

## **Gregg Anderson Academy Model Programs and Practices**

### **School Information**

CDS (County District School) Code: 19651020125690

County: Los Angeles

District (Local Educational Agency): Westside Union Elementary

School: Gregg Anderson Academy

### **Demographics**

Enrollment: 887 students

Location Description: Suburban

Title I Funded: No

School Calendar: Modified

Charter: No

### **Overview**

The mission of Gregg Anderson Academy (GAA) is to create an environment that ensures successful learning for all students through the integration of Science, Technology, Engineering, and Math (STEM) activities and the utilization of Advancement Via Individual Determination (AVID) strategies in every classroom. With these strategies, we encourage our students to be innovators, inventors, logical thinkers, and problem solvers. Our students will become contributors to their community, now and in the future.

GAA opened August 9, 2012. The school is part of the Westside Union School District located in the Antelope Valley. We currently have 830 students in our general education program and 57 students in our moderate to severe functional skills program. GAA is a school of choice. Students selected to attend the school are chosen through a lottery. GAA is the home of the Aviators.

Supporting student success at GAA involves partnership. Our teachers, staff members, students, parents, and local community work together to ensure our students receive a

high quality education for life and work. Teachers work collaboratively using data-based research to provide all students access to high quality instruction. The implemented AVID program ensures that all students come to school organized and ready to learn. Parents are involved and engaged in their student's education and success through communication with the classroom teachers and activities on campus that encourage their participation in their student's learning.

GAA offers a rigorous STEM curriculum. The STEM focus ensures all students are well-equipped with the cognitive, linguistic, interpersonal, and intrapersonal skills necessary to be successful in the global society. A foundation for the students' life and work must involve technology. GAA is networked with wireless internet available across campus. All classrooms are equipped with technology that includes state-of-the-art interactive whiteboards. In addition, there are two computer labs, seven Chromebook carts, three iPad carts, six classrooms with a full set of Chromebook towers, and students have access to a digital library, Follett Shelf. VEX Robotics, Lego Robotics, and National Geographic Geography Bee Club are offered as opportunities for our students to continue beyond the regular school day.

The STEM program at GAA is funded in a variety of ways. Our students receive funding from the state, the Westside Union School District's Local Control Accountability Plan (LCAP), grants, and money raised by our school PTA. Local businesses, including Walmart, have supported the school STEM program with donations.

GAA is a highly sought after school of choice in the Antelope Valley. The school's reputation for rigor, excellence in instruction, and STEM programs have created a culture of success in less than six years. All of these factors have created a climate of academic excellence for all students at GAA.

## **Model Program and Practices**

Name of Model Program/Practice: Gregg Anderson Academy Science, Technology, Engineering and Mathematics (STEM) Program

Length of Model Program/Practice: 5–8 years

Target Area(s): Parent, Family, and Community Involvement, Science, Technology, Engineering, and Mathematics, Use of Technology

Target Population(s): Black or African American, Hispanic, White, Socioeconomically Disadvantaged, English Learners, Students with Disabilities

Strategies Used: School Climate, Parent Engagement, Data-Driven Decision Making, Social/Emotional/Behavioral Support, Professional Development

## **Description**

GAA is basing our application on our STEM program. We are the only STEM school of choice in the Westside Union School District. This is a guiding principle in defining our school culture and expectations. Admission is based on a lottery system, not academic achievement. However, our Smarter Balanced Performance Summary scores reflect a high achieving student population.

Before GAA opened its doors, teachers met to develop a program based on STEM principles that aligned with common core standards. GAA continues to implement a rigorous STEM program that includes critical thinking. Science lessons are enriched with open ended questions and hands-on group activities that allow students to discover their own answers to problems. Technology at the school is integrated across the curriculum throughout the school day so that students are comfortable using the many different tools and programs available. STEM projects encourage students to think like engineers and utilize engineering processes while working as a team. Math skills provide a strong foundation for students to apply problem solving strategies.

Science is an important academic subject for all students, taught a minimum of three times per week in the classroom. The daily integration of technology is an important piece of the planning. In the Westside Union School District, Smart boards were a new interactive tool used only at GAA at the time of the school opening. Over the course of the last six years, technology tools and their use have increased significantly at the school. Examples of this include interactive whiteboards, Google classroom, grade level websites, Chromebooks, and iPads. GAA has a site level ratio of 1.1 students per computer. These tools strengthen the home school connection allowing parents to access the curriculum when working with their child.

The engineering component challenges students to solve problems in new and creative ways. Students learn by continually using mistakes as an opportunity to discover new outcomes. Engineers from the community often come to campus to support our STEM program by showing students the application of engineering in real-world situations. Students at GAA possess strong math skills as evidenced by their state testing (see Pupil Outcomes). Math is a three dimensional subject at GAA coming to life off the page and presenting students with opportunities to manipulate numbers in authentic ways.

