

Santa Clara Valley Open Space Authority

## 2017-2018 Measure Q Urban Open Space Grant Program

1/12/2018 deadline

### Thomas P. Ryan Elementary From Farm to Table

**\$ 100,000.00** Requested  
\$ 150,000 Total Project Cost

Submitted: 1/12/2018 12:53:11 PM (Pacific)

#### Project Contact

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#### Principal

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EIN 77-0016360

## B. Project Description

### Project Overview

#### 1. Grant Category (check all that apply)

- Environmental Stewardship and Restoration
- Parks, Trails, and Public Access
- Environmental Education
- Urban Agriculture / Food Systems

#### 2. What type of project is this (check all that apply)

- Capital improvement
- Planning
- Program

#### 3. Project Location: Address

*If the project will be in multiple locations, please list all addresses. If there is no street address, please describe the area(s).*

1241 McGinness Way  
San Jose, CA 95127  
Room 17

#### 4. Project Location: Neighborhood

*If unknown, please enter "N/A."*

Alum Rock  
San Jose, CA

#### 5. Project Location: OSA District (check all that apply)

*A detailed map of the OSA Districts can be found under the Library tab, or online at*

<http://www.openspaceauthority.org/about/boardmap.html>.

- OSA District 1
- OSA District 2
- OSA District 3
- OSA District 4
- OSA District 5
- OSA District 6
- OSA District 7

#### **6. Are there any project partners?**

*If there are project partners, please list each partner and describe their roles. Required - upload letter from each partner describing their role.*

N/A

#### **7. Project Abstract**

*(Brief, 3-4 sentences)*

Our vision for an indoor/outdoor 21st Century Makerspace is to provide students with a lab where they can answer environmental engineering inquiry questions. Our school community will benefit from plan, research, and build models through design challenges focusing on composting and sustainable materials through a vertical garden and compost system . Students would have flexible seating, 21st century materials and tools, as well as technology to develop their projects and work in groups.

### **Community Engagement / Stakeholder Support (10 points)**

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#### **8. Describe the community support and/or community engagement process.**

*When applicable, the application should include letters of support from local jurisdiction(s), particularly for capital improvement projects. Please submit letters using the Documents Upload tab.*

For the past three years, Ryan Elementary has provided our students with a Science, Technology, Engineering, Arts, and Math (STEAM) program in TK-5th Grade. We are the first elementary school to provide students with hands-on lessons that lead up to environmental engineering design challenges in the Alum Rock School District. Over the course of three years, our teachers and families have refined our vision for STEAM education at Ryan Elementary by also including a vision for our community engagement. Last year, for example, our families participated in an 8 week session focusing on agricultural engineering with the ultimate goal of creating a hand pollinator. Parents were then asked to support classrooms with their design challenges. Additionally, we hold parent walking field trips to our feeder middle school's makerspace lab to deepen their understanding of engineering through their technology. We also have a yearly STEAM night on our campus that engages over 200 families. Next year, we hope to provide showcases and a Farm to Table night.

As a community, we are deepening our understanding of environmental engineering by attending symposiums, workshops, as well as other makerspaces in Santa Clara. Our families have also voiced that having a makerspace on our campus would be a place where they can continue to support their child's love of engineering and exploration. The makerspace would be open for families to visit after school as well as our afterschool programs

### **Project Planning (20 points)**

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#### **9. Describe the proposed project**

Our proposed project is to create an indoor/outdoor classroom where students can design, build, and create projects connected to the education and environment curriculum which is aligned to the next generation science standards. The indoor space would allow students to design prototypes, collaborate with the peers, and generate solutions to environmental problems in our community.

