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Page 1 of 6

**APS, PHOENIX SUNS HELP BRING INNOVATIVE HANDS-ON STEM LEARNING
TO 6,000 ARIZONA STUDENTS**

Arizona Teachers Receive Classroom Grants Totaling \$50,000

PHOENIX – Arizona is blessed with a number of educators who inspire students in the fields of science, technology, engineering and math (STEM). APS and the Phoenix Suns are teaming up to help these teachers bring innovative hands-on STEM learning to 6,000-plus students through financial grants totaling \$50,000.

The grants were recently awarded to 25 elementary and high school teachers across Arizona – including Phoenix, Flagstaff, Yuma, Prescott Valley, Casa Grande and many others. These grants will be used by teachers to provide a wide range of STEM-related content, including robotics, gardening, water harvesting, computer coding and even designing and building classroom furniture. The intent of the grants is to spark the next generation of STEM professionals.

“These grants are relatively small, but they can make a big difference to a teacher with an innovative idea on how to get students interested in math and science. This year’s applications were especially creative,” said [John Hatfield](#), APS Vice President of Communications and Community Affairs. “These programs are so important because many of the best jobs in Arizona’s economic future will require technical skills.”

For the past 12 years, APS and the Phoenix Suns have partnered to promote STEM education in Arizona schools by annually awarding \$50,000 in mini-grants for hands-on projects focused on STEM subjects. The grants were available to all kindergarten through 12th-grade teachers in public and charter schools in APS service territories. The funds support inventive, student-based projects aimed at sparking students’ curiosity and getting them excited about STEM subjects.

“This STEM mini-grant will allow our students to combine critical thinking and creativity,” said Jonathan Perrone, a STEM mini-grant recipient and STEAM Instructor at Mountain Sky Middle School. “Our particular grant will allow our students to design new desks and tables for our STEAM Lab. Students will use computer-aided design software to model their prototypes, then they will be able to build desks and tables with furniture pipe and wooden surfaces.”

A complete list of grant recipients (alphabetized by community and school) follows below, with a description of each teacher’s project and the grant amounts awarded:

BOUSE

Bouse Elementary District; Bouse

Students Impacted: 7

Project Title: Space/Radio Science: The Attainment of a Ham Radio License

Grant: \$2,500

Description: Students will gain a full understanding of how ham radios are developed, utilized and will be trained with support from a certified ham radio operator.

BUCKEYE

Tartesso Elementary School; Buckeye

Students Impacted: 120

Project Title: Applied Science and Introduction to Robotics at Tartesso Elementary

Grant: \$2,440

Description: Grant funds will teach students how to create electrical circuits, see mitosis, and meiosis in action, sequence DNA, experience realistic fossil collection and analysis, and build and program a robot to perform tasks using data from environmental sensors.

CASA GRANDE

Desert Willow Elementary School; Casa Grande

Students Impacted: 534

Project Title: The Future Belongs to Those Who Innovate

Grant: \$2,247

Description: Students will have interactions with an “Innovation Station” and resources that foster creativity, critical thinking, and real world problem solving using the disciplines of STEAM to prepare them for a globally competitive workspace.

FLAGSTAFF

Ponderosa High School; Flagstaff

Students Impacted: 75

Project Title: Irrigation-Free Landscaping at Ponderosa High School- Conserving Water & Energy

Grant: \$2,500

Description: Using a 1,500-square-foot section of rooftop, students will help design and install a system that will harvest rainwater, which will be stored and later used for a landscaping project. The project involves learning about weather patterns, energy, water and soil, as well as the physics of effectively moving water.

FLORENCE

Circle Cross Ranch K-8 STEM Academy; Florence

Students Impacted: 750

Project Title: STEM-ming Up Our Classroom

Grant: \$2,500

Description: This grant will be used to acquire six Ozobot robots, a 3-D printer and random consumable materials for students to use when solving weekly STEM challenges.

