

Monterey Hills Elementary School Model Programs and Practices

School Information

CDS (County District School) Code: 19650296022784

County: Los Angeles

District (Local Educational Agency): South Pasadena Unified

School: Monterey Hills Elementary School

Demographics

Enrollment: 683 students

Location Description: Suburban

Title I Funded: No

School Calendar: Traditional

Charter: No

Overview

Monterey Hills Elementary (MHS) is nestled in the hills of South Pasadena. We have a diverse population with an enrollment of 683, TK–5th grade students. Represented are: 26% Hispanic, 29% Asian, 25% White, 2% Black and 14% multiple ethnicity. Approximately 9% of our students are EL and 14% qualify for free/reduced-fee lunch. The diversity on our campus encourages opportunities for students to build the multicultural understanding necessary to be productive citizens in the 21st Century. Known for its inquisitive students, outstanding community involvement, and instructional programs, MHS was named a California Distinguished School in 2012 and a Gold Ribbon School in 2016.

MHS offers a rigorous educational program to all its students based on CCSS for ELA and Mathematics. CAASPP data indicates that 79% of our students met or exceeded the standards in English Language Arts and 77% of our students met or exceeded the standards in Mathematics. We believe this was accomplished through the teachers' application of: Cognitively Guided Instruction (CGI), total active participation, and depth of knowledge to encourage engagement of all students. Math instruction is based on

CCSSMP, Math Expressions curriculum and CGI word problems. ELA instruction is based on CCSS, Benchmark Advanced curriculum and instructional strategies including reader's and writer's workshop. Social studies and science texts are used to provide instruction in citing text-based evidence and build vocabulary and content knowledge. In science, teachers incorporate STEM programming through PLTW, Mystery Science and other inquiry based activities guided by NGSS. Students are provided opportunities for visual and performing arts activities through instruction with an itinerant specialist in the visual arts, music, and drama on a trimester basis. Classroom teachers also provide opportunities as they integrate the arts in other content areas. Project Based Learning engages students in solving real world experiences. Integration of technology offers students access to 21st Century skills, promotion of research skills, and opportunities for collaboration in writing. MHS operates one elementary Special Day Class program for the district. These students are included in the general education program for school-wide activities, and mainstreamed into general education classes as described in their IEP. MHS offers a dual language immersion program to develop academic achievement, bilingualism and multi-cultural awareness. To provide social-emotional support we have a school psychologist and a part-time school counselor who offer services through social skills and mindfulness groups. This year, we have had a great emphasis on building empathy and kindness through community service projects; Second Step and participation in the Kindness Challenge.

Through our offerings, we believe we provide a program that encourages humanitarians, scholars and problem solvers for the 21st Century.

Model Program and Practices

Name of Model Program/Practice: Cognitively Guided Instruction

Length of Model Program/Practice: 2–4 years

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

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

Strategies Used: Parent Engagement, Data-Driven Decision Making, Professional Development

Description

Cognitively Guided Instruction (CGI) is the model practice employed by Monterey Hills School. It was selected to address the need that ALL students achieve the CCSS in Mathematics. This is the instructional strategy component which we have paired with standards aligned, Math Expressions.

To attain the CCSS-M and MP teachers must assess a student's ability to describe why a math statement is true or from whence a math rule comes. Teachers not only have to build conceptual ideas but also use organizing principles to build understanding of these concepts. After teachers were introduced to the changes necessary to meet CCSS-M and MP, it was necessary to seek a strategy to meet these standards and it was found in Cognitively Guided Instruction. Although CGI was chosen to use with ALL students, research on effective instruction to use with Hispanic students indicate that CGI is a powerful method. Small group instruction, problem solving and placing of the work in context are features of CGI that happen to be effective methods to teach Hispanic students. With the increased amount of wait time, diagramming and pattern finding, CGI is an effective strategy to use with students with disabilities. Research conducted by Carey et al (1995) measured the effectiveness of CGI with students from typically underachieving groups.

The model practice, coupled with math talks, has greatly impacted the social-emotional and behavioral needs of students by providing a classroom where students are free to take risks, count on each other as a community of learners and understand that there is no one 'right answer'.

CGI is based on two tenets: students have an intuitive knowledge about mathematics and recognizing that a relationship between computational skills and math problem solving leads to an improved ability to problem solve. In the classroom you will see: a teacher present a story as a problem; students encouraged to solve the problem any way they can, using any tools they want and in a way that makes sense to them; and time provided for students to explain their strategies to their peers. Teachers have the students develop meaning of a concept through this process then learn the algorithm associated with the concept after students explain their understanding.

