

LOS ANGELES UNIFIED SCHOOL DISTRICT

Table of Contents

	Page
Competitive Priority 1 – Need for Assistance	1
Competitive Priority 4 – Promoting STEM Education.....	6
(a) Plan of Operation	27
(1) The Secretary reviews the quality of the plan of operation.	
(2) The Secretary determines effectiveness of:	
(i) Management plan	
(ii) Plan to attain specific outcomes	
(A) Accomplishes the purpose of program	
(B) Attainable within the project period	
(C) Measureable and Quantifiable	
(D) Can be used to determine progress in meeting outcomes	
(iii) Plan for Utilizing its resources and personnel	
(iv) Ensuring equal access and treatment of the traditionally underrepresented	
(v) Plan to recruit students from different populations	
(b).. Quality of Personnel	49
(1) The Secretary reviews to determine qualifications of personnel	
(2) The Secretary determines the extent to which:	
(i) Project Director is qualified to manage	

- (ii) Other Key Personnel are qualified to manage
 - (iii) Teachers are qualified to implement special curriculum
 - (iv) Non-Discriminatory employment practices
 - (3) Considers experience and training in STEM related fields
- (c) Quality of Project Design 64
 - (1) The Secretary determines the quality of the project design
 - (2) The Secretary determines the extent to which each Magnet will:
 - (i) Promote desegregation and increase interaction among students
 - (ii) Improve student academic achievement for all students
 - (iii) Encourage greater parental decision-making and involvement
- (d) Budget and Resources – The Secretary reviews: 78
 - (1) Adequacy of the facilities
 - (2) Adequacy of equipment and supplies
 - (3) Adequacy and reasonableness of the budget
- (e) Evaluation Plan – The Secretary determines whether the plan: 84
 - (1) Includes methods that are appropriate
 - (2) ‘Will determine how successful the project is in meeting its

intended outcomes

(3) Includes methods that are objective and will produce data

that is quantifiable

(f) Commitment and Capacity – The Secretary determines: 93

(1) Each application . . . likely to continue after assistance no longer

Available

(2) Extent to which each Magnet:

(i) Is committed to the Magnet project

(ii) Has identified other resources to continue support

PRIORITY 1 – NEED FOR ASSISTANCE

Responding to the call to develop programs that promote Science, Technology, Engineering, and Mathematics (STEM), The Los Angeles Unified School District is creating a network of secondary Magnet Schools that will address (1) reducing minority group isolation and providing access and equity to rigorous, theme-based curriculum; (2) preparing teachers to teach 21st Century skills by using strategies that promote collaboration and present content in an interdisciplinary manner; (3) reversing the trend of underrepresentation in STEM/STEAM courses. The Network will begin with four secondary schools and expand through the K-12 system in years to come.

The Los Angeles Unified School District (LAUSD or the District) is the Nation’s second largest school district with 563,444 students (9.16% White; 93.1% Non-White, of which 52.9% are English Learners). Approximately 80% of LAUSD students qualify for free-or reduced-price meals. The District encompasses an area that is 710 square miles and is divided into four Educational Service Center (ESC) areas (North, South, East, and West) that represent the ethnic, religious, cultural, economic, and academic diversity of a city that is often identified as a “megalopolis” or a “megaregion”. LAUSD has a thriving network of 173 Magnet schools with 59,052 enrolled students and, despite the changing demographic trends throughout the city and District, the Magnet Program has been successful in fulfilling our LAUSD mandated court-order encouraging White student enrollment. The District has consistently maintained a 16-18% White student population in its Magnet program schools (in some schools the ratio of students of color to White students is as high as 60:40 respectively.) It should be noted that the District, as a whole, only reports a 9% overall White student population.

Since 1977, the LAUSD Court-Ordered Integration Program has met the guidelines of the

Magnet Schools Assistance Program (MSAP) by promoting diversity, reducing minority group and economic isolation, and developing innovative programs. The District's belief system is that one of its best programs is the Magnet Program, and it is committed to "educating every student to the highest quality" to ensure educational success. For the past few years, Board Members have voted to re-establish/revise some of its underachieving campuses, or open new campuses, as Magnet Schools with (1) a different instructional strategy; (2) a different structure; (3) a different curricula focused on a particular theme; and (4) a different educational philosophy to ensure student academic success.

At a time when the LAUSD Magnet Program is expanding and students are receiving academically enriched, theme-based instruction, California lawmakers continue to vote for drastic cuts to the state budget, including public education at all levels. This has led to a catastrophic impact on education across the state. The cuts to the District have included: \$427 million 2008-09; \$838 million in 2009-10; \$620 million in 2010-11; \$408 million in 2011-12, and \$557 million in 2012-13. With such severe cuts, the Magnet Program has also suffered financial devastation, yet due to the determination and dedication of the teaching force, the Magnet schools continued to be among the highest achieving schools in the District.

The 2013 MSAP Grant will support the District's efforts to improve curriculum development, professional development, and instruction at two significantly revised and two newly established Magnet secondary (grades 6-8 and grades 6-12) schools. These schools were selected because they are located in prime areas that have the potential to (1) bring together students from different economic, ethnic and racial backgrounds, (2) provide equitable access to challenging theme-based academic curriculum, and, (3) proximity to supportive Institutions of Higher Learning and other business/community based organizations. All schools, now a part of

the STEAM-initiative Magnet School Network, will be wall-to-wall, full school Magnets. They include:

- **LAUSD/USC Cinematic Arts and Technology Magnet**, 587 students – grades 6-12 – a significant revision Magnet (formerly LAUSD/USC Magnet High School)
- **Orville Wright Engineering and Design Magnet**, 665 students – grades 6-8 – a significant revision Magnet (formerly Wright Middle School and Math/Science Aerospace Magnet)
- **Washington Irving Advanced Mathematics, Music, and Engineering Magnet**, 650 students – grades 6-8 – a new Magnet (formerly Irving Middle School)
- **Sun Valley STEAM Magnet Campus**, 1636 students, with three distinct themes: Engineering Arts and Technology for Global Progress, grades 6-8; Environmental Studies through Arts and Sciences, grades 6-8; and, Biomedical Sciences, Engineering, and Leadership, grades 6-12 – a new Magnet (formerly Sun Valley Middle School)

(a) The costs of fully implementing the Magnet schools project as proposed

The cost to fully implement the STEAM Magnet Network is approximately \$48.7M for the three years of the project. Of that, \$38.3M (12.8M per year) is general fund money that is allocated by the District for the operation of the basic comprehensive program (staff, facilities, maintenance, books, furniture, and equipment). The additional \$10.4M is the amount over and above general fund which is needed to create the themed program, including Magnet personnel, STEM/STEAM equipment, materials and supplies, and professional development contracts. Under normal circumstances, Magnet programs would receive additional monies to purchase some theme based equipment and supplies, however, with the state of the California budget

crisis, that money is not available during this grant cycle.

(b) The resources available to carry out the project if funds were not provided

There are limited resources available to carry out the project. Basic materials and supplies are attainable, but nothing that would equip the Network schools with current technology, or allow the teachers the ability to receive professional development that would change their current practice. Classrooms have old computers and outdated audio visual equipment. Designing a 21st Century classroom is out of the question without the assistance of the MSAP Grant.

The L.A. Unified Board has, however, approved the use of \$50 million of voter-approved bond funds to provide LAUSD students with personal computing devices to support instruction and the transition to Common Core State Standards. These funds will ensure that all students in the District receive personal devices. This is a start towards 21st Century transformation, but in reality it will be months, maybe years, before these devices are in the hands of the students.

In the event that the District does not receive the MSAP grant, it will encourage the schools to seek out funding and support from local sources that support STEM/STEAM education. Additionally, each Network Magnet is in close proximity to a local college/university that will be solicited to assist with professional development.

(c) The extent to which the costs of the project exceed the resources

Each Network school has requested between \$100,000 and \$250,000 for equipment alone. With the cost of personnel and professional development added in, the cost for the project exceeds the District's general budget allocation by \$10.4M.

(d) The difficulty of effectively carrying out the approved plan, including how design impacts ability to successfully carry out plan

Although the schools have been approved and will open in August 2013, due to fiscal cuts at the State level, the Board currently lacks the necessary funds to fully implement the Science, Technology, Engineering, and Math (STEM) infused with the Arts (STEAM) programs that the schools in this grant are proposing. Schools have always been encouraged, even in brighter economic times, to seek out additional community resources (both monetary and partnerships) to support their programs, however due to the declining philanthropic resources in the area, and the cost of STEM/STEAM implementation, there is a need to seek additional funding for the family of schools soon to be known as the LAUSD STEAM-initiative Magnet Network. The District will commit to these new STEAM programs and will continue to look for additional funds to create the program(s) as envisioned by the schools.

**Priority 4 – PROMOTING SCIENCE, TECHNOLOGY, ENGINEERING, AND
MATHEMATICS (STEM)**

“The STEM workforce is exploding and is expected to continue to grow well into the future. . . That is why STEM education is vital to the careers of the future and what better way to encourage student participation than by putting before them teachers who have a passion and experience within STEM fields . . . President Obama called for 100,000 new STEM teachers over the next ten years . . . on this we do agree, that the importance of STEM education and putting those types of teachers in the classroom is paramount.” (Rep. Bucshon [R-IN])

The Los Angeles Unified School District (LAUSD) Magnet Office is creating a newly themed program that will pique the interest, generate curiosity, create intrigue, and fascinate the minds of secondary students in grades 6 through 12. Four schools were selected to create themed programs that would focus on integrating Science, Technology, Engineering and Mathematics (STEM) into the current and “next generation” Common Core curriculum.

