

# SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT MEETING NOTICE AND AGENDA

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## COMMUNITY RELATIONS COMMITTEE Thursday, May 25, 2023, No Sooner Than 10:40 AM

SRP Administration Building  
1500 N. Mill Avenue, Tempe, AZ 85288

Committee Members: Nick Brown, Chairman; Robert Arnett, Vice Chairman; Mario Herrera, Kevin Johnson, Kathy Mohr-Almeida, Larry Rovey, Stephen Williams, and Keith Woods

Call to Order

Roll Call

- 1. CONSENT AGENDA:** The following agenda item(s) will be considered as a group by the Committee and will be enacted with one motion. There will be no separate discussion of these item(s) unless a Committee Member requests, in which event the agenda item(s) will be removed from the Consent Agenda and considered as a separate item ..... CHAIRMAN NICK BROWN
  - Request for approval of the minutes for the meeting of February 23, 2023.
- 2. Classroom Connections Grants by SRP..... ANDREA MORENO**  
  
Request for approval to contribute \$200,000 in funding for the Classroom Connections Grants by SRP program to be awarded to individual schools within the Maricopa, Pinal, Gila, and Yavapai counties; Page; St. Johns; and Camp Verde for the 2024-2025 school year.
- 3. Report on Current Events by the General Manager and Chief Executive Officer or Designees ..... JIM PRATT**
- 4. Future Agenda Topics ..... CHAIRMAN NICK BROWN**

The Committee may vote during the meeting to go into Executive Session, pursuant to A.R.S. §38-431.03 (A)(3), for the purpose of discussion or consultation for legal advice with legal counsel to the Committee on any of the matters listed on the agenda.

The Committee may go into Closed Session, pursuant to A.R.S. §30-805(B), for records and proceedings relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information.

Visitors: The public has the option to attend in-person or observe via Zoom and may receive teleconference information by contacting the Corporate Secretary's Office at (602) 236-4398. If attending in-person, all property in your possession, including purses, briefcases, packages, or containers, will be subject to inspection.



THE NEXT COMMUNITY RELATIONS COMMITTEE MEETING  
IS SCHEDULED FOR TUESDAY, AUGUST 22, 2023

05/18/2023



MINUTES  
COMMUNITY RELATIONS COMMITTEE

DRAFT

February 23, 2023

A meeting of the Community Relations Committee of the Salt River Project Agricultural Improvement and Power District (the District) and the Salt River Valley Water Users' Association (the Association), collectively SRP, convened at 12:13 p.m. on Thursday, February 23, 2023, from the Board Conference Room at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona. This meeting was conducted in-person and via teleconference in compliance with open meeting law guidelines.

Committee Members present at roll call were N.R. Brown, Chairman, R.C. Arnett, Vice Chairman; and M.J. Herrera, K.J. Johnson, K.L. Mohr-Almeida, L.D. Rovey, S.H. Williams, and K.B. Woods.

Also present were President D. Rousseau; District Vice President C.J. Dobson; Association Vice President J.R. Hoopes; Board Members R.J. Miller and J.M. White Jr.; Council Vice Chairman J.R. Shelton; Council Liaison I.M. Rakow; Council Members G.E. Geiger and R.W. Swier; Mmes. K.J. Barr, M.J. Burger, C.C. Burke, A.P. Chabrier, L.F. Hobaica, G.A. Mingura, N.J. Mullins, A. Rickard, and C.M. Sifuentes; and Messrs. J.D. Coggins, J.M. Felty, M. Hummel, R.T. Judd, K.J. Lee, A.J. McSheffrey, M.J. O'Connor, J.M. Pratt, G. Saint Paul, and R.R. Taylor.

In compliance with A.R.S. §38-431.02, Andrew Davis of the Corporate Secretary's Office had posted a notice and agenda of the Community Relations Committee meeting at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona, at 9:00 a.m. on Tuesday, February 21, 2023.

Chairman N.R. Brown called the meeting to order.

Consent Agenda

Chairman N.R. Brown requested a motion for Committee approval of the Consent Agenda, in its entirety.

On a motion duly made by Board Member K.B. Woods and seconded by Board Member M.J. Herrera, the Committee unanimously approved and adopted the following item on the Consent Agenda:

- Minutes of the Community Relations Committee meeting on November 17, 2022, as presented

Corporate Secretary J.M. Felty polled the Committee Members on Board Member K.B. Woods' motion to approve the Consent Agenda, in its entirety. The vote was recorded as follows:

YES:	Board Members N.R. Brown, Chairman, R.C. Arnett, Vice Chairman; and M.J. Herrera, K.J. Johnson, K.L. Mohr-Almeida, L.D. Rovey, S.H. Williams, and K.B. Woods.	(8)
NO:	None	(0)
ABSTAINED:	None	(0)
ABSENT:	None	(0)

### Corporate Contributions

#### Arizona Science Center

Using a PowerPoint presentation, Anne Rickard, SRP Director of Community Partnerships, reviewed Management's request for approval for SRP to contribute \$30,000 to the Arizona Science Center to support the exhibition sponsorship and the Girls in STEM program. She said that Chris W. Campbell, SRP Senior Director of Distribution and Technology Operations, represents SRP on the Board of the Arizona Science Center.

Ms. A. Rickard reviewed contributions by other companies and recommended that SRP contribute \$30,000 to the Arizona Science Center: \$25,000 to sponsor the Dogs! A Science Tail exhibition and \$5,000 to sponsor the Girls in STEM program, as presented.