GILBERT

Burk Elementary; Gilbert

Students Impacted: 389

Project Title: Burk Elementary Community Garden

Grant: \$2,500

Description: Using their grant, Special Education students at Burk will develop a community garden. They will research which fruit/vegetables to plant, track growth and development and share their harvest with peers to take home and eat.

Neely Traditional Academy; Gilbert

Students Impacted: 130

Project Title: Coding and Robotics Using Vex

Grant: \$2,500

IQProjects Accessible for English Language Learners

Description: VEX IQ will be used to introduce second-grade students to coding and robotics. It will require students to become problem solvers while collaborating with peers and experiencing hands-on, project-based learning.

GOODYEAR

Copper Trails; Goodyear

Students Impacted: 360

Project Title: Robotics for all students

Grant: \$2,000

Description: Each week, students will participate in various STEM activities, challenging them to think outside the box, as well as learn to use resources with imagination.

GRAND CANYON

Grand Canyon Elementary; Grand Canyon

Students Impacted: 132

Project Title: Grand Canyon Goes STEM!

Grant: \$1,453

Description: The school library will create a STEM-Centered Makerspace Lab, offering a supervised space for small groups of K-5 students to work together to create and problem-solve issues such as building and racing, coding and circuits, gardening, and designing solar cities.

JOSEPH CITY

Joseph City Elementary School; Joseph City

Students Impacted: 212

Project Title: High School Garden for Service Learning and Ag Exploration

Grant: \$2,500

Description: Funding will be used to start a garden to grow plants and beautify the school. This garden may also be used by students to learn about birds, butterflies, and insects that are beneficial or detrimental to a plant's growth.

Joseph City High School; Joseph City

Students Impacted: 50

Project Title: High School Garden for Service Learning and Ag Exploration

Grant: \$2,500

Description: Students will test the soil and research what plants and crops can successfully be grown in the region, including cash crops. Students will sow the plants and monitor their growth. An irrigation system will be designed and implemented, and items grown will be shared with local senior care centers and churches.

MIAMI**Miami Junior High**; Miami**Students Impacted:** 200**Project Title:** Properties of Matter/Introduction to Chemistry Lab**Grant:** \$1,400**Description:** As a base of understanding higher level physics, chemistry and biology, students will conduct hands-on lab experiments to learn about the properties of matter, the PH of matter, how and why oxidation takes place, and how to identify a chemical reaction.**PHOENIX****BioScience High School**; Phoenix**Students Impacted:** 120**Project Title:** Sustainable Fuels and the Examination of Algae Application**Grant:** \$2,500**Description:** Students will examine the efficiency and accessibility of alternative fuels, specifically focusing on bio-diesel coming from algae lipids. They will grow and cultivate the algae and extract lipids to create bio-diesel.**Fireside Elementary School**; Phoenix**Students Impacted:** 900**Project Title:** Creation Station**Grant:** \$2,500**Description:** Implementation of this project will provide K-6 students at Fireside Elementary School a platform to engage in STEM through innovative, technology-minded, hands-on learning experiences as they apply understanding of energy, physics, and simple machines.**Madison Heights Elementary School**; Phoenix**Students Impacted:** 24**Project Title:** STEM Flite**Grant:** \$740**Description:** Focusing mostly on engineering, students will design and create a plane by learning about the science of aerodynamics, while also learning the main parts of an airplane along with the function of those parts. The ultimate goal? A plane that can sustain flight.**Metro Tech High School**; Phoenix**Students Impacted:** 49**Project Title:** Engineering Projects in Community Service**Grant:** \$1,500**Description:** Partnering with area non-profits, students will use design software, woodworking, welding, plasma cutting, and laser engraving – all engineering industry standard practices – to create and build obstacle courses to train future police and fire cadets, an amphitheater for students, a gift shop display area (shelving, storage, lockable cases), therapy play devices for autistic children, and medical carts for medical assistants.**Mountain Sky Junior High**; Phoenix**Students Impacted:** 375**Project Title:** Taking Ownership of the STEAM Lab - Design Thinking Challenge**Grant:** \$2,500**Description:** Students will design and build their own PVC-piping desks and tables to replace old, heavy science lab tables. The project addresses all four areas of STEM and includes artistic design for STEAM. The students will take detailed measurements (math), consider strength and durability (science), engineer their tables (engineering) and use appropriate technology for design and construction.