When approached with the idea, principals and teaching staff at the schools immediately embraced the concept and worked as a team to create and submit their own vision of instructional programs that focus on connecting STEM to the District’s approved curriculum. As one new school put it, “We believe strongly that a Science, Technology, Engineering and Mathematics program will [reverse the declining enrollment and] reinvigorate our school by bringing a [more] diverse group of kids and parents back to our campus. Moreover, we believe a STEM school best serves the needs of our students . . .” Taking the idea one step further, the schools collectively agreed to infuse “the Arts” into STEM creating what is now being known at the *LAUSD STEAM-initiative Magnet School Network* and recoinning the phrase:

“Full STEM- to-STEAM Ahead!”

The Magnet schools approved for the Network are:

Network School	Theme	Grade	Type
LAUSD/USC	Cinematic Arts and Technology	6-12	Revision
Orville Wright	Engineering and Design	6-8	Revision
Washington Irving	Advanced Mathematics, Music, and Engineering	6-8	New
Sun Valley STEAM Magnet Campus	Engineering Arts and Technology for Global Progress	6-8	New
	Environmental Studies through Arts and Sciences	6-8	New
	Biomedical Sciences, Engineering, and Leadership	6-12	New

(a) Providing students with increased access to rigorous and engaging coursework

“STEM education is an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering, and mathematics in contexts that make connections between school, community, work, and the global enterprise enabling the development of STEM literacy and with it the ability to compete in the new economy (Tsupros, 2009).” STEM teaching and learning designed for all students is the focus of this Grant Proposal. Traditionally, STEM fields are male dominated as are STEM classes. Boys proficient in STEM and girls accomplished in the Arts and Humanities is a prototype most familiar in our current system. The Network schools are aware of this phenomenon and plan to address the ethnic and gender gaps by reversing the trend of

underrepresentation in all STEM/STEAM classes.

Much research has been conducted about the traditionally underrepresented in STEM. Titles like: “Closing the Girl Gap in Science”, “Leveling the Playing Field: How to Get more Women in Tech”, and “Tech gURLs: Closing the Technological Gender Gap” inundate the Internet. In fact, there are more than 23 million references to the STEM gender gap on Google. Equally as studied is the diversity gap: “Engaging Diverse Learners Through the Provision of STEM”, “Diversifying the STEM Pool”, “Seeking Congruity Between Goals and Roles”. There are another 600,000 scholarly articles written regarding the concerns in the field about access and equity to STEM education.

Companies and programs like *The College Board* and *Google* are working on initiatives and partnering together to increase the number of traditionally underrepresented minority and female high school students that participate in Advanced Placement® (AP) courses in STEM (science, technology, engineering and math) disciplines. Grants, such as this sponsored by MSAP, are being offered to encourage public schools across the nation to start STEM programs that encourage those in traditionally underrepresented groups (black/African American, American Indian/Alaska Native, and Hispanic/Latino) and female students to enroll and explore these areas of study and related careers.

The challenge is out there. Network schools will work to bridge these gaps by reorganizing curriculum, retraining teachers, and offering students pathway choices that integrates STEM, infused with the Arts (STEAM), into the curriculum.

The proposed Magnet Schools in this MSAP project will be required to implement systemic reform strategies (such as collaborative teaching, project based learning, differentiated instruction, interdisciplinary coursework, inclusion and mainstreaming, Culturally Relevant and

Responsive Education) as teachers embed theme-based instruction into District Standards, Common Core State Standards, and the California Career Technical Education Model Curriculum Standards (grades 7-12). Additional research-based approaches and strategies for raising student achievement can be found in the District's Core Curriculum.

Staff at both the District-level and school level realize that providing students with increased access to engaging coursework will require vision, goals, and professional development. Pedagogical practices will have to be changed. Teachers will learn new approaches to teaching and working collaboratively, abandoning the desire to work in the metaphorical "silo" and embracing interdisciplinary teamwork. Administrators will schedule "common teacher preparation time" into the school day and plan relevant professional development to allow for complete transformation – the change from teacher-directed to student-centered learning (and teaching). Students will learn to be active participants in their own learning. They will be taught to work collaboratively with their classmates, demonstrate authentic learning, and become intrinsically motivated to reach goals that they set for themselves.

The foundation for the new STEAM program will be based on content knowledge derived from the District's Core Instructional Program and the STEAM curriculum specific to each Magnet school.

The District Core Instructional Program. LAUSD is a Program Improvement District, whose student achievement rates must be accelerated to meet the objectives of its Accountability Matrix (2010-2015) and the Federal No Child Left Behind (NCLB) guidelines. The District's instructional priorities are literacy and numeracy across content areas. To this end, all content areas (science, history/social science, English Language Arts, and mathematics) are essential

core instructional areas. In 2012, the LAUSD Board of Education unanimously passed a resolution establishing “the Arts” as part of the Core Curriculum.

With the addition of the Arts to the Core Curriculum, the Magnet schools participating in the newly established STEAM Network have a vast catalogue from which to choose in designing their uniquely tailored curriculum. The goal for all students, however, Magnet and traditional, is to be served with commitment to success in classrooms that offer rigorous, content-based instruction.

The STEAM Initiative Magnet School Network

“Students today live, learn and play in a media-saturated society, in a world of “infotainment” and spectacle. For many students the curriculum is not relevant, and they become disengaged from learning.” (21st Century Schools, 2010)

All schools in the Network will provide a fully integrated STEAM curriculum for their students. Although the STEAM themes vary from school-to-school, there are some common threads to which all four schools are committed: developing a school-wide collaborative vision for the creation of 21st Century classrooms with access to varied forms of technology; offering hands-on, project-based learning for the entire student body; partnering with programs that have researched the integration of STEAM-related content into the core curriculum; and developing programs that are innovative and cultivate creative confidence in both teachers and students. Additionally, each STEAM Magnet will begin with and expand upon the content presented in the *California Career Technical Education Model Curriculum Standards for grades 7 through 12.*

The STEAM Network Magnet schools realize that they can’t just take the traditional secondary classroom, fill it with technology, and call it a theme-based program. The leadership at each Network Magnet seeks guidance and reform instructions, from the District and their

collaborative partnerships. They will rely on the assistance of this MSAP Grant to develop and/or restructure their 20th Century ideologies. To their credit, principals and teacher leaders have already begun the discussion about how to shift from teacher-focused to student-centered. They have on-going conversations about the research that will help them transform their schools into sites that continually and consistently foster improvement and meet the needs of adolescents. The discussion has begun with two very complex teaching principles, academic rigor and pedagogical practice, and will, during the three years of this Grant cycle, build a strong framework that supports synergy for the entire school community. By piquing student interest and generating students' curiosity in selected courses of study, each school will create a program that fosters the teaching and learning of STEAM content and successfully prepares students to become competitive innovators of the 21st Century.

Academic Rigor -- In the context of The STEAM Initiative Magnet School Network (LAUSD/USC, Wright, Irving, and Sun Valley), "academic rigor" is defined as the articulation between grade levels and across content areas. It is helping students think for themselves using four basic criteria: (1) creating their own meaning out of what they have learned; (2) organizing information into mental models; (3) integrating individual skills into whole sets of processes; (4) applying what is learned to new and novel situations (Robin Jackson, 2012).

Pedagogical practices -- Currently, teachers are asked to focus on the pedagogical practice of the "direct instruction" method to promote teaching and learning. While this model of instruction is respected for its reliance on teacher-directed learning, initiated by demonstration, reinforced by practice; often it is the only "means of learning" students have experienced. Some of the research has stated that this didactic method of teaching is often applied to students of economic, linguistic and cultural diversity in order to facilitate their

attainment of mastery and academic success. A repertoire of pedagogical practices that are responsive to varied students' learning styles, and the different emphasis required by the content and skills defined by the standard under study, is necessary to decide the pedagogical match to both students and the intent of the curriculum. For example, the inquiry method of teaching universal concepts shifts emphasis from memorizing and restating to investigating facts inductively or deductively in order to define and substantiate the concept.

This shift in content also demands a shift in pedagogy... a shift from direct instruction to inquiry. There are a variety of pedagogical practices based on inquiry teaching and learning: group investigation, Socratic seminar, inquiry training, and project-based learning. Each of the inquiry models of teaching is mediated by the teacher's willingness to relinquish some of the responsibility for learning to a process that is more student-centered. The research indicates that the responsiveness, engagement and academic success of students of diversity can be positively affected by the presentation of teaching and learning pedagogical practices that involve the student as an active agent in learning. The match between learning styles, content and skill emphasis, and the need to develop autonomous and independent learners are essential to the implementation of "academic rigor" at each of the STEAM-themed Magnets funded under this project.

Differentiated Objectives of the Program. Based on Gardner's (2011) work *Five Disciplined Minds for the Future*, the following areas will be germane to the STEAM Magnets curricula. Each of the defined "minds" correlates with the objectives of the Magnets' sub-curricular themes: Science, Technology, Engineering, Arts, and Mathematics.

Disciplined Mind	Helping students make associations and connections to the scholarly work of the disciplines.	Magnet curriculum will focus on the study of disciplines aligned to Science, Technology, Engineering, Arts, and Mathematics
Synthesizing Mind	Helping students form connections to develop a coherent whole from their learning.	Magnet curriculum is intra-and interdisciplinary fostering students to make associations within, between and across disciplines.
Creating Mind	Developing an appreciation for creativity and the multiple forms of expressing ideas.	Magnet curriculum reinforces creative and critical thinking as well as problem solving to promote innovative thinking.
Respectful Mind	Learning how to be respectful of differences among people.	Magnet curriculum focuses on understanding diversity of perspectives.
Ethical Mind	Understanding the role of a citizen in society.	Magnet curriculum stresses the role of the citizen whose work is excellent, ethical and engaging.