#### Mesa United Way

Ms. A. Rickard reviewed Management's request for approval for SRP to contribute \$50,000 to Mesa United Way to support the Foster 360 Program and the 2023 Campaign Celebration. She said that Kevin R. Nielsen, SRP Senior Director of Power Generation, represents SRP on the Board of Mesa United Way.

Ms. A. Rickard reviewed contributions by other companies and recommended that SRP contribute \$50,000 to Mesa United Way to support the Foster 360 Program and the 2023 Campaign Celebration, as presented.

#### Maricopa Community Colleges Foundation

Ms. A. Rickard reviewed Management's request for approval for SRP to contribute \$52,520 to the Maricopa Community Colleges Foundation to support outreach to students in the K-12 system. She said that Geri A. Mingura, SRP Associate General Manager and Chief Human Resources Executive, represents SRP on the Board of the Maricopa Community Colleges Foundation.

Ms. A. Rickard reviewed contributions of other companies and recommended that SRP contribute \$52,520 to the Maricopa Community Colleges Foundation to support outreach to students in the K-12 system, sponsoring the Be A Student's Hero campaign, Heroes of Education, Girls Get IT, and Fast Track Certificate Program, as presented.

Arizona Water Education for Teachers (WET) Project

Ms. A. Rickard reviewed Management's request for approval for SRP to contribute \$71,039 to the Arizona WET Project to support the SRP 5-day Water Academy for teachers and additional programming.

Ms. A. Rickard reviewed contributions by other companies and recommended that SRP contribute \$71,039 to the Arizona WET Project to support the SRP 5-day Water Academy for teachers and additional programming, as presented.

Valley of the Sun United Way

Ms. A. Rickard reviewed Management's request for approval for SRP to contribute \$235,000 to Valley of the Sun United Way to support the annual campaign fund and sponsor the 2023 "We are United" Luncheon. She said that Nina J. Mullins, SRP Senior Director of Land and Papago Park Center Inc., represents SRP on the Board of the Valley of the Sun United Way.

Ms. A. Rickard reviewed contributions of other companies and recommended that SRP contribute \$235,000 to Valley of the Sun United Way to support the Valley of the Sun United Way campaign and sponsor the 2023 "We are United" Luncheon, as presented.

On a motion duly made by Board Member K.B. Woods, seconded by Board Member M.J. Herrera, and carried, the Committee agreed to recommend Board approval of all corporate contributions, as presented.

Corporate Secretary J.M. Felty polled the Committee Members on Board Member K.B. Woods' motion for approval. The vote was recorded as follows:

YES:	Board Members N.R. Brown, Chairman, R.C. Arnett, Vice Chairman; and M.J. Herrera, K.J. Johnson, K.L. Mohr-Almeida, L.D. Rovey, S.H. Williams, and K.B. Woods.	(8)
NO:	None	(0)
ABSTAINED:	None	(0)
ABSENT:	None	(0)

Copies of the handouts distributed and the PowerPoint slides used in this presentation are on file in the Corporate Secretary's Office and, by reference, made a part of these minutes.

Report on Current Events by the General Manager and Chief Executive Officer or Designees

There was no report on current events by Mike Hummel, SRP General Manager and Chief Executive Officer.

Future Agenda Topics

Chairman N.R. Brown asked the Committee if there were any future agenda topics. None were requested.

There being no further business to come before the Community Relations Committee, the meeting adjourned at 12:15 p.m.

Lora F. Hobaica  
Assistant Corporate Secretary



# SRP Community Relations Board Committee

Anne Rickard | May 25, 2023



# SRP & Classroom Connection Grants

Request \$200,000 to support:

- \$131,358: 32 Learning Grants
- \$13,608: 7 History and Social Science Grants
- \$25,000: St. Johns High School and Round Valley High School
- \$10,000: Camp Verde School District
- \$20,000: Reserve for Rural Communities

Nonprofit	Giving Priority	SRP Corporate Objective Support
SRP Classroom Connection Grants (FY24)	Education	<ul style="list-style-type: none"><li>• Customers</li><li>• Community</li></ul>

**thank you!**



# EXECUTIVE SUMMARY



## Corporate Contributions Committee Items for Approval May 25, 2023

Organization	Amount Requested	Focus Area	SRP Corporate Objective Alignment	SRP Board Member
SRP Classroom Connections Grants (FY24)	\$200,000	Education	Customers Community	n/a

*Note: Detailed descriptions for each item included in appendix.*

**Organization:** SRP Classroom Connections Grants

**Amount Recommended:** \$200,000 for FY24

**Description:** SRP’s Classroom Connections Grants incorporate both the Learning Grants and the History and Social Sciences Grants programs. The Learning Grants incorporate aspects of science, technology, engineering, and math (STEM) education while the History and Social Sciences grants incorporate the interrelated disciplines of history, geography, civics, economics, and government education. A special selection committee comprised of SRP employees, educators and museum/library educators determine the individual grants.

The grants provide monetary support to school activities that impact students directly. The program has been successful since its inception and serves as a tool for SRP Community Outreach to support classroom educator-driven programs. Grants are funded with the FY24 contributions budget and will be used in the 2023-24 school year.

SRP received 172 total applications for both Learning and History and Social Science Grants. A total of 32 Learning Grants totaling \$131,358 and 7 History and Social Science Grants totaling \$13,608 were funded. In addition, schools in the SRP Coal Community Transition and areas of impact, St Johns High School and Round Valley High School received \$25,000 and Camp Verde School District \$10,000. The additional \$20,000 in funds requested will be held in reserve for rural communities.