For the first semester, students will research vertical gardens and will create a garden containing microgreens. The vertical garden will be part of the outdoor classroom which will be located on the exterior of the makerspace. Classes will be able to collaborate with our community and Second Harvest Food Bank to provide over 500 individuals with additional food resources. While researching vertical gardens, they will use technology including Google Expedition goggles, zspace (3D computer research program), etc. to explore various environments around the United States to determine the physical features of plants and characteristics of different environments. Students will create prototypes of storage systems for their garden using the 3D printer and laser cutter. They will use materials to build a vertical garden and will learn about sustainable resources. Students will end their unit in a "Farm to Table" family night. Parents will be able to taste some of the vegetables and fruit from their garden while also presenting about the important of creating sustainable materials.

During the second semester, students will be able to research and design prototypes using their 3D printers and glass jars to

design a recycling system as well as research the benefits of composting by visiting a local recycling center. Students will learn about the benefits of resource conservation and how it can impact their own school and greater community. Students will also take two field trips to Emma Prusch Park and the Youth Science Institute to expand their knowledge of how microorganisms play a major role in many processes and cycles. This useful information will support them when they create their own compost system through a hands-on design challenge. Students will then use iPads and go pro cameras to create a documentary capturing their thought process around the design of their compost system. This will be presented at the end of the year to their families to create a greater awareness of valuable resources. During the family night, students will lead their families through various activities including weighing their compost system and using microscopes to view the microorganisms in the compost.

During both semesters, students will use a variety of technology to research the environment in different capacities. Zspace computers will allow students to dissect plants, worms, etc associated to their inquiry projects. A 3D printer will allow students to create prototypes of their jar compost system as well as their container for their vertical garden

#### 10. What is the lifetime of this project?

*For capital improvement projects, applicants must state how long the project would remain on the site AND demonstrate that they have appropriate permissions. Please submit the Land Tenure form and documentation using the Documents Upload tab.*

- 5 Years (minimum for capital improvement projects)
- Other time period - explain:
- Perpetuity
- Not applicable

#### 11. Describe your plans for operating and maintaining the project over the next 10 years, and indicate your source of funds for ongoing management.

*This question is required for all capital improvement projects. For planning and program projects, please answer if applicable, otherwise enter "N/A."*

Monies have been allocated from our site budget that will continue to fund the environmental engineering programs we offer including materials that will be replenished yearly for students to access. Fifty percent of the instructional coach's salary will continue to be funded by the district to provide professional development around science, technology, engineering, arts, and math. We have also allocated funds for yearly field trips for grades TK-5th including transportation and registration costs. The district has also committed to replacing any damaged or broken 21st century furniture and technology as needed.

Volunteers are extremely excited about supporting our school with the maintenance of the vertical garden. A core group of parent volunteers will water and care for the vertical garden over our holiday breaks. This is reflected in our proposed budget.

#### 12. Describe the project's readiness for implementation.

*Please include the status of any planning, design, or funding development necessary for project completion. This includes the status of CEQA compliance and any permits required for this project. REQUIRED: CEQA form, if applicable.*

As a STEAM school, our staff has spent the last three years attending professional development and conferences in order to enhance their practice. We have invested in full day release planning days as well as funded an instructional coach to support the implementation of STEAM in the classroom. As a school community, we are in a place where we are ready to expand our program to include an indoor/outdoor makerspace lab. This will enhance our current program by providing students with materials, technology, and a space to engage in their work on a continuous basis. Site and district planning meetings were held earlier this year to create a blueprint for the makerspace including a timeline to prepare the room for painting and flooring.

### Project Budget (15 points)

#### 13. Budget Summary

*This is a budget summary only; a detailed Project Budget must be submitted using the Documents Upload Tab. Please note: after the application is submitted, the software will automatically total all lines. This additional TOTAL will not be used.*

<input type="text"/>	Grant request: Personnel
<input type="text" value="9000"/>	Grant request: Contracted Services
<input type="text" value="87,100"/>	Grant request: Supplies/Materials
<input type="text" value="3900"/>	Grant request: Other Direct Costs
<input type="text"/>	Grant request: Indirect Costs
<input type="text" value="100,000"/>	TOTAL GRANT REQUEST
<input type="text" value="50,000"/>	TOTAL MATCHING FUNDS

150,000 TOTAL PROJECT COSTS (grant request + matching funds)

50% PERCENT MATCH (matching funds / grant request)

400,000.00 TOTAL

## Project Goals (15 points)

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### 14. Describe the specific problems, issues, or unserved needs the project will address.