Expectations of Student Performance. The Magnet curriculum is differentiated from the core or basic curriculum and has been designed to meet the range of students’ needs within the classroom. Given the recognized heterogeneity of the students, further differentiation will occur based on time appropriated for task, range of resources for students to utilize, and, the nature and amount of assistance given to students to be successful. This curriculum will demand

that outcomes for learning are held constant for ALL students. To achieve the goal that all students meet the same objective in differing ways, this curriculum also will be differentiated in terms of pedagogy. The needs of differing learners such as the English Language Learners, Special Needs Students, underrepresented minorities, female students, and gifted students will be facilitated by a range of differentiated instructional strategies and pedagogical models. *“Evidence indicates that differentiating the curriculum without simultaneously differentiating instruction does not allow all students equity to learning”* (Kaplan 2009).

Curriculum specific to each STEAM Network School that provides students with increased access to rigorous and engaging coursework in STEM to STEAM:

Each school in the Network will offer a different STEAM theme for its students. STEAM Magnet schools will prepare their students to be leaders in the STEAM fields. This means that all students will be techno-savvy and will need to understand the meaning of academic integrity. Each school will create policies and embed the principals of academic integrity into all content and interdisciplinary classes offered.

Although Professional Development will be designed specific to each site, the Magnet Program will negotiate blanket contracts, for the four Network schools, with companies that offer research-based programs in STEM education or system reform. The companies have not been contracted but some have already been suggested by the District or Schools as possible providers. Those being considered are: the College Board, Project Lead the Way/Gateway to Technology Middle School Engineering Program, The Buck Institute for Education (Project Based Learning), Educators Cooperative, UCLA Center X, USC Rossier School of Education, Character Counts!, and Expeditionary Learning.

The effectiveness of each STEAM Network Magnet School will be measured by using

authentic assessments and projects along with the specific metrics outlined in No Child Left Behind, Academic Performance Index, Annual Yearly Progress and California Common Core Standards as a guide to achieving those marks. Moreover, because our goal is for all students to achieve at the highest levels so that they are prepared for college and career, we will also measure the percentage of students at each school who are engaging in Pre-Advanced (middle school) or Advance Placement (AP) courses, the percentage who pass these exams with a score of three or higher, and the percentage who are taking and achieving college and career readiness benchmarks on the PSAT and SAT. The Los Angeles Unified School District has established additional goals with the Performance Meter and School Report Card around attendance, suspension, parent engagement and other indices for excellent schools. Together with community, staff will establish clear, transparent timely authentic assessments that benchmark progress in order to insure growth.

Significant Revision Magnet School Projects:

The LAUSD/USC Cinematic Arts & Engineering (CAE) Magnet will have a projected enrollment of 750+ students during year one of the Grant. This significant revision school will add grades 6-8 to its grades 9-12 high school creating a span-Magnet, grades 6 through 12. It is also changing its theme to reflect the 21st century infusion of arts and sciences.

The Magnet school will provide a rigorous, diverse, integrated, project-based learning curriculum. Teachers and Administrators share, “We want to nurture our students to be global learners; therefore, we intend to blend science, technology, engineering and math with the visual and performing arts. Student projects will be designed using the ‘*California Common Core*’ and ‘*Next Generation Science*’. The new century demands that all students be effective communicators, speak clearly, put their thoughts into print, and have the ability to adapt to any

situation. We will guide students in developing skills that allow them to collaborate across social, linguistic, and cultural lines.”

The CAE Magnet will be a wall-to-wall project-based learning school that allows student a degree of choice on topic and/or project presentations resulting in culminating projects that solve real world problems. These projects will involve multiple disciplines and feature the teacher in the role of facilitator rather than leader.

The vision of CAE is to provide students with a comprehensive learning experience beginning with an understanding of the natural world (science) and their role in extending the natural to the human-made world (technology, engineering, math) through various forms of expression and creativity (arts). The goal is to foster true innovation that comes with combining the mind of a scientist or technologist with that of an artist or designer. In this framework, students are given the opportunity to use the skills learned in the core classes for a deeper transference of learning among all disciplines, and are provided a venue of learning that is more adaptable for engagement.

CAE realizes that the emphasis on the math, science and technology, while necessary for the demands of the 21st century, is incomplete unless they continue to nurture their students’ capacity to create and imagine. Students will be able to select from a catalogue of unique courses depending on the pathway chosen: Science and Technology; Engineering and Technology; Mathematics and Technology; or Cinematic Arts and Technology. Students matriculating from one grade to another will be required to present a portfolio of their work for assessment. In addition to the District mandated curriculum, courses being considered for middle school students include: Advanced Mathematics, Intro to Design, Film, Graphic Arts, Art History, Digital Imaging, Robotics, Exploring Media, Computer Literacy, Computer

Animation, and Forensics. High school students will meet the A-G requirements with the following courses offered to support their theme choice: (Science/Technology Pathway) Forensics, Genetics, Intro to Bio Tech Science, Environmental Technology, Bio Med Science, Bio Med Technology, Research/Exploration, AP Courses, Innovation 12; (Engineering/Technology Pathway) Principles of Engineering Design, Applied Engineering, Intro to Engineering Science, Robotics, and, Game Design; (Mathematics/Technology) Discrete Mathematics, Math Analysis, Statistics and Probability, Trigonometry, Advanced Applied Math, AP Calculus; and, (Cinematic Arts/Technology) Cinematic Art, Filmmaking, Film Production, AP Studio Art, Photo, AP Art History, Advertisement, Design Cartoon, Animation, Graphic Art, and Film Integration Art.

The Cinematic Arts and Engineering Magnet is located adjacent to the University of Southern California (USC) campus. This provides a plethora of academic partners that can assist with the new reform and new direction of the Magnet. These entities are strong supporters of theme-based education and related activities, and will be approached to become collaborators in this new venture: USC School of Cinematic Arts; Thornton School of Music; USC Rossier School of Education; USC Viterbi School of Engineering; USC Roski School of Fine Arts.

Teachers will also use area resources that are in close proximity to the school, including: USA Olympic Swim Stadium, the California Science Center and the Air and Space Museum, IMAX Theatre, Hollywood Actors Guild, 24th Street Theater, Hoover Park Afterschool Programs, Exposition Park Intergenerational Community Center (EPICC), Natural History and California African American Museum to further support theme-based instruction.

Orville Wright Engineering and Design (EAD) Magnet, a grades 6-8 middle school Magnet, will open with approximately 700 students during the first year of the Grant. This is

also a significant revision school that is combining its comprehensive middle school with its smaller Aerospace Magnet Center to become a wall-to-wall, full school Magnet. The new vision, developed by the teachers and administrators, is to “provide a rigorous, diverse, integrated, project-based curriculum that blends Science, Technology, Engineering and Math with the Arts.” It should be noted that the school has opted to keep Aerospace as one of the sub-themes of the Engineering pathway, however plans are to broaden the theme to include the Engineering Design and Engineering Technology. Students at the Engineering and Design Magnet will use creativity and innovation to think big, make things and solve problems within a standards-based curriculum.

Orville Wright teachers believe that their students are destined to lead the nation during this epoch in time. They say, “Our STEAM curriculum has the potential to directly support the United States economy. As such, we will question the status quo, always take risk to refine our practice, stretch our skills and unfetter our imaginations to better prepare our students to take their rightful place as fully prepared citizens, scholars and workers of the 21st century.” The Principal at the Wright has challenged his teachers to “dream big and prepare our students to form the spine of our country’s economic and workforce transformation”.

The Magnet will offer a chance for students to take classes in beginning and advanced Flight Simulation and Art Design. The staff at Wright want to make sure that their Magnet offers a creative pathway for all who wish to attend. Per their proposal, they note: “We realize that the emphasis on the Sciences, while necessary for the demands of the 21st Century, is incomplete unless we continue to nurture in our students the capacity to create and imagine . . . The sciences and the arts have always worked in tandem to innovate and move our civilization forward. We believe that Wright is uniquely poised to be the center of a Science, Technology,

Engineering, Arts and Mathematics educational pipeline that integrates artistic design into the curriculum for every student.”

As with the other schools in the STEAM Magnet School Network, Wright will base their curriculum on career pathways outlined in *The California Career Technical Education Framework for Engineering and Design*. They will provide a standards-based instructional program that integrates STEM with the Arts. Their elective course offerings will provide students with instruction in a variety of visual, digital, and performing arts. Their STEM classes will include engineering, drafting, robotics, Intro to Aerospace/Aeronautics, and computer programming. The school is hoping to partner with Project Lead the Way/Gateway to Technology and plans to offer the courses prescribed: Design and Modeling, Automation and Robotics, Energy and the Environment, Flight and Space, Magic of Electrons, and Science of Technology.

Wright is located near the Los Angeles International Airport (LAX) and the campus of Loyola Marymount University (LMU). School and District leadership will work to establish a partnership with the LMU College of Communication and Fine Arts, School of Education and the College of Science and Engineering. The school will also have an opportunity to forge partnership alliances with Otis School of Design.

New Magnet School Projects

Washington Irving Advanced Mathematics, Music and Engineering Magnet will begin with a student body of approximately 650 students in grades 6-8. The teachers and administrators believe strongly that a Science, Technology, Engineering, and Mathematics program “will [reverse the declining enrollment and] reinvigorate our school by bringing a [more] diverse group of kids and parents back to our campus. Moreover, we believe a STEM

school best serves the needs of our students . . .” Their proposal states, “We want to build the best STEM school in Los Angeles . . . a hub for Science, Engineering, Technology, and advanced math learning, and a place where kids are innovative. We will create a student-centered approach to problem-solving and innovation. It is precisely because we want to be the very best STEM school that we know we must be the very best STEAM school. This belief reflects the reality of both how the human mind works and what the 21st Century working environment now expects.”