**Declined Requests**  
N/A

# INDIVIDUAL GRANT APPLICATION DETAIL

The following are the individual grant applications for the  
Community Relations Committee on May 25, 2023.

# Learning Grants Summary 2023-24

## **32 Grants Awarded -\$131,358**

- 12 Elementary Schools
- 11 Middle Schools
- 9 High Schools
- 12 schools in the East Valley
- 8 schools in the West Valley
- 8 schools in the Central Valley
- 4 schools in SRP Impact Areas

### **Elementary Schools**

#### **Arizona Desert K-8 (Phoenix) \$5,000.00**

I work in a Title 1 school where most students do not have opportunities to code and use robots. I believe all students should have access to coding opportunities and high level of instruction that will support a deep understanding of coding and how to transfer code to a machine. According to Learning.com Coding is important for students because it helps increase confidence through problem solving, perseverance and creativity. These are skills I want to see in my students and skills I want to further develop so that they can transfer to other subject areas or real-world experiences. Students in my Computer Science Classes have been working on coding and using Scratch and Scratch Jr. during class, but this project will allow them to transfer their computer coding skills to robots where they will be able to program and see an immediate response to what they have coded. This project will spark student creativity, ignite their imagination, and help them to develop and build on problem solving skills. Coding is the future and I want to give my elementary students an exposure to this high-level skill by offering a variety of challenges through Dash and Sphero robot coding challenges and in turn encourage the transfer of coding from the computer to a robot. Dash and Sphero provide many different coding opportunities and challenges at varying levels and my project would allow for all students to do some type of coding using a robot. I would like to purchase a class set of Wonder Robots and work with all students on basic robot coding using the Dash robot. As my students gain a deeper understanding of coding, I plan to move my more advanced students into coding using the Sphero robots where students can use code and completely different types of activities using their coding skills and the Sphero Bolt. Students that need extra support will be able to continue using the Dash robots along with the challenge cards that come with the class pack.

#### **Chandler Traditional Academy-Freedom (Chandler) \$5,000.00**

CTA Freedom Elementary School is committed to creating a makerspace lab in its media center. Our media center is the hub of our school where students come to research, create, and dream. It is a vital student resource, and we believe that providing access to a makerspace lab will enable us to expand our educational offerings and provide more opportunities for our students. The CTA Freedom Library Makerspace Lab will be a STEAM-based (Science, Technology, Engineering, Arts, and Mathematics) space where our students can come together to learn, create, experiment, and innovate. The lab will feature a range of technology tools, building materials, and art supplies that will enable our students to create a wide range of STEAM projects. These projects will include problem solving and critical thinking. With this lab, we hope to provide our students with the opportunity to collaborate with one another and develop valuable skills and experience that can help them succeed in the 21st century.

#### **Desert Oasis K-8 (Phoenix) \$4,937.00**

Our kindergarten through eighth grades students is loving our three-dimensional science standards and technology standards. They are excited to learn about the way our world works through the lens of the gather reason-communicate cycle of learning. They are gathering information through a phenomenon and then reasoning about the science that is taking place in a science investigation and then communicating what science they have learned. To do this, we need some materials to help with the investigation part of learning. The materials will be used in science and STEM classrooms across K-8th grade. Project Activities and Timeline: Overarching School Goal: To utilize the gather-reason-communicate cycle of learning in hands on investigations and models to promote the learning of how the world works from a science and STEM perspective. K-8 STEM: Students will apply the principles and concepts of how computers work and gain experience with writing computer programs to solve problems in creative and inventive ways.

#### **Jack Barnes Elementary (Queen Creek) \$5,000.00**

Edison Robots can be used from kindergarten to 6th grade. I have borrowed Edisons from our District and our students love to be able to code them. For example, our 5th graders recently did a project where they had to design a course for their robot. Once their course was done, I gave them their Edisons to code. They had to keep their robot on their course, so each student learned intervals and how important timing was. To be able to do similar projects with ever grade would be a dream. With this extra material, I would be able to go into each class on their dedicated computer day and we would be able to code and get the students excited about coding and what it means to be a computer scientist. My students usually play on CODE.org but if we are fortunate enough to get chosen for this grant my students would be able to code robots and see firsthand how coding works.

#### **Jane D. Hull Elementary (Chandler) \$4,039.00**

The VEX Go Classroom bundle is an innovative and engaging construction system that introduces elementary students to the fundamentals of STEM education. By using hands-on activities and coding exercises, the VEX Go robots provide an interactive and enjoyable way for all students at Hull to learn

about coding and engineering principles. The VEX Go robots are designed to be built in one or two class periods rather than over the course of a few weeks like many other robotic kits. This will allow more students at Hull to interact with building and coding robots since we can use them in Technology class as well as in the classroom.