Our STEM program exceeds in meeting all three LCAP Westside Union School District goals. Students are receiving an exceptional education that will prepare them for life and work. All students have access to learning through this STEM program. The increased number of parents and community partners model active and responsible citizenship on campus when they come to assist with specific learning opportunities, such as Engineers Week and NASA's Mission to Mars presentation.

## **Implementation and Monitoring**

GAA uses Stemscores, Project Lead the Way (PLTW), and Mystery Science to ensure that the Next Generation Science Standards are brought to life. PLTW is a curriculum

supplement for every grade level and includes Lego Robotics, Vex Robotics, in addition to Design and Modeling for real world problems. Sixth graders are challenged to build a tram focusing on ecological sensitivity, safety, and design components. In Mystery Science, fourth graders design cars powered by rubber bands. The GAA Garden is an extension of our science curriculum. First and second grade students maintain fruit and vegetable planters. They see first-hand how a plant grows and is affected by minerals, water, and sunlight. In addition, the GAA Garden includes a greenhouse for year round planting and growing.

Technology is a strong component of the GAA STEM program. GAA teachers are experts in utilizing Google Classroom and Google Drive continuing to further their knowledge through weekly trainings. Third graders type their required core curriculum essays and create science slide presentations using Google Classroom. The staff uses Google Drive as an interactive website for sharing ideas and information. Every grade level maintains its own website that includes teaching resources, electronic copies of textbooks, and helpful links to further extend learning. Coding is introduced and practiced during the Hour of Code.

Engineering and math are practiced throughout the STEM program. GAA students have excellent math scores in state testing measures (See Outcomes for data). For example, our functional skills students use engineering and math skills in their weekly cooking lessons. Kindergartners build small houses using a variety of materials that they test through the engineering process and measure before assembling. Fifth graders create water filtration systems and use these systems to clean water polluted by an oil spill using a ratio of water to oil.

STEM extends outside of classroom instruction. All students can participate in our annual STEM Fair. Third and sixth grade put on STEM based theatrical performances, including biomes and internal organs. Assemblies include NASA giving a presentation to all students on their venture to Mars. In-house and off campus field trips are STEM based. Our Lego Robotics and VEX clubs give students an opportunity to show off their engineering capabilities. Family members employed by Lockheed run STEM projects for all students during Engineer Week. For example, second graders made seltzer rockets learning that the amount of gas determines the thrust of the rocket. All of these components make up a superior STEM program committed to excellence and rigor for all students. This program prepares students for life and work as active and responsible citizens. Over the course of every school year, administration and staff continue to evaluate the STEM program, student progress, and opportunities for further growth.

## **Results and Outcomes**

While admission to GAA is not based on academic abilities, students excel due to the high expectations and rigorous curriculum offered. One measure used to evaluate student progress is the Smart Balanced Performance Assessment (SBPA). In 2016–2017, 69% of our student population met or exceeded the state standards in Mathematics. On the mathematics tests, 89% of GAA students scored Near or Above Standard in the area of Communicating Reasoning. Students have ample opportunities

to practice and present their STEM findings in both oral and written mediums. In the area of Problem Solving and Modeling Data, 89% of GAA students scored Near or Above Standard. Engineers problem solve to make improvements and show results using their data. In Concepts and Procedures, 88% of GAA students scored Near or Above Standard.

Overall, 78% of our student population met or exceeded the state standards in English Language Arts. In the area of Research and Inquiry, 93% of GAA students scored Near or Above Standard. These are two central components of the STEM program. Writing is another area evaluated where 93% of GAA students scored Near or Above Standard. Informational, opinion, and persuasive reports are written by students as research and summative elements to STEM projects. In the area of Listening, 92% of GAA students scored Near or Above Standard. Working in collaborative groups, students practice the skill of active listening. In Reading, 89% of GAA students scored Near or Above Standard. In the STEM program, reading to find the main idea and important details is practiced through research and following instructions. This data is available to teachers in Illuminate which allows teachers to tailor instruction to support student progress.

PowerSchool is another tool used to evaluate student progress. GAA has 127 Gifted and Talented Education students in 4th–6th grades. This represents 36% of our school population in those grade levels. In addition, 70% of our fifth grade students qualify for admission to the 6th Grade Junior High Honors Academy programs. This is a prestigious and challenging opportunity. The program offered for 6th grade students at GAA is also viewed as rigorous and impressive. Therefore, only 25% of the eligible 5th grade students matriculate to the program offered at the junior high while the other 45% choose to remain at GAA for 6th grade.

As a result of the school culture, GAA attracts and retains families and students. Waitlists for attendance in every grade level are maintained at the district office. For example, 250 students applied for 120 spots in Kindergarten for the 2017–2018 school year. Statistical data distinguishes GAA as a leader in student achievement. The STEM program helps us satisfy and surpass the district LCAP goals of Access for All, Education for Life and Work, and Active and Responsible Citizenship.

“Aviators fly! Aviators soar! Reaching great heights to accomplish more! Go Aviators!”