Staff at Irving believe that the human mind requires each individual to be involved in creative problem solving using both hemispheres of the brain - left and right, constructive and descriptive, intuitive and logical, approximate and precise, working hand in hand, together. The writers of the proposal recognize that there is an inextricable relationship between the sciences and the arts. They cite that, “As students develop mastery in one, they simultaneously improve proficiency in the other.” In multiple studies, students who studied music showed improved spatial temporal reasoning skills, which helped them later learn math concepts (Graziano, 2002). Students who participate in the arts also consistently do better on standardized tests, including the SAT, than students who study core content alone. (College Board, 2006) The belief system is that “the right and left hemispheres of the brain work best in concert, aiding and enabling creative solutions to complex problems.”

The leadership team at Irving worked diligently on their proposal. The following is extrapolated from their plan. They wrote: “We also believe that, in order for a STEAM school or a STEM school to be successful, at its core, it must expect, demand, and support academic rigor. In particular, we believe that the mathematical literacy of the highest degree should be expected to be supported for all the students in such a school . . . math instruction must be personalized

enough that students can accelerate at their own pace, regardless of their grade or starting point. As such, math instruction must be portfolio based, data-driven in real-time, and personalized for each student.

“Our school will focus on a college-readiness core curriculum that will build the foundation for inquiry and project-based learning in all subject areas. As the 21st Century learner will need to cultivate creative confidence to arrive at solutions to problems in both the classroom and community, our school will set up the parameters to foster a student-centered approach to problem solving and design innovation. In each classroom, students will engage in open-ended inquiry-based discussions, use technology to help solve problems, and utilize math and critical thinking skills creatively to shed new light on solutions. By design, our learners will incorporate their knowledge in artistic skills and talents to approach problems in novel ways by using modern collaborative instructional strategies.”

There will be three elective pathways at Irving: STEM, Fine Arts, and Design Studio. Regardless of the student’s choice, each strand will be deeply embedded with Common Core content standards. In addition to the District’s core instructional program, students will choose from a bevy of classes to round out their program. These courses include: 3-Dimension Art/Design, Advanced Robotics, Animation Projects, Art Fundamentals, Astronomy, Beginning Dance, Computer Maintenance, Conceptual Physics, Digital Publications, Journalism, Electronic Art/Design, Intermediate Dance, Intro to Computer Assisted Drafting, Orchestra, Pre-Engineering/Science Tech, Robotics, Science and Technology, Studio Art, Video Production, Visual Communications, Web Design.

The Magnet plans to cultivate and fertilize these core values: responsibility, creativity, community, well-being, and global mindedness in its students. These “life skills” will be woven

into the daily experiences of all students. Admittedly, though, the school realizes that they cannot “go it alone” in educating the students. They will partner with other institutions and community organizations to assist them in reimagining and strengthening the curriculum outside of the classroom. Partners will include museums, local and non-profit organizations, cultural institutions, colleges and universities. Closest in proximity to Occidental College, Irving Magnet will seek the support of departments with majors closely aligned with the new themed pathways. The Math, Music, and Engineering Magnet have highlighted a plan to form a multi-faceted community that will help foster and strengthen scholarship, research, and interactions that take student learning beyond the classroom walls.

The Sun Valley Steam Campus is the largest of the four schools in the Network with a projected enrollment of 1150 students (grades 6-9) during year one, increasing to approximately 1500 students when it reaches full 6th-12th grade capacity. Currently, Sun Valley is a comprehensive grades 6-8 Middle School that is converting into three Magnet programs, one of which will add a high school beginning with 6th through 9th grade in year one and adding one high school grade level per year.

All three Magnet programs will require students to take foundational courses and respective specialization courses in STEM. Students will also get additional elective STEM courses specific to their pathway choice. STEM elective teachers will be hired and trained to teach the curriculum or have a specialization in the Magnet theme.

AVID (Advancement Via Individual Determination – www.avid.org), will become a school-wide reform and all students will be participants. AVID is a proven, intensive college-readiness system that is designed to increase school-wide learning and performance. AVID provides professional development (PD) for teachers on research-based methods of effective

instruction and provides meaningful and motivational professional learning. All teachers will also receive training for project-based learning through a recognized research-based program such as the Buck Institute for Education (BIE – www.bie.org).

a. Engineering, Art and Technology (EAT) for Global Progress Magnet (6-8) envisions the development of student interests in the areas of science, technology, engineering, arts and mathematics in order to infuse change in our society by creating citizens who, as critical thinkers and innovators, will transform their community, their country and the world.

All students will be required to take courses such as (1) Inventions, Technology and their Impact on Humanity, (2) Computers and Technology, (3&4) Introductory and Advanced Animation Programming, (5) Automation and Robotics, (6) Design and Modeling, (7) Flight and Space and (8) Magic of Electrons.

b. Environmental Studies (ESAS) through Arts and Sciences (6-8) Magnet envisions the development of student interests in Environmental Studies. ESAS is a STEAM-based middle school Magnet that understands that the fusion of arts and sciences is what helps to develop true innovation. Students need the creative development that comes from the arts in order to have breakthroughs in science and technology. A 21st century world cannot ignore the impact of humans on the environment. Their goal is to increase student interest and participation in environmental protection, and to lay a foundation for future studies in this field.

All students will be required to take courses such as (1) Introduction to Environmental Studies, (2) Water and Air Pollution Impacts on Ecosystems, (3) Computers and Technology, (4) Automation and Robotics, (5) Design and Modeling, (6) Energy and the Environment, (7&8) Beginning and Intermediate Green Architecture and Design. These two final electives will help support the development of essential skills in design of new structures, systems or models for a

greener planet. Partnerships for the purposes of research, field-work, project-based learning, service learning and internships include the following: Afflack, Heal the Bay, Tree People, the Lego Mindstorm Project, and Generation Earth.

c. Biomedical Sciences, Engineering, and Leadership (BSEL) Magnet – (6-12) envisions graduating students with a strong foundation in Biomedical Sciences or Engineering, able to face the challenges of our world, be prepared to go into the workforce, and/or to pursue higher levels of education. Their graduates will utilize critical thinking and creative processes of writing, listening, speaking, mathematical and scientific methodologies in order to successfully navigate through the obstacles and opportunities of contemporary society.

BSEL will offer a rigorous advanced math and science curriculum to all students beginning in the 6th grade. Students will take a year-long Advanced/Exploratory Math Elective in 6th grade to ensure that all students obtain a solid foundation in mathematics from their first year. They will then take exploratory elective courses in (1) Automation and Robotics, (2) Design and Modeling, (3) Science of Technology and (4) Medical Detectives. In 8th grade all students will take either a year-long science elective course in Introductory Biology or Anatomy & Physiology to better prepare them for a more rigorous high school science curriculum. In addition to a strong A-G curriculum all high school students will be required to take 4 years of math and science including at least 1 Science and Math AP course.

Students will also have the opportunity to choose an individualized area of concentration following a multiple pathways curriculum that prepares students for college and/or the workforce. High school students will be required to take 4 years of a STEM elective class and may choose one of two distinct pathways: the Biomedical Sciences Program or the Engineering and Design Program.

Professional Development that supports teachers in the development of strong engaging lessons that integrate well with the STEAM curriculum will be offered. Students will leave ready to be effective members and leaders of teams of scientists and engineers.

(b) Increasing the Opportunity for High-Quality Preparation of Teachers of STEM Subjects

Creating a STEAM Magnet Network will require a shift in thinking for all of its participating schools. Implementing the type of Magnet schools that are being proposed will not be possible without considering how best to support teachers as they transition into the 21st Century STEAM instructional model. All schools in the Network will begin their STEAM journey by partnering with programs that have researched the integration of STEAM-related content into the core curriculum. These partners will assist teachers in learning about and planning appropriate project-based activities related to the STEAM theme at their schools and for their grade level.

Any paradigm shift requires time. Time for teachers to learn new teaching strategies, delve deeply into the curriculum to develop theme-related magnet lessons, and to work collaboratively to integrate core and theme. They will need time to create school-wide, grade level, and content area goals in order to produce a school that develops critical thinkers, problem solvers, and innovators. To support teachers in their growth and knowledge of STEAM content, each school will plan a minimum of 30 hours per school year of Magnet-themed professional development.

As one of the new schools so eloquently expressed in their proposal, “The days of disconnected professional development devoted to agenda items and district compliance measures will no longer be relevant . . .” Network schools are going to rethink “change”.

Teachers must personalize the learning experience for students; but to do that, the leadership (school site and District), must first personalize the learning experience of the teachers. Both veteran teachers and those new to the field must make a conscious effort to implement reforms that are conducive to the 21st Century teaching and learning. In other words, teachers must “change” their current teaching practices in favor of a new design that promotes independence, innovation, and creativity in their students. Thus, teachers at the Network schools will also participate in a minimum of 30 hours of systemic reform professional development annually. Areas of systemic reform to be considered will include (but not be limited to): differentiated instruction, project based learning, culturally relevant and responsive education, cooperative learning, support for English Language Learners, assessment, Common Core, and data driven decision-making. Additionally, teachers at all Network Magnet schools will focus on the research-based strategies presented in the District’s *Teaching and Learning Framework* to effectively meet the needs of diverse learners, including Special Needs and Students with Disabilities. The Teaching and Learning Framework will also be an appropriate guide to assist teachers in analyzing, reflecting upon and improving their teaching practice both independently and collaboratively.

At the end of the MSAP grant - having completed more than 180 hours of mandated professional development; having experienced a variety of delivery methods; and having heard from various experts, from “home grown” to researchers - the LAUSD STEAM-initiative Magnet School Network teachers will have a diversified portfolio of educational strategies and planned Magnet integrated curriculum to continue the STEM-to-STEAM instructional model long after MSAP has ceased to provide support.