#### **Madison Camelview Elementary (Phoenix) \$5,000.00**

We are seeking funds to expand our maker's space into an action lab for our school. The proposed area would be in a dedicated area within our current maker space, and it will have materials and kits for students to design creatively and collaborate to build their ideas and explore STEAM concepts. The teachers and their classes can use this room in conjunction with their homeroom to extend the learning of science, technology, engineering, arts, and mathematics. We feel that this room can be above and beyond what is given in the general classroom and will give students the motivation to take the risks needed to be explorers of STEAM. The evolution of the maker space to include an action lab is to create an opportunity in the original space for students to further their exploration of science, technology, engineering, arts, and mathematics in their free time (aka, their recess or free choice period). We envision the students using a vacuum former, where students can make 3-D molds and provide another medium for students to design creatively, a class set kit to explore renewable energy sources to support the science curriculum, and electronic circuitry exploration kits to help jump-start the student's interest in building functional robotics from their own designs that will help develop the student's computational thinking skills. Our STEAM program is in its fifth year and to add more rigor and relevance to our program this room would be an exciting addition for motivating our staff and students to dream big, tap into their creativity, reinforce collaboration and teamwork, and support the efforts in the homeroom.

#### **M.O.Bush Elementary (Phoenix) \$4,994.00**

This project seeks to provide students at Maxine O. Bush elementary with opportunities to engineer and create tangible objects using circuitry, motors, and other tools. Currently, most of the experience's students have in these areas are computer simulations and videos, or low-tech applications. The materials selected will support students at different levels of knowledge of circuitry and provide opportunities for students to design their own projects and test their own questions. The focus area is energy and forces and motion, but some of the other materials can be used to create models and experiments that support other science standards. The secondary objective of this project is to enhance and broaden the experience of using iPad and digital technology by adding equipment useful in creating with these tools. These tools would be used with all standards in math and science, to enhance students' ability to communicate their ideas.

#### **Pathfinder Academy (Mesa) \$3,375.00**

This \$3,375.00 will allow 3-3rd grade classes at Pathfinder Academy in Mesa to purchase 13 catapults and 2 sets of (6) smash balls for History and Science curriculum. This project will allow 75 students to have a crosscutting curriculum integrating history and science activities. Students will be divided in small



groups using catapults to engage students in learning about simple machines, force and motion, and Newton's Laws of Motion during science classes. Information on how far the balls go will be written on graphs and transferred to computers in the classroom. This also ties directly with a program at Pathfinder using Mystery Science. Mystery Science has many videos and hand-on Manipulatives. This will also be used with information using Defined Stem. The catapults will enhance student's exploration and engagement especially where there are gaps in the curriculum. Also, students will be able to use the catapults during science class for several projects. The catapults will also be used during History. Students will use the catapults to learn about the simple machines that were used during the Revolutionary War and Civil War. Students will explore how the catapults are related to what was used to defend themselves during battle and how this is related to today. Students will use the catapults during History and science activities. The catapults will help meet state standards in both subjects. Students will learn how to work the catapults learning force and motion. Students will also be able to incorporate math and collecting data. The unit will also include Newton's Laws which will enhance the information that the students need for state testing.

#### **Peralta Elementary (Phoenix) \$4,976.00**

This unit will develop students' engineering design skills as they investigate ways of defining problems, brainstorming solutions, and testing and refining prototypes. They'll refine their problem-solving skills as they create a solution to a problem that has constraints and improve on others' ideas. All while honing their ability to identify failure points and success criteria when comparing, modifying, and evaluating a solution. There are multiple lessons that students will participate in utilizing specific LEGO kits, materials, and software. Students will participate in real-world problem-solving activities where they must utilize the engineering and design process to design, build, and test their proposed solution. Students will work collaboratively to assess their data, compare with other's ideas, and make refinements. Lesson topics include Creating a waving machine to say good morning. Developing a way to carry items from one place to another. Creating a high-tech playground. Developing a new way to collect and dispose of trash. Developing a soccer-like game that resembles a video game. Designing a randomizer machine that helps select literary books. Creating a solution to picking up and cleaning laundry. The unit ends with students identifying a problem and building their own solution through the engineering design process.

#### **Percy Julian Elementary (Phoenix) \$5,000.00**

The goal of this project is to allow students to explore and learn using modern technology and make learning easier to understand and retain the concepts taught. Funds will be used to purchase a VR Classroom set to help the 5th Graders of this Title 1 School students to focus attention on virtual lesson which would engage them to explore and enhance their learning path. The students will be able to analyze information and collect data on various topics. This will help them to connect with real world issues without having to leave their classrooms. As said these virtual handsets would give my students the excitement to reach for the stars and bring them back to the classroom.

### **Silver Valley Elementary (Mesa) \$1,600.00**

The goal of this project is to supply kindergarten classrooms full of student's math manipulatives to help engage students during math lessons. Materials would be able to be used all year long for hands on practice, assessments, and centers. These materials would be able to be used year after year. There are 175 kindergarten students in eight classrooms, and all would benefit from this funding.

### **Union Park Elementary (Phoenix) \$1,570.00**

The goal of this project is for students to have hands-on learning in math and science while acquiring coding skills. The Wonder Classroom Curriculum Pack has premade lessons for grades K-8 aligned to math and science standards that engage students and take their math and science understanding to the next level. Starting in first grade, we will use the Wonder robots and simulator to teach coding foundations, such as creating algorithms with block coding. Creating algorithms builds math skills and gives students opportunities to see math in a visual way. The Wonder resources also has math and science challenges. Students will continue this learning in second grade by creating models and simulations in math and science using the robots and coding using more advanced commands. In grades 3-6, students will continue to use the robots for models and simulations in math and science. They will also investigate and explore engineering concepts, design their own challenges, and plan and carry out investigations. Students will take their coding skills to an even higher level by using computational thinking to decompose steps in a process to solve problems. Student Impact: This project will benefit students in my gifted classes in grades 1-6, with 120 students' total. With the resources and teacher professional development, I will be able to maximize learning in the classroom and students will develop a foundation of coding literacy and skills they will be able to take, as tech leaders, to their peers in their homeroom classrooms. The learning will positively affect 500 students. Union Park is a new school with limited resources. Acquiring this Wonder robotic classroom pack will help build a foundation of using technology as a regular part of every day, hands-on learning.