CGI is an instructional program used at all elementary sites. The distinction at MHS is the amount of additional time in study, discussion and continued growth in usage. Teachers continue to perfect their word problems and incorporate the math talk to fully engage students with the practice of mathematics. This year 7 teachers provided a parent workshop on CGI!

We have seen evidence that the CGI strategies have helped our students achieve the goal of CCSS-M and MP: preparing our students with the mathematical understandings and habits of mind that will give them the foundation needed to be college and career ready.

Implementation and Monitoring

During the 2013–14 school year, SPUSD teachers were chosen to pilot Math Expressions. MHS had 1/3 of our K–5 teachers assist in the selection process. At the end of the pilot, it was determined Expressions would help students acquire the standards and the habits of mind needed to achieve mathematical practices.

A curriculum was chosen, now an appropriately paired instructional strategy was necessary. UCLA was contracted to provide training in CGI. During '14–15 year almost half MHS teachers and principal, chose to be early adapters and participate in a once a month, 10-day training. Teachers learned theory; engaged in math problem-solving and concept building; analyzed types of questions and how to write story problems. In the class, teachers saw the change in the knowledge their students exhibited during math lessons. Teachers went from delivering a lesson that provided practice for 25 problems, to presenting one, then used the remainder of the class time for in-depth conversation on meaning making. Based on the success of implementation, the following year the balance of MHS staff received the same training, with similar supports and results.

How does implementation look at MHS now? Student leaders emerge in classrooms and took over the teaching by modeling 'their' way of solving a math problem. Classroom routines of partner checks and small group discussion are part of the way math instruction is conducted. Math problems are centered in real-world contexts. Teachers' efficacy has increased as well; monitoring the way the students are attacking a math problem during the lesson, rather than relying on summative data that measured what students don't know, not what they do know.

Monitoring and support is provided through formal and informal observations by site administrators; teacher peer observations; teacher lesson studies; and analysis of work samples. New teachers receive training and opportunities for observations of mentor teachers. Seasoned teachers continue their learning through grade level and staff meeting discussions.

Although all district's elementary schools have adopted CGI, MHS distinguished its' implementation in a number of ways. There was greater participation upon the part of teachers involved in both the selection of the curriculum and in the number of CGI trained teachers compared to the other schools. This meant a greater percentage of students were taught using this method and also allowed for a more comprehensive change in teacher instructional practice. Informal conversations amongst teachers throughout the day, and formally, during staff and grade level meetings, helped teachers with implementation. Peer observations of CGI by non-CGI teachers, was also a distinguishing feature on our campus. Parents became intrigued by the strategy so they have become partners and have learned of the changes in instruction at PTA, SSC, and on-going workshops.

Results and Outcomes

The process of monitoring and assessing the implementation of CGI was an integral part of the training days and continues to be part of the structure now that we are in year four of implementation. Opportunities to ask questions about how to set lesson objectives, develop questioning strategies, and analyze lesson components were built into the monthly training dates. Teachers had the chance to look at work samples to determine what students learned and next steps for instruction.

Continuous training must be included to ensure sustenance of the practice. All new teachers have had the opportunity to attend a four-day training; our Dual Immersion teachers have had the chance to visit UCLA Dual Program; new teachers can attend a two-day training at the end of March and all teachers are offered a training by UCLA this summer to keep their techniques sharp.

Two years ago a formalized means of collecting data was established. Mathematics data on students is being gathered through the use of the assessments in Expressions. The resources provided by CAASPP through IABs for 3–5th are also used. This data gives us quantitative information to determine student progress and outcomes of the program. Data is gathered and analyzed for our established ‘watch-list’ students to ensure they are meeting CCSS-M.

Additional results are gathered through qualitative means. Our first grade team regularly distributes math CGI tasks they use with students. Other grade levels develop or share word problems with their peers. Results and outcomes must also be measured for teaching and learning. Teaching practice is monitored through formal and informal observations. Principal and assistant principal give feedback to teachers as they visit classrooms during walk-throughs conducted on a monthly basis with classroom visits lasting 5–10 minutes. Student learning is apparent as students use whiteboards to show work; student leaders explain the use of strategies; and students engage in math talk. These methods allow teachers to monitor the impact CGI has on student learning. Teachers are able to measure ‘partial’ understanding on the part of the struggling students. This qualitative data has teachers marvel that some of the students who would typically struggle are “getting it”.

Additional assessments will be used to measure both teacher practice and student outcomes. A self-assessment tool on CGI implementation will be piloted with willing teachers. This data can help mark the growth of teachers as they reflect, modify, adapt and expand their instruction based on what they learn from their students. We have also scheduled an informal assessment to learn how our students view them as mathematicians. This measure is being developed by one of our teachers and will be reviewed by the site leadership team for administering to our students in the third trimester. Our goal is to use CGI to honor our students as the math scholars they are becoming.