(a) PLAN OF OPERATION

(a)(1) Introduction

The 2013 MSAP Grant will support the District's efforts to improve curriculum development, professional development, and instruction at two significantly revised and two newly established Magnet secondary (grades 6-8 and grades 6-12) schools. These schools were selected because they are located in prime areas that have the potential to (1) bring together students from different economic, ethnic and racial backgrounds; and, (2) provide equitable access to challenging theme-based academic curriculum.

The new Magnet schools will provide an opportunity for middle- and high-school students, throughout the District, to participate in a new theme-based Magnet program that focuses on Science, Technology, Engineering, and Mathematics (STEM), infused with the Arts (STEAM). Each STEAM Magnet will prepare students to become competitive innovators who use both the logic-driven left half of their brain and the creative right. STEAM Magnets will develop 21st century critical-thinking learners who master their cognitive/concrete and creative/abstract talents.

Magnet schools falling under the STEAM-themed umbrella include:

- **LAUSD/USC Cinematic Arts and Engineering Magnet (6-12)**
- **Orville Wright Engineering and Design Magnet (6-8)**
- **Washington Irving Advanced Mathematics, Music, and Engineering Magnet (6-8)**
- **Sun Valley STEAM Magnet Campus:** Environmental Studies through Arts and Sciences Magnet (6-8); Engineering, Arts, and Technology for Global Progress Magnet (6-8); Biomedical Sciences, Engineering, and Leadership Magnet (6-12).

(a)(2)(i) Effectiveness of management plan to ensure proper and efficient administration of project;

The Los Angeles Unified School District has planned, operated and effectively managed Magnet Programs since their inception in 1977. Currently, the District has 182 Magnet Programs serving more than 50,000 students. These Magnet schools are considered first choice for parents and students seeking a successful program that maintains high educational attainment. The management plan that follows includes key components of how and why Magnet schools are in the forefront of effective implementation.

Los Angeles Unified School District has successfully managed federal and state funded programs for more than 600,000 students amid devastating economic downturns, drastic budget deficits, and declining enrollment. District programs essential to effective management include, the Superintendent's Office, Creating and Supporting Quality Schools Division, and Student Integration Services.

At the helm of the District is Superintendent John Deasy who states in the 2012-2015 Strategic Plan, "Performance Management is not a new initiative, but the new way in which we will manage LAUSD and hold ourselves accountable." The Performance Management Cycle has been implemented with fidelity including all elements of the Cycle: Performance Goals & Targets, Planning, Performance Tracking, Performance Dialogues and Plan Adjustments, and Results and Implications for each area of the scorecard. Every unit within the District follows and is supported by the Performance Management Cycle to maintain transparency, measure goals/targets, and adjust the course of action to achieve desired outcomes and results. Monthly goals and performance dialogues provide strict adherence to all stated goals and targets.

Systemic Key Performance Indicators receive high levels of scrutiny as an accountability monitoring tool. The Superintendent is committed to the reduction of minority group isolation in as many schools as possible and the creation of high quality Magnet schools that provide an equitable choice for youth and families.

Creating and Supporting Quality Schools (CSQS) Division provides needs-based, differentiated services and supports, across Los Angeles Unified School District's wide range of schools and diverse communities, to improve student achievement and increase student and community engagement. The District's portfolio of schools includes Magnet Programs and other programs designed to offer school choice options. This division uniformly supports all school models through common accountability frameworks, tailored programmatic offerings and responsive oversight. Magnet Programs consistently embody tenets, such as: strong culture, solid curriculum, shared practices, reflective instructional leaders, and accurate assessments. Additionally, this Division supports oversight of funding through scheduled Performance Dialogues. As Portfolio Schools, LAUSD Magnet schools are guided through Performance Management including specific processes and accountability measures that drive continuous improvement in all areas of teaching and learning, supporting productive learning conditions and effective performance management. An important component of Performance Management includes Constructing Budgets to achieve results. The Division is committed to monitoring effective use of all funds and resources through scheduled meetings, review of goals, targets, key performance indicators and adjustments designed to achieve desired successful outcomes.

Student Integration Services will provide expertise at every level to LAUSD Magnet Programs. Currently the Director of Student Integration Services, Estelle Shepherd Lockett, has

full responsibility and oversight for operations, fiscal accountability, and academic achievement of all 182 Magnet Schools/Centers. As Program Director, Ms. Luckett will continue to implement the necessary policies and regulations that guarantee effective performance of all fiduciary matters. Further, as Program Director, she will ensure continued implementation of the Court Order, Board of Education policies, administrative rules/regulations, and all budget rules and regulations pertaining to Magnet Programs. Her leadership and expertise will steer the day-to-day functioning of the MSAP grant.

A. Central Office Level

Magnet Programs in Los Angeles Unified have a leadership team with strength and capability related to all aspects of proper management and administration of these programs including innovative educational design. In addition to the Program Director, other MSAP team positions are the Magnet Project Director, Instructional Theme Coordinator, Intervention Support Coordinator, Magnet Program Recruiters, Community Representatives, and the Magnet Program Financial Analyst.

The Magnet Project Director will provide overall Central Office oversight for the operation of all MSAP schools. This Central Office staff member will serve as a direct report to the Program Director with supervisory responsibility for MSAP principals, coordination of project activities, curriculum development, recruitment and selection activities, as well as direct supervision of all MSAP staff, both Central Office and School Site (Instructional Theme Specialists, Intervention Teacher Advisors, Magnet Program Liaisons, Micro-Computer Support Assistant, and Secretary).

Overall fiscal responsibility for the operation of the MSAP program will be assigned to

the Magnet Program Financial Analyst, responsible for all development, dissemination and budget reporting for the MSAP schools. This staff member serves as a direct report to the Program Director and is able to maintain continuous communication designed to provide support to all mandated centralized state and federal reporting tools and accountability instruments. This position is funded centrally by the District.

Magnet Focus Advisory Group

The Magnet Focus Advisory Group is chaired by the Program Director and is comprised of concerned parents, members of various Community Based Organizations (CBO), representatives from School Site Councils, Magnet Coordinators, Magnet Principals, parents of English Learners, parents of gifted and talented students, parents of Educationally Disadvantaged Youth, parents of students with disabilities, and members of grass roots organizations. This Advisory group meets a maximum of 4 times annually to share concerns about the quality of Magnet schools, the recruitment and application cycle and to preview the application process and release of the Choices Brochure and review. Agendas are developed jointly by the Program Director, MSAP staff and members of the advisory group. Recommendations from this group are shared with Senior Staff and may be implemented at the discretion of the Superintendent.

Administration of the project at the Central Office level is illustrated by the organization chart. (See Attachments)

Central Office Reporting Relationships

The Program Director will have the primary responsibility for successful implementation of the MSAP grant including all required goals, objectives, and reporting and relating to the District policies, procedures, rules and regulations. The Program Director will maintain constant

communication with the District Superintendent through his predetermined designee, Chief of Intensive Support and Intervention (Senior Staff) and the Creating and Supporting Quality Schools Division. All District support and resource personnel will be coordinated through the Magnet Program Director, observing existing protocols and Senior Staff reporting procedures.

As necessary, the Program Director will consult and confer with the Office of Curriculum Instruction and School Support, Division of Special Education, Office of Data and Accountability, Federal and State Education Programs, Parent Community Services Branch, and the MSAP Advisory Committee.

Further, the Program Director through the Student Integration Services office will be responsible for continued implementation of the voluntary Court Order to address the five harms of racial isolation: Low Academic Achievement, Low Self-Esteem, Lack of Access to Postsecondary Opportunities, Interracial Hostility and Intolerance, and Overcrowded Conditions.

The Magnet Project Director will have full responsibility for all MSAP schools including continuous communication with the Magnet Program Director. Reporting responsibilities include coordination of MSAP schools; supervision of all MSAP staff; facilitation and coordination of MSAP curriculum and professional development; MSAP monitoring and site visitations; and other duties as assigned and described in the Quality of Key Personnel section of this proposal.

The Magnet Program Financial Analyst has full fiduciary responsibility for all MSAP grant activities. Serving as a direct report to the Program Director, the Financial Analyst will maintain regularly scheduled meetings and routine reporting cycles that coincide with the Performance Management structured Budgets dialogues and meetings. As required, he will

adhere to all federal and state guidelines and follow protocols established by the Program Director. As directed, he will consult with Federal and State Education Programs, Budget Services and Accounting, and Human Resources to ensure that all General Accounting Procedures and mandated district policies are implemented. All other duties and assigned tasks are described in the Quality of Key Personnel section of this proposal.

School Level Management

The LAUSD MSAP grant management plan embodies innovation and collaboration within all stakeholder groups: students, teachers, parents, administrators and community members. Each MSAP school will work directly with the Magnet Project Director to implement a high-quality Magnet program designed to lead schools to the use of 21st Century skills and a selected governance models that allows for streamlined decision-making and communication channels that facilitate change. Working with the Single Plan for Student Achievement, each school will be able to establish systemic measures for planning the use of resources, curriculum development, professional development, data-driven assessment, and coordination of activities aligned to a successful cohesive school program.

The MSAP grant will be evaluated by a team of consultants with special experience with Magnets at the building level, district level and post-secondary level. This team will direct both formative and summative evaluation activities that lead to interim and final evaluation reports for the MSAP grant. The Evaluation Team will monitor the MSAP grant through regularly scheduled visits with key grant and school personnel. Suggestions for program improvement will be continuous and based upon the stated goals and objectives of the MSAP grant.

The LAUSD MSAP management plan is the roadmap for successful grant

implementation. Overall, the plan enhances full implementation at each MSAP school site with flexibility based upon school needs while adhering to project goals and objectives. The plan has seamless administrative support at all levels Central, School, and MSAP staff. To ensure equity and access within every aspect of the grant, collaborative support is a necessity. All school populations, sub-groups including students with disabilities, gifted and talented, English Learners, Standard English Learners, Socio-economically Disadvantaged students will have full active participation at each STEAM Network school. The achievement of all project goals and objectives leading to desegregation, improved academic achievement, access to post-secondary opportunities and systemic reform goals will be fueled by full STEAM network participation in rigorous curriculum, themed instruction, and inquiry-based learning.