## **Middle Schools**

### **Canyon Springs STEM Academy (Anthem) \$3,800.00**

Students will practice and enhance their math and Computer Science skills using Sphero Bolts. My project will incorporate these create programming robots into our Makerspace which provides STEM to our entire campus; K-8th grade. With the use of this technology our students will practice how to sequence and use patterns. Lesson is structured to support early geometry skills in our K-3 grades. Students will also learn NGSS Science standards including Cross Cutting Concepts which focus on variables and cause/effects among many others! With the use of Sphero Bolts students will be able to practice all these cross-curricular concepts PLUS Computer Science skills which focus on coding and Engineering Design Process.

**Casa Grande Middle School (Casa Grande) \$5,008.00**

This grant will update our Robotics class with current Lego Robots that are compatible with Scratch Coding programs. Currently, we have outdated Lego Mindstorms that will no longer interface with our computer programming. This grant will also enable my students to engage in a Robotics Club and potentially other competitions that are within our region. Our students are focused on learning not only code but how the code interfaces with Robots. Many of my students literally come to school to enjoy the robotics and coding aspects of our STEM program. This motivates even the most reluctant of our learners in our very Title 1 community.

**Circle Cross Ranch K-8 (Florence) \$5,000.00**

This grant is moving to include Project-Based Learning (PBL) in every classroom. I will also be the K-8 STEAM Teacher in the upcoming school year. Each grade level will be working with their students to complete a PBL in their classrooms, either as individual classrooms for Preschool -- 3rd grade or grade level projects for 4th -- 8th grade. I will also be teaching a middle school elective of PBL where students will solve real-world problems. The materials purchased with these grant funds are non-consumable and will be used by all students at the school for many years. The Preschool -- 2nd grade students will use the DUPLO LEGO projects to solve problems in their PBL. The LEGO SPIKE and Bricq Motion robotics kits will be used by the 3rd -- 5th grade students. Finally, the Vernier renewable resources kits will be used by students from 4th grade up as a part of their PBL's. Each quarter the students will be presented with a different real-world problem that matches one of their science standards. The students will work in small groups or individually to solve the problem including creating a prototype of their solution and explain how their prototype solves the problem. All 800 students will benefit.

**Madison #1 Middle School (Phoenix) \$2,473.00**

The funds will be used to purchase five 3-D printers, filament refills, and tape for the 7th and 8th grade science department at Madison No.1. The printers will benefit roughly 450 students. With financial support in adding 3-D printers, we can turn the classroom into a technologically advanced environment that allows for more innovation and project-based lessons. We will be using the Design Thinking Method to help guide our students through the creative process. The students will be utilizing the Design Thinking Method to apply the science standards we have mastered and translate that knowledge to help solve current real-world problems. Design thinking includes researching and empathizing, prototyping, and creating, testing, and redesigning until they find an effective solution. With this grant we will be able to level up the students and encourage innovation in new ways. The goals of my project are to get kids comfortable using new technology, increase the engagement in my classroom, and help students tackle real world problems using real world technology.

**Mesa Digital Learning Program (Mesa) \$5,000.00**

Mesa Public Schools and the Mesa Digital Learning Program are committed to personalized competency-based learning, which includes aspects of inquiry, student voice and choice, meaningful assessment, and more. Our professional learning continues to drive the expansion of student-constructed learning. For example, as I revise our existing science classes, I am using the GRC model, promoted by Brett Moulding. This is one component of this proposal: to increase the use of phenomenon-based lessons, in which student observations and questions build the bridge to deeper conceptual understanding of the core ideas. As we continue to publish lessons and publish courses in which students gather evidence to support a scientific explanation, we will put together kits of materials for students to engage in these demonstrations and investigations at home. For example, in our first semester Chemistry course that was recently revised, students will need balloons and pumps to engage with Avogadro's Law; containers, yeast, flour, and a baking surface to engage with Charles' Law; a comb and woolen fabric to engage with coulombic attraction; and more. Another example: in our Physical Education Wellness course, students routinely track their heart rate by taking their pulse, analyzing, and interpreting the data, and using that data to reflect on their progress toward the course goals. With heart rate monitors, we could make this data more accurate and their interpretation of it more valid. This is the second component of this proposal: to increase student access to the correct materials to execute these demonstrations. Having these supplies available in our office will increase equity of access for all students, as well as increase correct execution of the demonstrations of phenomena.

