

La Jolla Elementary School Model Programs and Practices

School Information

CDS (County District School) Code: 37683386039846

County: San Diego

District (Local Educational Agency): San Diego Unified

School: La Jolla Elementary School

Demographics

Enrollment: 550 students

Location Description: Suburban

Title I Funded: No

School Calendar: Traditional

Charter: No

Overview

La Jolla Elementary School is a beautiful, well-maintained, K–5 school in a suburb of the City of San Diego. We are proud to be part of San Diego Unified School District, the second largest district in California. We enjoy the benefits of being part of a large school district, while providing a small community school experience for our 550 students.

What stands out most about our school is our commitment to excellence. Our expert teachers, strong instructional program, support for English learners, response to intervention strategies, work with students with disabilities, and parent involvement have enabled the vast majority of our students to meet or exceed the standards each year. Our school community's proudest moments were receiving the California Distinguished Schools Award in 2008 and 2012, and the California Gold Ribbon Schools Award and the National Blue Ribbon Award in 2016.

Our strong focus on continual improvement is realized through a comprehensive structure of professional development, including monthly whole school workshops and weekly collaborative time for teachers to work in grade level professional learning

communities (PLCs). Our curriculum and instruction has always been designed to promote critical thinking skills. For this reason, we fully embraced the Common Core State Standards and have achieved alignment between the standards, curriculum, instruction, and assessments.

Our literacy instruction is focused on enabling students to think critically about complex texts in our narrative and expository units and to use collaborative conversations to deepen their understanding. Teachers use daily small group instruction to give students guided practice at their instructional reading level. Although students are writing all through the day, we use the Lucy Calkins Common Core Writing Workshop units to teach narrative, expository, and opinion writing.

We deliver an exemplary mathematics program focused on developing mathematical reasoning skills through a standards-based curriculum and supplemental resources. Teachers create additional problem solving tasks and have students work collaboratively to solve them.

Our science instruction is based on the Next Generation Science and Engineering Standards. We utilize curricular resources and experimentation to develop concept understanding. We also provide a unit of engineering using simple machines in grades K–2 and robotics in grades 3–5.

Our comprehensive educational program includes art, choral and instrumental music, dance, theater, yoga, technology, and Spanish classes. We have PE teachers who provide weekly instruction and organize a daily Run Club.

We have a wonderful partnership with our parent community who support our efforts at home, serve on decision-making committees (SSC, SGT), volunteer in classrooms, and raise funds to enhance our programs. The PTO hosts monthly family events. Our foundation, Friends of LJES, runs successful fund raising campaigns.

Model Program and Practices

Name of Model Program/Practice: Increased Rigor in Problem Solving and Developing Strong Mathematical Explanations

Length of Model Program/Practice: 2–4 years

Target Area(s): Education Supports, Parent, Family, and Community Involvement, Professional Development, Science, Technology, Engineering, and Mathematics

Target Population(s): American Indian, Asian, Black or African American, Filipino, Hispanic, Pacific Islander, White, Two or More Races, Socioeconomically Disadvantaged, English Learners, Students with Disabilities

Strategies Used: School Climate, Small Learning Communities, Parent Engagement, Data-Driven Decision Making, Social/Emotional/Behavioral Support, Professional Development, Implementation of Academic Standards Basics (Teachers, Instructional Materials, Facilities)

Description

The Common Core State Standards in Mathematics emphasize learning content in the context of real-world situations, applying mathematics to solve problems, and effectively communicating mathematical reasoning. Mastery of both mathematical content and understanding are foundational to college and career readiness and productive citizenship in the 21st century. To enable all of our students to meet these rigorous standards, we designed our model practice to increase the rigor of our problem solving work and to focus on developing strong mathematical explanations.

At LJES, we have a relentless focus on excellence. We continually analyze data and study instructional practices that will enable our students to not only meet, but to exceed the standards. Though our past efforts yielded exemplary results, with 91% of our students meeting/exceeding the standards on the initial CAASPP assessments, our scores in mathematical reasoning were the lowest in proficiency. Analyzing our students' problem solving work confirmed our belief that students struggled with demonstrating their reasoning. Students' visual representations and equations often did not match the problems they were solving, and written explanations were largely procedural and did not show an understanding of how and why the mathematics worked.

Through the years, our PD focused on the structure of math lessons, incorporating routines, emphasizing multiple strategies/access points to solve problems, creating exit slips to assess student understanding and guide subsequent instruction, and providing scaffolds for students with disabilities. As we began work with the CCSSM, we studied the eight mathematical practices, shifts in content, collaborative conversations, and the behaviors evidenced in exemplary math classrooms. We also worked with a consultant to supplement our curriculum with additional differentiated problem solving work.