(a)(2)(ii) Effectiveness of plan to attain specific outcomes . . .

This proposal's outcomes (i.e., objectives and performance measures) are aligned with the six purposes of the Magnet Schools Assistance Program (MSAP). A set of objectives and performance measures follow the Program Purpose they address.

Program Purpose (1): The elimination, reduction, or prevention of minority group isolation in elementary and secondary schools with substantial portions of minority students...

All proposed magnet schools will reduce minority group isolation by decreasing the percentage of one or more groups of minority students (e.g., American Indian/Alaskan Native, Asian, African American/Black, Hispanic/Latino) and increasing the percentage of White students as a result of the Magnet program described in this proposal. Every student will fully participate in the program. All schools can accommodate the numbers of students needed to achieve desegregation goals. **Objective 1.** Minority group isolation will be reduced at the proposed

Magnet schools. (Addresses MSAP Performance Measure a.)

Performance Measures 1.1-1.5: By October 1 of each project year, approved enrollment targets for each racial group (see **Table 3: Enrollment Data-Magnet Schools**) will be attained by reducing minority group isolation of one or more groups (e.g., the percentage of American Indian, Asian, Black, Hispanic students) at each proposed magnet school (using 2012-13 as the baseline) by at least 2 percentage points by year 1, 4 percentage points by year 2 and 6 percentage points by year 3. The schools are: **1.1** LAUSD/USC Cinematic Arts and Engineering Magnet; **1.2** Orville Wright Engineering and Design Magnet; **1.3** Washington Irving Advanced Math, Music & Engineering Magnet; **1.4** Sun Valley STEAM Campus. Their 2012-13 enrollments are:

School	Amer. Indian/ Alaskan Nat.	Asian	African-Amer./ Black	Hispanic/ Latino	Nat. Hawaiian or Other Pacific Is.	White	Two or more races	Total # Students
LAUSD/USC	0%	4.08%	11.60%	77.43%	0%	6.90%	0%	319
Wright	0.84%	3.56%	63.30%	21.55%	0%	3.70%	0%	478
Irving	0.31%	12.11%	1.26%	83.81%	0.16%	2.36%	0%	636
Sun Valley	0.18%	1.27%	1.18%	95.83%	0%	1.54%	0%	1102

On the table above, *Total #* is the total number of students enrolled in each school.

Sun Valley Biomedical Sciences, Engineering, and Leadership (Grades 6-9) will open in the fall of 2013 as part of the Sun Valley STEAM Magnet Campus which currently includes grades 6-8. During implementation years 2 (2014) and 3 (2015), they will add grades 10 and 11.

Year 4 (2016), grade 12 will be added.

1.5 For each project year, each magnet school will receive at least 65 applications.

Purpose 2: To develop and implement magnet school projects that will assist local education agencies achieve systemic reforms, and provide all students the opportunity to meet challenging State academic content standards and student academic achievement standards;

The implementation of systemic reforms, magnet themes and rigorous curricula for all students will be facilitated and supported by the project and district office resource staff.

Objective 2: All students will receive instruction that includes their school's systemic reforms and magnet themes in units and courses aligned with State standards.

Performance Measure 2.1 By October 15 of each project year, each magnet school's Magnet School Plan will be revised and include objectives and activities that support: ► the adoption of high standards for all students and ► specific systemic reforms (e.g., Common Core Standards, Inquiry, Project Based Learning); and describe how they are coordinated with MSAP activities. Success will be determined through inspection of each school's plan. Implementation success will be measured by performance measure 3.1.

Purpose 3: The development and design of innovative educational methods and practices that promote diversity and increase choices in public elementary and secondary schools ...

Magnet theme development and implementation and adoption of systemic reforms will increase diversity and choice because the curricula are distinctive (not offered at other schools at the same grade levels) and innovative (combine systemic reforms and unique magnet themes).

Objective 3. All students, at each magnet school, will receive magnet theme instruction.

Performance Measure 3.1 By the end of each project year, all students, at all magnet

schools, will receive magnet theme instruction coordinated with or including systemic reforms for at least 3 (year 1), 6 (year 2) and 10 (year 3) hours per week. Success will be determined through unit plan analysis and confirmed with surveys, interviews, and walkthroughs. Units and lessons produced as a result of this program will be peer reviewed.

Program Purpose 4: Courses of instruction within magnet schools that will substantially strengthen the knowledge of academic subjects and the attainment of tangible and marketable vocational, technological and professional skills of students attending such schools.

The California Department of Education has established the following Adequate Yearly Progress (AYP) targets for 2012-2013: (1) Proficiency in English Language Arts grades 2-8 (includes reading and writing): 89.2%; Proficiency in English Language Arts grade 10 (includes reading and writing): 88.9% (2) Proficiency in Mathematics grades 2-8: 89.5%; Proficient in Mathematics grade 10: 88.7% (3) Participation in Testing: 95%; and (4) Other Academic Indicator: The schools must have a minimum Academic Performance Index (API) score of 770 or exhibit a growth of one point from the previous year. In addition, high schools must meet one of the following: have a graduation rate of 90%, meet its four-year graduation rate fixed growth target rate, or meet its four-year graduation rate variable growth target rate. AYP targets in English language arts and mathematics under NCLB will increase to reach 100% proficiency in the 2013-2014 school year. (Please note that California does not have an NCLB waiver.)

Objective 4: Each year, for each magnet school, the percentage of students scoring at or above the proficient level on the California Standards Tests in English Language Arts (ELA) and mathematics will increase for each of the NCLB defined subgroups.

Performance Measures: 4.1-4.2. By the end of each project year, for each magnet

school, the percentage of students scoring at or above the proficient level on the California Standards Test (CST) for grades 6-8 or the California High School Exit Examination (CAHSEE) for grade 10 will increase by at least 10% for the total population and for each of the NCLB defined subgroups **4.1** in English language arts. **4.2** in mathematics. These objectives address MSAP U.S. Department of Education Performance Measures (b and c): *The percentage of students from major racial and ethnic groups in magnet schools receiving assistance who score proficient or above on State assessments in reading/language arts and mathematics.*

4.3 By the end of each project year, for each magnet school, the percentage of students who score at or above the proficient level on the California Standards Test (CST) for science will increase compared with the previous year. **4.4** By the end of year one, 2 of the 4 magnet schools will have attained AYP for their total population and for each NCLB subgroup. **4.5** By the end of year two, 3 of the 4 magnet schools will have attained AYP for their total population and for each NCLB subgroup. **4.6** By the end of year three, all four magnet schools will have attained AYP for their total population and for each NCLB subgroup. (Please note that AYP for high schools includes attaining the graduation rate standard cited above.) **4.7** By the end of the project period, as a result of the implementation of theme curricula, 75% of students at each magnet school will develop mastery of that curriculum as determined by end of course assessments and alternative performance measures such as portfolios.

Purpose 5: Improvement of the capacity of LEAs, including through professional development, to continue operating magnet schools at a high performance levels after Federal funding...is terminated. **Objective 5.** Provide professional development for magnet school teachers related to systemic reforms and magnet theme development and implementation.

Performance Measures 5: By the end of each project year, magnet school teachers will receive at least 30 hours of professional development (e.g., workshops, courses, coaching) in each of the following areas: **5.1** the development and implementation of the systemic reforms listed in the Magnet School Plan; and **5.2** directly related to the implementation of the magnet theme.

Other performance measures related to capacity building include: (2.1, 3.1) development and implementation of systemic reforms and magnet theme units and courses.

Purpose 6: Ensuring that all students enrolled in the magnet school programs have equitable access to high quality education that will enable the students to succeed academically and continue with postsecondary education or productive employment.

An important aspect of ensuring that all students enrolled in the magnet schools have equitable access to high quality education is to monitor access. Performance measure 6.1 will be reported on each year and monitored by the each magnet school's principal, the project staff including the project director, and the evaluator. As with all performance measures, schools not attaining the measure, will take corrective action approved by project and district staff.

Objective 6a: All students enrolled in the magnet schools will have equitable access to high quality education.

Performance Measure 6.1 By the end each project year, for each magnet school, at least 75% (yr. 1), 85% (yr. 2) and 95% (yr. 3) of classes (elementary) and STEM classes (secondary), will reflect their grade's enrollment for each racial/ethnic group and males and females by ± 15 percentage points.

In addition, performance measures 2.1, 3.1 are related to providing all students the

opportunity to meet challenging State standards including common core standards.

Parent involvement also promotes equitable access to high quality education for all students. **Objective 6b:** There will be an increase in parent participation at each magnet school.

Performance Measure 6.2 By the end each project year, for each school, there will be an increase (compared with the previous year) in the numbers of parents who participate in school activities.

(a)(2)(iii) Effectiveness of plan for using its resources and personnel . . .

Eliminating Minority Group Isolation STEAM Network schools will operate in conjunction with the District Court Order to eliminate, reduce and prevent minority group isolation within the boundaries of Los Angeles Unified School District. The 2012-2015 Strategic Plan states that the District is committed to equity and access to excellent schools for all students. The District has consistently maintained a 16-18% White student population in its Magnet program schools, even though, as a whole, the District, only reports an 9% overall White student population. All STEAM Network schools will reduce minority group isolation by decreasing the percentage of one or more groups of minority students and increasing the percentage of white students by creating attractive learning opportunities.