#### **Payne Junior High (Queen Creek) \$600.00**

The goal of this grant is to update the means of data collection for a 21st century science and engineering classroom for years to come. I am requesting funds for digital scales and thermometers. This will provide efficient data collection, increase data sets for reliability of results and provide access to more technical labs where data points can be collected with lower latency. Measuring weight of objects is a fundamental data point in physical and chemical experiments. From Newton's laws of motion labs in physics to conservation of matter labs in chemistry, recording weight is a first step. The goal is to reduce latency and error by allowing students access to digital scales. The triple beam tool is easily uncalibrated or broken and too much time is spent waiting for balance rather than experimenting. A mercury-based thermometer can break open, waste time setting to temperature and outright prevent rapid temperature data collection of various liquids in succession. The proposal is to move my classes forward with digital scales and thermometers. Physics is taught to my 7th grade for a semester and chemistry is taught to my 8th grade for a semester. Each Arizona standard required in physics and chemistry can be made more relevant and accurate through digital measurement. These tools in my class will serve to improve the precision and reliability of engineering labs as well (one per quarter) that challenge students to meet strict constraints. Though I could list more labs, I want to be clear allowing my students access to better equipment that are used for most if not all labs are a true benefit. The science and engineering practices this proposal meets are the following. 1. Designing and carrying out investigations by allowing lab setups previously unavailable without digital tools. i.e., how friction creates heat energy. 2. Analyzing and interpreting data through more trials collected in the same period with older tools. Analyzing data that is more precise and more frequent will allow greater reliability. i.e., 100's of data points from the digital thermometer, 10's more weight measurements to describe a more detailed pattern in Newton's 2nd law  $F=ma$  from digital scales.

**P.H. Gonzales (Tolleson) \$5,000.00**

Two of the core ideas in 3-Dimensional Science Education and the Arizona Science Standards is that "Changing the movement of an object requires a net force to be acting on it" and "The total amount of energy in a closed system is always the same but can be transferred from one energy store to another during an event." With this in mind, we are developing a multi grade level learning scope that will support our students understanding of these two core ideas. Using Statapults, mouse trap cars, hand cranked flashlights, vernier sensors, and windmills; will investigate motion and the transfer of energy. Students will follow a progression of learning in different grade levels to look at energy transfers including potential and kinetic and then moving into the different energy sources and then types of potential and kinetic energies such as mechanical, chemical, elastic and electrical. It is expected that the project will provide materials for three units over three grade levels.

**Raul H. Castro Middle School (Phoenix) \$5,000.00**

Most of my 8th grade students have not experienced true science exploration by hands-on activities. They had very little if any science K-6 in our district and a small amount in 7th grade. So as a former high school science teacher, I feel I am sending them off to high school with few science skills in performing accurate science investigations. I spend a great deal of my own money as a science teacher buying basic supplies for our science labs. Of course, my budget is greatly limited. Many labs which I'm sure would help them understand are out of my reach even though I am more than willing to spend the time setting them up and teaching them. Quite frankly, I need a plethora of basic resources and supplies to teach upwards of 150 students. Project Activities and Timeline: I want to be able to set up my science labs with adequate materials on-hand and without going broke buying them out of my meager budget. My goal is to get the students used to doing labs and learning accurate science-experimentation skills.

**San Tan Junior High 1 (Chandler) \$1,700.00**

A pinewood derby track / race will allow all our 7th grade students to utilize a hands-on approach to basic physics; speed, velocity, acceleration, potential energy, kinetic energy, and momentum. The grant will allow us to purchase timers and car kits for a pinewood derby track. The students will build pinewood derby cars as a group. Using the track and timers the students will model momentum and the conversion of potential to kinetic energy. The students will modify their cars between each race to understand how mass affects the cars performance. This will be incorporated into our fourth quarter standards. Approximately 600 7th grade students will utilize this activity.

**San Tan Junior High 2 (Chandler) \$5,000.00**

Last year, SRP funded a Learning Grant to purchase \$5000 worth of microscopes. This year my goal is to continue that project by purchasing digital screens that connect to the microscopes to provide a larger and clearer viewing platform. In addition to the screens, more premade slides will be provided so that

students can view multiple different objects via the microscopes. Santan's microscopes and slides have not been updated since the school opened 20 years ago, so it's time for updated technology so we can continue to provide a first-class education to our 21st century learners. All 8th grade students at Santan Junior High may be impacted by the funding of this grant. Students enrolled in 8th grade science will be learning about cells, cellular division, reproduction, and genetics. Having microscopes with large viewing screens allows students to collaborate and discuss their learning.

### **Sheely Farms (Phoenix) \$5,000.00**

This project will focus mainly on the Physical Science, Earth and Space and Life Science Arizona Science Standards for 5th -- 8th grade. The first component for the project would be "microscopes" that are able to plug into the student laptops. These new devices allow the laptop to become the microscope and students can carry the device around with them and view items as you would through a fixed focus magnifying glass. Students can also use the microscope as a camera document different phases of life cycles or moon cycles. The microscopes would be used by many grades throughout the school year. The second component for the project would support the Physical Science standards and the understanding and developing of models that represent alternative energy. Students would have opportunities to build turbines and test the impact of the size, shape, and pitch of the blade. The Alternative Energy Class Pack also allows students opportunities to discover electrochemical reactions by producing electricity from the air and water using fuel cells to design hydrogen-powered model cars. Solar energy opportunities are also available within the kit as students build solar chargers. The Earth and Space standards are enjoyable for students but finding hands-on activities that allow for a deep understanding are difficult. These opportunities are prevalent in three Earth and Space items I am requesting. The Earth's Place in the Universe hands-on inquiry kit where students use critical thinking skills to create models of the night sky to demonstrate an eclipse and plan their own mission to space. Students can use the materials to also understand how seasons work and investigate compound orbits. The Astro Reality Solar System Mini Set supports students as they look at detailed textured surfaces of planets and then leap into the world of Augmented Reality and discover the atmosphere and composition with each planet through a QR code and student laptop. With the Gravity Well students are able in a hands-on way compare mass and gravity and understand the gravitational pull of objects in space.