Education: A lack of materials to construct their learning design challenges have restricted the scope of environment engineering curriculum that can be covered

Education: A lack of flexible seating designed for students to move easily into pairs and small groups has limited the number of small group activities due to limited space in the classroom.

Community Involvement: Our community has limited resources, materials, and technology at home so families can come to the lab to use the technology and materials after school. Students will be able to share the design process with their families. This will engage our community, and it has also been something they have requested.

Community Involvement: Our community will be able to see stronger connections between family nights and students' inquiry projects in class.

Teacher Training: To gain teacher buy-in for professional development on the environmental engineering STEAM curriculum the makerspace needs to be robust enough so that teachers see the viability of the space.

Student Engagement: Our students have limited opportunities to attend field trips connected directly due to a limited budget.

Technology: Our students have limited opportunities to experience the latest technology connected directly to their inquiry projects due to budget restrictions.

Teacher Engagement: Our teachers have limited opportunities to visit other school sites with similar focus areas due to budget restrictions that cannot cover substitutes.

Community: Our families will be able to access the vertical garden which will allow them to have more food resources at home. We currently serve over 500 individuals one time per month during our monthly food pantry. Families have requested additional resources.

### 15. Please list the project's goals (both social and environmental).

*These should be specific, measurable goals (e.g. 600 people participating in educational programs). Please see Appendix E of the Grant Program Guidelines for a list of sample goals.*

Project Goals:

1. 400 students participating in environmental educational programs
2. 100% of students participating in design challenges focusing on sustainability and natural resources
3. 75% of our families attending our "Farm to Table" night
4. 100% of our students participating in field trips to Youth Science Institute, the recycling center, and Emma Prusch Park
5. 100% of our students accessing to technology and materials to design their projects
6. 100% of teachers receiving professional learning through the use of the space
7. 100% of students understanding and giving back to their community
8. 100% of our families will be able to access the vertical garden throughout the year

## Impact (15 points)

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### 16. Describe the lasting impact of the project.

The impact of this project will continue year after year for our students and community to enjoy, learn, and grow from. At Ryan Elementary, we believe that our students will reach their greatest potential through hands-on learning focused on solving real-world problems. Our makerspace will have a tremendous impact on each and every students. Students, staff, and the community will have opportunities to demonstrate their understanding of the Next Generation Science Standards through hands-on, real life experiences rather than through a textbook. They will be able to build a vertical garden and create a compost system that will have a long-lasting impact on our school and greater community. The environmental education program builds on the content each year so students will learn about sustainable materials at various levels of complexity for 6 years. With our community component, families will also be able to access the garden after school. Families will also attend two community nights to learn about sustainable materials through hands-on learning activities as well as by listening to our students' documentaries.

## Leadership & Innovation (10 points)

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### 17. Describe how this project employs innovative approaches or encourages collaboration and partnership in the

**field of parks, open space, urban agriculture, land conservation, or environmental education.**

Our Farm to Fresh program employs innovative approaches by building on the 4 C's of the common core state standards including critical thinking, communication, creativity, and collaboration. During both semesters, students will use critical thinking by developing prototypes for their vertical garden and their compost system. Students will also have to research multiple sources using the latest technology. Students will develop their communication skills by creating documentaries which will focus on promoting student voice. The rich vocabulary that students will learn about connected to environmental engineering will enhance their academic language. The project allows for creativity by providing students choices regarding technology they can use to research their designs and concepts as well as a variety of materials they can choose from to create their designs. Collaboration will be evident when students are sitting in flexible groups in either pairs or groups. They will have to design portions of their projects together by sharing ideas.

Students will also participate in the engineering design process. This innovative approach requires students to plan, create, and evaluate their prototypes. We want students to redesign or modify the original plans if their solution is not successful the first time. Our school will partner with several land conservation organizations through field trips and guest speakers.