Uses of Resources and Personnel to Achieve These Objectives

The success of these objectives depends on the following key personnel who will have important roles in the recruitment plan that will be described in detail in the next section:

Magnet Project Director, Instructional Theme Coordinator, Intervention Support Coordinator, and two Magnet Program Recruiters and two Community Representatives. Magnet Schools Assistance Program funds are being requested for the Magnet Project Director, Magnet Project

Director, Instructional Theme Coordinator, Intervention Support Coordinator, two Magnet Program Recruiters and two Community Representatives (centrally); Instructional Theme Specialist; Intervention Teacher Advisor, Magnet Program Liaison Assistant, and Micro-Computer Support Assistant (at each school site). All other personnel will be paid for from local funds.

The Project Director and Magnet Program Recruiters will have the overall responsibility of coordinating and implementing the recruitment plan. The recruitment materials to be developed include but are not limited to school brochures, video tapes, print ads, press releases for local newspapers, radio and television stations. All materials will be developed by the Project Director and the Recruiters. Translation services will be coordinated by the Project Director with the Translation Unit to either translate or supervise the translation of all recruitment materials and applications to Spanish, Armenian, Russian, Chinese, Korean, and all other languages that are represented in LAUSD.

The Magnet Program Recruiters, under the direction of the Project Director, will present magnet programs to parents convincingly. Recruiters will give presentations in a variety of settings. Recruiters will be trained to assist parents in the school selection process and the application process. Each Recruiter will maintain records of daily contacts, follow-up visits, letters and telephone calls. They will make appointments with parents for magnet school visits and meetings with magnet staff. Because recruitment is so important, having a full time position to coordinate and support the entire process described in this proposal is essential.

School brochures will be developed and produced by each school with the support of the Magnet Program Recruiters and the Project Director. Recruiters will coordinate the

dissemination of brochures and other school created recruitment materials as well as plans for school tours. The Principal of each magnet school will be responsible for the completion and implementation of these school based recruitment activities.

Provide students with rigorous engaging STEM coursework At the secondary level, Science, Technology, Engineering, and Mathematics (STEM) education is used to identify individual subjects, stand alone courses, sequence of courses, activities involving any of the four areas, a STEM-related course, or an interconnected or integrated program of study (CDE, 2013). STEM introduces an interdisciplinary program of study consisting of rigorous and challenging courses; continues to provide standards-based, structured inquiry-based and real world problem-based learning that interconnects STEM-related subjects; increases student awareness of STEM fields and occupations, especially for underrepresented populations; and begins student exploration of STEM related careers. STEAM Network teachers in grade 6-12 will develop hands-on experiential inquiry-based lessons. All inquiry-based learning allows students to construct their own understanding of concepts, rather than simply being told information. Inquiry-based courses offer many advantages. Students develop stronger problem-solving and critical thinking skills, demonstrate greater understanding of concepts, retain information longer, and have a more positive view towards science than their peers in traditional courses (Brown, et al, 2009). Instructional Theme Specialists will share Linked Learning opportunities designed to increase participation of underrepresented groups and provide lessons for all students (English Learners, Standard English Learners, socio-economically disadvantaged, students with disabilities and gifted and talented students). Secondary students will be able to connect with engineers who share the same gender, ethnicity, language and culture. Websites will portray

pictures of women engineers at work; post questions and answers of female engineers; link career pathways; provide age appropriate games and challenges, and host real-world competitions for teams and individual students.

The NASA Digital Learning Network™ supports the 5E constructivist learning cycle, representing five stages of a sequence for teaching and learning: *Engage, Explore, Explain, Extend (or Elaborate), and Evaluate*. Modules of this caliber promote STEM education for underrepresented groups while creating pathways to post-secondary opportunities.

Uses of Resources and Personnel to Achieve These Objectives

The Project Director will coordinate the development of magnet theme curricula units. School teams and departments will concentrate on one unit per team under the direction of the Project Director, Instructional Theme Coordinator, Magnet Principal and other curriculum experts. Upon completion of several groups of units, the material will be piloted with students and refined to meet student needs. This is the cycle of curriculum development and testing that will continue through the life of the MSAP grant. In addition, all Magnet teachers, including special education teachers, will receive a minimum of 30 hours per year of high quality professional development including but not limited to effective use of heterogeneous grouping, differentiated instruction, cooperative learning, culturally relevant and responsive pedagogy, inquiry-based instruction, project-based learning and other rigorous engaging pedagogy and strategy instruction. Magnet School Assistance Program funds are requested to support development of units, training and high-quality professional development.

Opportunity for High-Quality Professional Development High Quality professional development opportunities for magnet teachers will take the form of a minimum of 30 hours of

professional development in STEM. Magnet teachers have options of attending workshops, attending other approved coursework, and participate in STEM theme-based coaching sessions.

The Project Director will coordinate the development of magnet theme curricula units. School teams and departments will concentrate on one unit per team under the direction of the Project Director, Instructional Theme Coordinator, Magnet Principal and other curriculum experts. Upon completion of several groups of units, the material will be piloted with students and refined to meet student needs. During the curriculum development process, teachers will create interdisciplinary and multidisciplinary unit. This will be accomplished during department and team meetings. This process will include alignment of Common Core standards for appropriate secondary grades and subjects for STEAM specific lessons. Magnet School Assistance Program funds are requested to support development of units, training and high-quality professional development.

(a)(2)(iv) Ensures equal access and treatment for eligible participants . . .

One of the core values in LAUSD is the inclusion of all students in general education classes to ensure that everyone has equity and access to a high quality education. The District has a long history of providing services to students with disabilities on general education sites. Research supports inclusive education and its benefits to children with and without disabilities. Research also supports the increased participation of individuals with disabilities in society and shows that it fosters understanding and acceptance among peers.

The Magnet Program, under the direction of LAUSD, encourages all applicants and ensures that the needs of students with disabilities are met at levels equal to or greater than the resources on the comprehensive school campus. In fact, the following statement is published at

the beginning of the Magnet Choices Brochure so that parents are aware of the policy to be inclusive of all students: “Magnet programs are Court-ordered voluntary integration opportunities available to students in grades K-12, living within the LAUSD boundaries . . . All District students, including English Learners, Special Education and Gifted/Talented are encouraged to apply.”

The Magnet Program recognizes that girls are generally underrepresented in the fields of Science, Technology, Engineering, and Mathematics (STEM). It was noted that “women, minorities and people with disabilities represent two-thirds of the American workforce, yet are only a small fraction of those working in science, engineering, and technology.” District Administrators and School Principals have banded together to create a STEM infused with the Arts (STEAM) themed Network of Magnet school that will encourage and embrace the participation of girls, students of color, and students with disabilities.

The 2012-15 District Strategic Plan, *All Youth Achieving*, states: “We believe in possibilities. We believe in futures. We believe in transformation . . . and a commitment to equity and access to excellent schools for all of its 655,716 students.” The Superintendent of Schools, Dr. John Deasy, says: “I believe in the value of a quality education. I want this for every youth no matter where they live, what languages they speak, or how far behind they may be in learning basic skills.

(a)(2)(v) Effectiveness of plan to recruit students from different SES, ethnic and racial backgrounds

The Recruitment Plan

The Project Director and Recruitment Coordinator will have the overall responsibility of

coordinating and implementing the recruitment plan. The recruitment materials to be developed include but are not limited to school brochures, virtual tours, video tapes, print ads, press releases for local newspapers, radio and television stations. All materials will be developed by the Project Director, Recruitment Coordinator, and the Recruitment Specialists. Translation services will be coordinated by the Project Director with the Translation Unit to either translate or supervise the translation of all recruitment materials and applications to Spanish, Armenian, Russian, Chinese, Korean, and all other languages that are represented in LAUSD. The recruitment plan for LAUSD is designed to disseminate magnet school information to all parents from every racial and ethnic group and offer assistance to those who need it. The recruitment plan has extensive district and school level activities.

The Recruitment Campaign

Los Angeles Unified School District yearly initiates a large scale campaign to notify all eligible applicants about the Choices Application Process for Magnet schools. The launch of the recruitment campaign is a full-scale comprehensive announcement covering all known print media, television and radio stations throughout the Los Angeles and surrounding areas.

Choices Brochure, Post Cards, Bookmarks, Posters

Every known format of outreach is fully utilized throughout the Choices Application Process. Post cards are mailed to announce that the Choices Brochures will be available in two weeks. The Choices Brochures, in English and Spanish, are delivered to all LAUSD schools, Los Angeles City Public Libraries, LAUSD Headquarters, Educational Service Centers and Parent Community Services Branch prior to the opening of the Choice Application Process. Bookmarks and Posters in English and Spanish announcing the Choices Application process are

given to each student in grades K-11 enrolled in a LAUSD school.

Print Advertisement

Print advertisement is used to maximum advantage. Ads are run in the *L.A. Times*, *L.A. Daily News*, *L.A. Parent Magazine*, *La Opinión*, *L.A. Sentinel*, *Korea Times* and *The Wave* newspapers. These Community newspapers serve residents within specific circulation areas. Also, print advertisements in English and Spanish are placed on the tails of 25 Metro Buses that run throughout targeted sections of the LAUSD boundaries. The ads run for the duration of the Choices Application Process.

Email, Telephone, Online Tutorial

Connect-Ed messages (electronically generated telephone messages in English and Spanish) are sent to the contact numbers of all students and employees of LAUSD. E-Mail Blast announcements regarding the Choices Application Process are sent to all parents with an e-mail address on file. Both Connect-ED messages and Email Blasts are sent multiple times prior to the close of the application process. During the Choices Application Process, each time a parent performs a log-on to *eChoices.lausd.net*, they receive an offer of assistance from the On-Line Tutorial in English and Spanish. The tutorial gives step-by-step directions for completing the Magnet Application.