Three years ago, we began analyzing the types of problems we asked students to solve and determined the need to increase the rigor of these tasks. Our teachers began working on math scenarios – multi-tiered problems using real world situations. They used many resources to find ideas for scenarios including the websites of early implementer states, as well as California's released performance tasks. In PLCs, teachers wrote scenarios that would take multiple days to accomplish, with students working collaboratively as they made meaning of the problems. They developed guidelines for solving complex problems to use for reference during instruction and independent work. We did lesson studies, continually analyzed student work and gathered exemplars, and developed model explanations. We shared this work across grade levels at articulation PD.

Our students were used to solving problems easily and often appealed to adults when challenged. In response, we incorporated the character strengths of grit and perseverance, and work with growth mindset into our math instruction.

Implementation and Monitoring

As we worked with our more complex level of problem solving tasks and supports, we saw improvement in our students' ability to visually represent the problems, to label their work with what the quantities represented, and to write corresponding equations. Through this practice, the students were able to deepen their understanding of math concepts and could better communicate it to others. As we monitored student work in PLCs, however, we continued to find that our students' written explanations were largely procedural and we wondered if we, as educators, had a clear understanding of how to justify mathematical reasoning.

To that end, we invited a district math resource teacher to collaborate with a principal/teacher team on our PD and to teach demonstration lessons in classrooms. As a result of these efforts, and our continual monitoring, students are now able to justify their reasoning. At lower grades our focus is on visual representations, labeling, and equations, and at grades 3–5, we added written justifications. Teachers developed common checklists and rubrics that clearly show students our expectations. Teachers display examples of model explanations on charts and exemplars are given to students to place in their math notebooks.

With each new curriculum initiative, we communicate our goals to parents through many vehicles. As we began the year, the principal used the opening session of our Back to School Night to present our model practice. Parents then attended classroom presentations where teachers shared math content standards, instruction, the kinds of problem solving tasks students would be given, and their expectations for mathematical explanations.

We have Family Math Days each year where parents are invited to experience the curriculum with their students. Last fall, parents and students solved real world situations together using the checklists and rubrics we developed. Teachers prepared resources for parents to use at home. Most teachers also posted these materials on their web sites. Parent feedback on the supports provided has been overwhelmingly positive. They tell us that they have a better understanding of our expectations and are better able to support their students at home.

The principal writes an article in the school newsletter each year highlighting our work in mathematics. For our model practice, the article addressed the rationale for the work, instructional practices, expectations for student work, and how parents could support the work at home.

Another important aspect of the work for parents is preparing our students for their next level of education. To that end, the principals and teacher representatives from all of the schools in our cluster observed mathematics instruction at all levels (elementary,

middle, high) with a focus on mathematical reasoning skills. This work impacted instruction at all of the schools and was communicated to parents through our La Jolla Cluster community meetings.

Results and Outcomes

The results of our model practice were even stronger than anticipated. As a result of using our comprehensive professional development structure to analyze data and student work, evaluate the rigor of our problem solving tasks, and to examine our instruction, we have reached a new level of understanding for both the students and the adults in our learning community. The tasks that we give our students are more rigorous and complex. Students are engaged in collaborative conversations that focus on how and why the mathematics works, and their visual and written explanations show an increased level of understanding. Our teachers know how to model and support students to achieve these skills, and how to effectively engage parents in the work.

We see the results daily in our math classrooms. As the principal observes problem solving work, she hears students talking about their reasoning – not how they did the calculations, but why they chose the quantities and the operations they used to solve the problems. They are working on clear visual representations and equations that match the story, and, at upper grades, writing justifications for their reasoning. The principal gives feedback to individual teachers to continuously improve instruction and shares information gleaned from classroom visits with the Instructional Leadership Team to plan future PD.

We also see the results of the practice as we analyze our students' problem solving work during PLCs and whole school PD. We utilize our site created rubrics and exemplar problems to determine how well our students are doing in relation to our expectations. We find that the work has benefited the students greatly, as they now have the tools to demonstrate their understanding at a deeper level. They have more perseverance, and say that the work has caused them to "push themselves harder." One student told the principal in a recent classroom visit, "I have a better understanding of the problem through writing out my explanation. It's almost as if you're doing the work again and it helps you to check your work."

Over the last three years, we have seen an increase in students achieving an advanced level of proficiency on daily problem solving work, exit slips, and unit tests. In addition, our CAASPP scores of 91% proficient/advanced, with 67% of our students achieving advanced scores in 2015 (initial year), increased to 94% proficient/advanced, with 79% of our students achieving advanced scores in 2016. In 2017, our scores increased to 95% proficient/advanced, with 81% of our students achieving advanced scores. We expect higher scores this year as a result of our focus on mathematical explanations.

Our Special Education teachers attend whole school PD and partner with classroom teachers to scaffold the work to meet the needs of their shared students. As a result, our students with disabilities' scores have improved each year as well, with 73% proficient in 2015, 74% in 2016, and 75% in 2017.