## **High Schools**

### **Arizona College Prep (Chandler) \$5,000.00**

This project is all about learning how power generation is done along with different means of power generation and which one is more practical and efficient. This is continuation of a previous SRP grant and are hoping to continue their research on this topic and hopefully find a way to generate power more efficiently using their own design. Their goal is to design and construct a hydroelectric generator.

### **Benjamin Franklin High School (Queen Creek) \$2,544.00**

Increasing the quality of student collected data in science laboratory investigations is integral to improving student understanding of key concepts. Spectrophotometry is an important analytical scientific technique with a wide range of applications across High School science classes, which is currently missing from the Benjamin Franklin High School science program. Through the purchase of spectrophotometers, the plan is to both increase the scope of labs that we can offer across all of our Biology and Chemistry classes and improve the quality of data that is collected. High quality quantitative data will allow for detailed post lab data analysis, and the development of key IT skills, such as graphing and data analysis in spreadsheets. The end-goal is to improve key transferable IT skills, increase student participation in higher level science classes, and improve student test scores on AP examinations and state standardized tests.

#### **Bioscience High School (Phoenix) \$5,000.00**

Bioscience is a small public school in the Phoenix Union District. Science teachers integrate vertically across all four grade levels. They would like to purchase newer models of Vernier LabQuest interfaces to update older science technology equipment, most of which no longer function. By purchasing new models there will be enough for multiple teachers to use on concurrent days rather than waiting until they become available as has been done. With this new equipment, we will also be increasing the exposure to technology across all four grade levels. Using this technology will strengthen our students' skills in the areas of collecting, analyzing, and interpreting data, which will also increase their ability to think critically about the world around them.

#### **Gilbert High School (Gilbert) \$5,000.00**

Gilbert High School is seeking funding to update our Physics Momentum/Collisions unit as well as our Energy unit. With our district's push for a Bio-Chem-Phys track we are seeing more students in both our regular and our AP Physics courses. Additionally, because of this push, we are seeing a wider range of math abilities in our program. This provides a unique challenge to incorporate as many hands-on activities as we can to support the variety of learners in our program. Momentum and Energy tend to be conceptually the most difficult units. The new equipment will go towards more hands-on lab experiences to help students confront their misconceptions, grasp the physics of energy transfers through collisions and build intuitive explanatory models. Gilbert currently has older collision carts and sensors, while our photogates are unreliable. We have been using more online PHet simulations in recent years. While these are useful in proving calculations, they are not supportive of the newer Next Generation Science Standards, and their proven tool for deep conceptual learning. This new equipment will allow students to have hands on exploration that they can then use to develop deep conceptual understanding of collisions and energy transfers. The lab equipment has a life of 5-6 years. Each year I have 120 physics students. My colleague also has 120 physics students each year. This grant will reach 1200-1500 students.

#### **Liberty High School (Globe) \$4,142.00**

For the past 25 years, Liberty High School has served the Globe-Miami community, helping students who struggled within the public-school setting succeed. Our success has been impressive. However, around science and math, it has done so with very limited equipment and course offerings, focusing mainly on helping students to achieve basic competence and graduation. We wish to move beyond that, by offering more challenging courses directed at developing a deeper understanding in science, by introducing students to actual research activities in astronomy, rocketry, and climate studies, regions of study for which our area is uniquely suited. We have full access to the resources of a local research observatory and its director, who is now on our staff. What we need is classroom laboratory materials that will help us bridge the gap between basic science book learning and its advanced application. The equipment listed will all enable our students to advance in these areas.

### **Queen Creek High School (Queen Creek) \$4,700.00**

This project will use spectrophotometers to study the science of light and color, specifically the electromagnetic spectrum, in fireworks, metals, liquids and other types of media to investigate each object's unique color signature. The sensors will be compatible with the student Chromebook that each student in carries daily. While the spectrophotometers will be used in many different labs, this project would allow them to study the chemistry of fireworks with the ability to graph and visualize the data in real time. Studying exciting real-world topics like fireworks helps students to see how science connects to their lives. Being able to use technology like spectrophotometers to graph and understand the topic deeper increases the rigor of classes and better prepares students for college and career readiness.

### **St. Johns High School (St. Johns) \$5,000.00**

St. Johns, an agricultural community in the poorest county in Arizona, has never had an FFA program and the CTE programs have long neglected the agricultural heritage of our local kids' families. This project is the first expansion of several over the next few years to allow more hands-on livestock and tech-based agricultural experiences for our students. Eventually, the goal is to have a large outdoor enclosure for quail, a small livestock breeding program, a working arena and barn for underserved students to keep their 4H and FFA small stock projects, a large, fully-automated learning greenhouse with an aquaculture program including tilapia and catfish (or trout in the coldest months), hands-on in-class experiences, a subscription to an online learning platform for Agriculture lessons that are aligned with National FFA standards as well as Arizona CTE Agriculture standards, and much more. The proposed land lab is over 7 acres, owned by the school district, and will need to be fenced, paths need to be built, electricity and water need to be run to the various outbuildings. This is a large project spanning many months, and this request is to help fund just the second phase, which is hands-on in-class supplies, online subscription, additional housing for the quail and chicken program, supplies for our ongoing escape room fundraiser, building supplies to assist in the future construction plans, and general supplies for student use while waiting for governing bodies to approve and allocate labor for the first phase of building at the land lab.

