comprised of books, equipment, materials and guides for extending STEM learning opportunities to the home environment.

GOAL: Develop Awareness of Additional Library Resources

OBJECTIVE: Create and share with patrons lists of library resources in a variety of formats supporting STEM education for preschoolers and other age groups.

5. Project timeline (activities):

September 2017

- Submit grant application to Pacific Library Partnership
- Seek partnerships and support from community

October - December 2017

- Develop twelve-session curriculum and accompanying parent handouts
- Develop six themed Preschool STEM Discovery Kits for circulation
- Develop list of equipment and materials needed to support curriculum
- Develop bilingual promotional materials with in-house graphic designer

November- December 2017

- Order equipment and materials for program
- Order equipment and materials for Preschool STEM Discovery Kits
- Order books and materials to add to the RCPL circulating collection
- Translate all RCPL created materials into Spanish

January 2017

- Distribute promotional materials in library, in the community, through email and social media
- Assemble Preschool STEM Discovery Kits for the Downtown Library and enter into circulation
- Assemble Preschool STEM Discovery Kits for the Fair Oaks Branch and enter into circulation

February - August 2018

- Offer Preschool STEM Storytime twice per month for a period of six months at both the Downtown Library and Fair Oaks Branch
- Conduct preliminary assessment after one month and make adjustments as necessary
- Conduct final assessments after completion of twelve sessions
- Monitor circulation of Preschool STEM Discovery Kits

August 2018

- Prepare written evaluation of Preschool STEM Discovery and share with stakeholders
- Gather and present circulation statistics for Preschool STEM Discovery Kits
- Provide recommendations for continuing, modifying or extending STEM Preschool Discovery Program

6. Evaluation of the project:

1. Program Attendance: Attendance will be tracked on a bi-weekly basis.
2. Vocabulary Mastery: Mastery to be determined by observation, discussion with participants and survey of parents/caregivers.
3. Concept Mastery: Mastery to be determined by observation, discussion with participants and survey of parents/caregivers.
4. Satisfaction and Enjoyment of Program: To be determined by survey of parents/caregivers with input from their child/children.
5. Interest in STEM topics: To be determined by observation, discussion with participants and survey of parents/caregivers.
6. Parental Confidence in continuing/extending activities in the home environment: To be determined by observation, discussion with participants, survey of parents/caregivers and circulation of Preschool STEM Discovery Kits.
7. Demand for preschool level STEM library materials: To be determined through patron requests and circulation statistics.

7. Project budget: Requesting \$15,000

ITEM	GRANT	IN KIND	TOTAL
Equipment to be added to RCPL Collection	\$2000		\$2000
Books/Materials to be added to RCPL Collection	\$1500		\$1500
Books/Materials to be given to participants	\$1000		\$1000
Books/Materials for Discovery Kits - Downtown	\$2000		\$2000
Books/Materials for Discovery Kits – Fair Oaks	\$2000		\$2000
Reusable Supplies	\$2000		\$2000
Consumable Supplies	\$500		\$500
Promotion of Program	\$1000	\$1000	\$2000
Staffing of Program	\$2500	\$2500	\$5000
Miscellaneous	\$500		\$500
TOTALS:	\$15,000	\$3,500	\$18,500

8. Sustainability Analysis

This program will create a new opportunity for young community members and their families to be introduced to scientific content and processes through storytimes and curated library materials. It is our hope that this program will continue, as we see an ongoing need for our youngest patrons to develop scientific literacy in preparation for kindergarten readiness.

The creation of both the Preschool STEM Discovery Storytime curriculum and the Preschool STEM Discovery Kits will require a significant amount of staff time for research and development. Grant funds will support this process to ensure high quality opportunities are established. While the development is time intensive at the front end of this program, it will lead to a curriculum and circulating materials that will be able to be used repeatedly in the future, with very low continued operating costs. Preschool STEM Discovery Kits will be available for circulation at the Downtown Library and Fair Oaks Branch. The curriculum and program will be able to be repeated and shared with the two other library branches. Additional staff members will be trained to present the curriculum increasing the number of children and families who will benefit from this program.

A significant portion of the grant funds will be dedicated to purchasing high quality, durable equipment, materials, and supplies. Although these items are costly, once purchased they will be able to be used for years to come, benefitting many patrons through ongoing Preschool STEM Discovery Storytimes, continued circulation of Preschool STEM Discovery Kits and additional STEM based programming for preschoolers and school age children.

Continued operation of the Preschool STEM Discovery program will incur very low costs beyond the scope of the grant period. The ongoing costs would include staffing and consumable supplies. With a fully developed curriculum and lesson plans available, staff preparation time would be minimal. Should the program continue beyond 2017 – 2018 as hoped, Redwood City Public Library would absorb the costs of future marketing and staffing. We are fortunate to have a supportive and generous Friends group at Redwood City Public Library. We would request that they support Preschool STEM Discovery by covering the costs of the consumable materials necessary for the continuation of the program.