**Organizational Capacity (15 points)**

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**18. Briefly describe the organization.**

*Please include the year the organization was founded and its mission and goals. If the applicant is a Fiscal Sponsor, please describe both the APPLICANT and the SPONSORED ORGANIZATION.*

Ryan Elementary was established in 1960 with the goal of providing a high quality education for all students. In May 2017, Ryan Elementary was named Ryan STEAM Academy with a mission to enhance education through hands-on learning through science, technology, engineering, arts, and math. Our goal is that students leave Ryan Elementary with a growth mindset as well as knowledge and experience around the engineering design process. Our goal as a school is also to ensure that students are ready for middle school and beyond by providing a rigorous learning environment with a strong parent engagement component. As a school, we view our families as partners in their child's learning. We provide opportunities for parents to learn alongside their students so that they can participate in academic conversations at home around engineering. One of our goals around parent engagement is to provide workshops and events around what the parents would like to see at our school. This year, for example, we provided art workshops as well as a parent sessions on how to have academic conversations with their children at home.

**19. Describe the organization's ability to successfully implement this project. This might include successful past projects, staffing levels, financial resources, etc.**

*If applicant cannot otherwise demonstrate its capacity, expertise, and experience, please provide names and contact information of individuals knowledgeable about the organization's work.*

Our school is committed to continuing to provide engineering lessons to our students 2x/week. We were recently named a STEAM Academy based on the rigor of the programs we offer to our students and parent community. We have invested time and funds to support the professional development of our staff. We have successfully held parent workshops as well as extra curricular activities including our robotics club, coding club, and art classes that align to science, technology, engineering, arts, and math (STEAM). Our school has strong partnerships with our after school partners including Think Together and City Year who also provide enrichment around STEAM. We hold a yearly STEAM parent night as well as workshops for parents so that they can learn alongside their students. Our community liaison works closely with our parent community to connect them to the classroom as well as community resources. Funds are allocated to STEAM each year focusing on field trips, assemblies, and materials aligned to environmental engineering. We are also closely aligned to our feeder middle school so that students can continue their hands-on learning through project based learning.

**20. Briefly describe key staff members and volunteers' qualifications and experience relevant to the project.**

This is our school's third year of engineering implementation. The instructional coach, teachers, and site administrator have received extensive training in environmental education through the Tech Museum, Buck Institute, and have attended STEAM symposiums in the county and state. Our staff has worked closely together to design blueprints of a makerspace. They envisioned flexible seating so that students can move around the classroom easily and work in small groups or pairs, space to store their projects, additional technology, and materials they can use during their design challenges. The blueprints were also shared with our parent community and school site council for additional input around what they would like to see in the makerspace.

**BONUS POINTS: Underserved Communities (10 points)**

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**21. Describe how the project addresses open space needs for sensitive populations such as residents of park-poor neighborhoods, underserved or disadvantaged communities, youth, seniors, or is located within a Deep Engagement Community (DEC).**

A map of the DECs can be found under the Library tab of online at <http://www.openspaceauthority.org/urban>. This question is optional; please answer if applicable, otherwise enter "N/A."

Our campus lies in the heart of Deep Engagement Community 3 located in a low-socioeconomic area with limited resources around our school. Parks are located over a mile away from our campus and we do not have any local clubs/organizations within walking distance. 100% of our students receive free/reduced lunch and breakfast. We have a high English Language Learner population who would benefit from hands-on learning and realia proposed in the From Farm to Fresh proposal.

## **BONUS POINTS: Community Building (10 points)**

### **22. Describe how this project actively encourages community building by engaging or accommodating local residents in novel and creative ways.**

*This question is optional; please answer if applicable, otherwise enter "N/A."*

One of our top priorities both as a district and site is community engagement. We have moved away from the typical parent volunteer work which may have seen as a parent sitting in the back of the classroom stapling papers to parents who are truly engaged and knowledgeable about our school focus areas. With your support, this project will engage our community by providing a space for families to create projects and learn together. Materials and technologies will be available for student and community use so that students are not limited to what they may or may not have at home.