### **Tempe Prep High School (Tempe) \$3,500.00**



The funds awarded would be used to purchase a class set of graphing calculators to be used in our Algebra 2 classes. Students will use these to explore the nature of functions in a real-world application. They will research topics related to water conservation and sustainability. Students will be required to find data relating to their topics, will model this data graphically and use the calculators to analyze the best type of function to represent it. Students will utilize their functions to make predictions about future issues the community may face or to formulate a cogent argument for a change the community could make to improve/mitigate potentially negative outcomes. This directly relates to state standards.

#### **Trevor Browne High School (Phoenix) \$2,400.00**

A STEM training to demonstrate the theory of how generators and electric motors work. It allows the students to build a motor and then see how it can be converted into a generator. This is the basis for many of the components used in automotive today. It is also the basis for Electric Vehicles, EV. We cannot see electricity, only the results of it. This is an opportunity for the students to get the closes they can be to "touching" electricity. The STEM kits will allow us to have a hands-on training for students. Each kit allows 10 students to explore how basic electric motors work and why. We have another project where the student s learns about electromagnetism, and this would allow us to bring a realistic application for this learning. We can also use this as an introduction to younger students into what they will be learning in this program. Our school is changing to an academies model. We will in the next three years be expanding to 160 students in our program. That is more than double our current capacity.

## History and Social Science Grants Summary 2023 - 24

### **7 Grants Awarded - \$131,358**

- 5 Elementary School
- 2 High School

No applications were received from Page or St. Johns

#### **Elementary Schools**

#### **Casa Grande Elementary School (Casa Grande) \$2,500.00**

Imagine studying history through the lens of hygiene, cleanliness, and soap. During the pandemic, everyone became experts in hand washing. But where did soap come from? Did civilizations and societies that were more cleanly advance and thrive? How big of industry is soap? What are the regulations around soap?

Students in K-8<sup>th</sup> grade will divide into different teams with a central question to answer; how has

soap and sanitation impacted different societies at different times in history. Grant funds will be utilized to purchase soap making materials including fragrance oils, goat's milk, molds, and safety equipment. Students will learn the chemistry that goes into making soap, and illustrate the process of saponification, the PH scale, chemical reactions of fire to make lye, and the physical reactions to render fat. They will then package their products and launch their own soap company. Students will learn about different aspects of running a small business while also providing the opportunity to learn about chemistry, lab safety, the scientific method, and various aspects of business management at an early age.

**Circle Cross Ranch School (Florence) \$2,500.00**

Grant funding will be used for students in K-3<sup>rd</sup> grades to purchase multiple LEGO DUPLO Communities sets that students will use to solve real-world problems. The creation of communities will reinforce the development of societies, cooperation, and compromise to solve problems. Students will study their community and learn about characteristics that define urban, suburban, and rural communities. Democratic principles and participation in government are introduced. Community resources, environment, change over time, and cause/effect will be examined.

**Islands Elementary School (Gilbert) \$2,500.00**

The implementation and development of a social studies resource lab will provide Islands Elementary students the opportunity to explore social studies concepts through cooperative hands-on learning activities. Students will be able to explore and learn about the world in which they live by interacting with various social studies manipulatives. Grant finding will be utilized for students in K-1<sup>st</sup> grades to create social studies portable labs including maps, puzzles, earth, and environment book library, snap together letter blocks and It's a Multicultural World library of CDs and books.

**Montessori Education Centre North Campus (Mesa) \$950.00**

Grant funds will be used to purchase the Arizona History Program for 3<sup>rd</sup> grade students. Third Grade Arizona Studies is a comprehensive 10-unit 3rd Grade Arizona Social Studies program designed for Arizona History teachers searching for an Arizona state studies curriculum aligned with all 3rd grade Disciplinary Skills and History and Social Science Standards.

**Rudy G. Bologna Elementary School (Chandler) \$1,158.00**

Funding from this grant will be used to purchase a selection of library books for the history section for K-6th students. Funds purchase 8 sets of library bound history books to be added to the nonfiction library collection for both teacher and student use. The collections include: History's Hotshots, a collection about histories most famous warriors and rebels; Amazing Archeology, series covers 6 well-known discoveries in archeology and the who, what, where, and when; Daily Life in US History, answers

questions about daily life in different US eras of history World Wonders, six books about world wonders; Pirates, history of pirates; Ancient Warriors, six books on the worlds most skilled warriors; Fact and Fiction of American History, 6 titles on American history stories; History's Greatest Mysteries, six stories highlighting some of history's greatest mysteries.

### **High School**

#### **Alhambra High School (Phoenix) \$2,000.00**

JROTC students in the 10<sup>th</sup>-12<sup>th</sup> grades will take an in-depth look at events leading up to the Japanese attack on Pearl Harbor in 1941 and subsequent United States entry into the WW II. The grant will provide funding for students to construct scale models. The recreation of Pearl Harbor will reinforce the research learned in the prior phase of the project. Students will display their scale models in conjunction with their class presentation thus reinforcing research methods in primary and secondary resources. Students will discuss current events and relate the lessons learned from WWII to present day. Students will also write an essay on the significance of applying lessons learned from Pearl Harbor to current world events.

#### **Sequoia Choice Distance Learning (Mesa) \$2,000.00**

The social studies team will use grant funds to purchase programs and lessons to enhance online learning from Nearpod allowing for more interactivity for distance learners. Educators will create interactive lesson, videos while having access to premade standards-aligned lessons and have live participation from students in the 7<sup>th</sup>-12<sup>th</sup> grades.