PRESCOTT VALLEY

Lake Valley Elementary; Prescott Valley

Students Impacted: 439

Project Title: Problem Solving and Design Thinking with Cublets

Grant: \$2,400

Description: Students in grades K-6 will use robot blocks to learn about coding, robotics, and design, culminating in the creation of a unique robot designed to solve a real-world problem.

SOMERTON

Orange Grove Elementary School; Somerton

Students Impacted: 132

Project Title: Vegetable sustainability in the desert with STEM beyond.

Grant: \$2,500

Description: This project will address plant sustainability in the desert, while enabling students to research watering systems to provide optimal growth and taste for edible vegetables. Together, students will learn about watering, eco systems, and soil, and will chart the growth of certain plants.

Somerton Middle School; Somerton

Students Impacted: 600

Project Title: Roaming Under Water Robot

Grant: \$1,308

Description: Students will research and learn physical and biological characteristics of the ocean with the objective of building a simple underwater robot. As they design, build, and test their projects, students will experience the following fields of engineering: robotics, electrical and mechanical engineering.

SCOTTSDALE

Grayhawk Elementary School; Scottsdale

Students Impacted: 245

Project Title: Harnessing our Phoenix Sun's Energy

Grant: \$1,500

Description: Primary students in grades 1-3 will discover how the sun supports life on Earth including photosynthesis, life-sustaining heat, and energy converted into electricity. They will use the scientific method to plant and grow seeds while testing variables such as soil, light, water, compost and worm decomposers.

SURPRISE

Cimarron Springs Elementary; Surprise

Students Impacted: 90

Project Title: Dino Pet: Learning about science with LIVING bioluminescent dinoflagellates!

Grant: \$210

Description: Using the Dino Pet, which contains bioluminescent plankton and seawater, students will get a close-up interaction with bioluminescence.

Shadow Ridge High School; Surprise

Students Impacted: 200

Project Title: Half-Size Solar House Project

Grant: \$2,500

Description: Architecture, by its very nature is STEM...along with Art and Design. The Half-Size Solar House Project will integrate these concepts into one overall combined "hands-on" project to construct a half-sized solar-powered house.

YUMA

Gowan Science Academy; Yuma

Students Impacted: 120

Project Title: Coding Across the Grades

Grant: \$2,380

Description: Fourth-graders will teach first-graders to code using the Osmo Awbie system. This grant will allow technology to be integrated into the existing center’s time without taking away from foundational math or reading skill building.

Pueblo Elementary School; Yuma

Students Impacted: 285

Project Title: Coding with Friends

Grant: \$1,800

Description: Spheros robots will introduce students to coding a robot to perform specific tasks, including developing programs where the robots teach future students information about rules and ways around the school.

About APS

[APS](#) serves about 2.7 million people in 11 of Arizona’s 15 counties, and is the Southwest’s foremost producer of clean, safe and reliable electricity. Using a balanced energy mix that is nearly 50 percent carbon-free, APS has one of the country’s cleanest energy portfolios, including both Palo Verde Generating Station and renewable energy. The company is also a proven leader in introducing technology and services that offer customers choice and control over their energy consumption. With headquarters in Phoenix, APS is the principal subsidiary of [Pinnacle West Capital Corp.](#) (NYSE: PNW).

About the Phoenix Suns

The Phoenix Suns are Arizona’s original sports franchise and are celebrating their 50th season in the Valley during the 2017-18 NBA campaign. Since entering the league in 1968, the Suns have been regarded as one of the most successful NBA franchises on and off the court. Phoenix is led by Managing Partner Robert Sarver.

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