Students will also have culminating projects and night events to present to their families. We want to encourage student voice by providing students an opportunity to create a documentary of their projects. We also want to encourage our entire school community to learn about resource conservation through our family nights.

Families will also be able to access our vertical garden throughout the year. We serve over 500 individuals once a month during our food pantry. Our families would benefit from a year round place to access food.

## **BONUS POINTS: Leverage Funding (5 points)**

### **23. Describe how the project leverages funding with more than 25% match by grantee (cash or in-kind).**

*This question is optional; please answer if applicable, otherwise enter "N/A."*

50% of our instructional coaches position is to support teachers with the implementation of STEAM and she will also help in the development of the makerspace. She will be in charge of monitoring supplies, training staff on technology, leading classroom visits and setting expectations around usage. Our site continues to provide extended duty to teacher and our community liaison to accommodate various after school workshops such as our robotics club focusing on solar energy as well as days when parents can visit. Our district will continue to fund materials and labor charges around flooring of the room, painting, and white boards. Our school will purchase refill sets of various curriculum materials orders for the following school year. Teachers will also continue to attend trainings and conferences around environmental engineering.

## **C. Work Plan**

### **C.1. Project Work Plan**

<b>Task Number</b>	<b>Activities</b>	<b>Timeframe</b>	<b>Outcome/Deliverables</b>
1	Finalize blueprints of makerspace	August 2018	Final blueprint
2	Create contract with painter - Mr. Gonzalez (Artist) and draft wall art designs	August 2018	Paint Room
3	Create contract with flooring company	August 2018	Redo flooring
4	Order 21st century flexible seating	September 2018	Tables/chairs
5	Order technology including ipads, promethean board, projector, laptop cart, go pros, zspace computers	September 2018	Technology
6	Order google expedition environmental goggles	September 2018	Google expedition technology
7	Visit Hacienda Elementary (Environmental Science Magnet School)	August 2018	Learn from other schools with similar initiatives
8	Develop outreach brochures to inform public	October 2018	Brochure

	about makerspace		
9	Professional development for new technology	September 2018	Professional Development
10	Purchase materials for vertical garden (soil, seeds, pipes, etc.)	September 2018	Materials for inquiry projects
11	Teach students how to use technology	October-December 2018	Students are proficient in class
12	Redo flooring and window coverings in preparation for the makerspace	August 2018	New flooring and window coverings
13	Organize field trips to YSI, Zanker recycling, and Emma Prusch Park	December - March 2019	Students attend field trips to increase knowledge around design challenges
14	Provide students with instruction around environmental engineering	November - ongoing	Lessons on environmental engineering
15	Farm to Table Night Event	May 2019/ yearly	Extend awareness of sustainable resources to our parent/school community
16	Create documentaries on engineering project to present to families	December - May 2019	Documentary
17			
18			
19			
20			

#### D. Documents Upload

Documents Requested *	Required?	Attached Documents *
Financial statements	✓	<a href="#">Budget Title 1 and LCAP</a>
Authorizing Resolution from Governing Body <a href="#">download template</a>	✓	<a href="#">Resolution</a>
Project Budget <a href="#">download template</a>	✓	<a href="#">Project Budget</a>
Acknowledgment Form <a href="#">download template</a>	✓	<a href="#">Acknowledgment Form</a>
Fiscal Sponsorship Agreement <a href="#">download template</a>		
Land Tenure Form <a href="#">download template</a>		
CEQA Compliance Certification Form <a href="#">download template</a>		
Letters of Support		<a href="#">Parent Letter</a> <a href="#">Student Letter</a> <a href="#">Instructional Coach Letter</a> <a href="#">Staff Letter</a> <a href="#">Partnership Letter of Support</a> <a href="#">District Letter of Support</a>
Letters from Project Partners		
Maps		
Other		<a href="#">Project Photos</a>

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