Radio and Television

Public radio stations in all language formats is used to air public affairs announcements about the Magnet schools. Educators and administrators from the magnet schools are interviewed on talk shows on those stations, in English, Spanish, Armenian, Korean, Russian, and other languages of parents in the District.

Television access is used to create an image, develop awareness, and direct the target groups to the applications when the sign-ups start. Network stations air public service announcements at least three weeks prior to the opening of the application process. A 30-minute television program is recorded for multiple broadcast times in English and Spanish on KLCS-TV, the District's Public Broadcast station.

Magnet Fairs and Tours

Magnet Fairs are held throughout LAUSD to encourage families to gather information about prospective schools. These fairs create interest with three-dimensional displays, posters, banners, table runners and attractive marketing tools. School themes are displayed boldly with many featuring multi-media presentations, videos and performances. Magnet School staff conducts lively dialogues with parents and students. Fairs provide specific information about the curricula and course content. Multi-media presentations showcase the magnet school spirit, pride and commitment to excellence. Following the Magnet Fairs, parents may follow-up with a request for a Magnet Tour.

Uses of Resources and Personnel

Coordination of the recruitment campaign is the responsibility of every member of the MSAP grant staff, from the Project Director, Recruitment Coordinator, and the Recruitment Specialists to the Magnet Focus Advisory group. The recruitment plan for LAUSD is a large scale project with timelines in place for each month of Magnet school operation. Requested MSAP funds will assure that the dissemination of all recruitment elements are available to all parents from every racial and ethnic group who need or desire assistance.

(b) QUALITY OF PERSONNEL.

Project Personnel

The Los Angeles Unified School District (LAUSD or the District) Magnet Schools Assistance Program grant will be run by a team of individuals with experience and competence in implementing innovative educational programs and designing effective Magnet Schools. All positions will support the significant revision of two existing Magnet Schools: *LAUSD/USC Cinematic Arts and Technology Magnet* – Grades 6-12 and *Orville Wright Engineering and Design Magnet* – Grades 6-8; and, the creation of two new Magnet Schools: *Washington Irving Advanced Mathematics, Music, and Engineering Magnet* – Grades 6-8 and *Sun Valley STEAM Magnet Campus* [with three distinct themes: Engineering Arts and Technology for Global Progress – Grades 6-8, Environmental Studies through Arts and Sciences – Grades 6-8, and Biomedical Sciences, Engineering, and Leadership – Grades 6-12].

(b)(1) Qualifications of personnel the applicant plans to use on the project.

The following are the key project Personnel who will be supported by MSAP funding and will work full-time (100%) on the project include: *Magnet Project Director, Instructional Theme Coordinator, an Intervention Support Coordinator, two Magnet Program Recruiters, and two Community Representatives*. Additionally, each school approved under this grant will receive (one position per school, a total of four in each category): *Instructional Theme Specialist; Instructional Teacher Advisor; Magnet Program Liaison Assistant; and Micro-Computer Support Assistant*.

MSAP funding will also support the services of professional development consultants, specializing in systemic reform or the Science, Technology, Engineering, and Math (STEM) infused with Arts (STEAM) theme, to assist teachers in building instructional capacity. The

consultants will be selected because of their proven expertise in their field, such as (but not limited to): The College Board, Project Lead the Way/Gateway to Technology Middle School Engineering Program, The Buck Institute, Expeditionary Learning, Jet Propulsion Laboratory/Sally Ride Science Center, The Science Center, University of California Los Angeles, and University of Southern California. Additionally, consultants will be hired to evaluate program effectiveness over the course of the three year grant.

(b)(2)(i) The Project Director is qualified to manage the project.

Magnet Project Director. Past experience confirms that the Magnet Project Director must be someone with evaluative authority over the selected projects. For that reason, the Project Director will have complete oversight over the 2013 MSAP schools and will ensure implementation and adherence to the tenets of the Grant. This person will be selected based upon his/her ability to manage schools slated for significant revision and schools starting new, innovative programs. S/He will support, monitor, and supervise the implementation of the STEAM-themed projects, assisting the principal at each site with the development of the program. S/He will supervise staff hired to carry out the Grant and will serve as the liaison between District divisions/offices, interpreting the MSAP grant to ensure understanding and support.

The Director must possess outstanding organizational skills; excellent interpersonal skills; a vision of desegregation and academic achievement founded on the belief that all students can meet high standards; and a commitment to alleviating the Court-ordered Harms of Racial Isolation: Low Academic Achievement, Low Self-Esteem, Lack of Access to Postsecondary Opportunities, Interracial Hostility and Intolerance, and Overcrowded Conditions. S/He shall have been a principal with successful Magnet school experience and possesses knowledge of,

and experience in, curricula development and the creation of theme-based programs. Additionally, this person must understand and promote the alignment of core and magnet curriculum to State and National standards; successfully conduct teacher training/professional development; and, be able to create/implement school improvement models that result in knowledge of the theme and increased student achievement.

The MSAP Project Director will work with the Magnet Program Director - Student Integration Services, the approved external evaluation consultants, and the USDE to ensure that the program objectives and performance measures are reported, and that all requested materials pertaining to the Grant are submitted. This person will coordinate and supervise the monitoring process, including site visitations at all MSAP schools. S/He will plan, organize and present professional development workshops on Grant compliance matters; will assist with necessary agreements related to compliance with federal, State and local agencies; and, will compile, organize and disseminate information regarding the MSAP grant. S/He will have knowledge of Federal, State, and local policies, rules, and regulations pertaining to the MSAP Grant; know District policy and procedures, goals and objectives, organizational structure and functions; understand and interpret California Education Code, Board Rules, District and MSAP regulations; and, know fundamental principles and accepted practices, current trends, and research in the fields of study outlined in this Grant.

Required qualifications for the Project Director will include: An administrative services credential; an earned master's degree or advanced degree from an accredited college or university; at least eight school years of successful full-time service in a certificated position (preferably as a Magnet Administrator), no fewer than two years of which must have been in a management position(s); At least four semester units in multicultural education or equivalent

study (multicultural understanding coursework must pertain to a minority group represented in the District student enrollment); At least two semester units each (six semester units total), or the equivalent, of coursework in culture, language, and methodology to meet the requirements of the District's Master Plan for English Learners.

Desired qualifications include: Proven ability to manage large projects; at least three years of experience in curriculum development; training and experience in creation of theme-based curriculum aligned with state standards; experience in the development of Magnet themes, specifically with the themes that are described in this proposal (Science, Technology, Engineering, Arts, and Mathematics [STEAM]); experience and knowledge related to Standards-Based education as it relates Common Core curriculum, instruction, and professional development; demonstrated leadership in the development of courses of instruction that substantially strengthen students' knowledge of academic subjects; and excellent interpersonal skills.

The *Project Director* will insure that staff time, at the four MSAP Magnet secondary schools, will be spent on the activities described in this proposal; that project funds are spent appropriately; and that all project activities are implemented effectively and on time.

It should be noted that Los Angeles also has 173 Magnet programs that have been successful in a variety of ways. The successful operation of these schools has also produced a cadre of teachers and administrators experienced in the operations of Magnet schools. Therefore, LAUSD currently has, among its professional staff, experienced principals, administrators and teachers, with the qualifications needed to ensure the success of this project. Selecting a Project Director who will supervise the creation and implementation of a successful themed project and be responsible for the documentation and evaluation for this project will advise the entire Los

Angeles community that the District is committed to the success of this project.

(b)(2)(ii) Other key personnel are qualified to manage the project.

The success of the 21st Century STEAM-initiative Magnet School Network depends upon the selection of staff that is knowledgeable in the STEAM-themed areas selected by the schools. The certificated positions listed below will be able to create programs that are innovative, train teachers to improve student outcomes by challenging them (students) to work independently and interdependently on rigorous project based STEAM-themed activities, and implement the missions, goals, and visions created in this proposal.

Instructional Theme Coordinator. The Instructional Theme Coordinator will provide expert advice, assistance, and leadership in planning, developing, organizing, implementing, and evaluating instructional programs, curriculum, and instructional materials in the STEAM fields of study. S/He will develop strategies for the assessment and evaluation of STEAM instruction in collaboration with the Office of Curriculum, Instruction and School Support, as well as with Student Integration Services. Additionally, this person will collaboratively plan and organize ongoing data-driven and focused professional development for the schools in the area of program curriculum, policies, and procedures. S/He will plan, organize, and conduct articulation meetings to promote community, school, and central/district offices understanding of the MSAP Grant.

The Instructional Theme Coordinator will coordinate the efforts of the school-based Instructional Theme Specialists, ensuring that all Magnet schools provide instruction in the STEAM theme(s) chosen. S/He will assist school administrators in working with teachers, Magnet Coordinators, and other staff to promote the STEAM themed instruction across all content areas, ensuring fidelity to appropriate strategies that provide access to core instruction, enrichment, and

intervention. Additionally, s/he will prepare necessary reports, letters, instructional bulletins and general communications relating to the STEAM curriculum.

Intervention Support Coordinator. The Intervention Support Coordinator will be hired to work with the STEAM Magnet School Network and to coordinate the efforts of the school-based Intervention Teacher Advisors, ensuring that all four Magnet schools provide core intervention services that are tied to the STEAM theme. The Coordinator will work solely with the four Magnets in the Network and will use the approved District systemic reform initiatives as one of the strategies for assisting teachers in providing high quality instruction or intervention that is matched to student need.

The Intervention Support Coordinator duties will include the: Using data (multiple measures) to identify areas of strength and need for instruction and behavior; conducting professional development in the areas of systemic reform, problem-solving models, analyzing of data, differentiating instruction and strategies, progress monitoring; presenting parents/guardians workshops on how to support students at home; developing and monitoring student intervention plans using an integrated data and assessment system; and participating on Student Support and Language Appraisal teams. S/He will facilitate the work of the Intervention Teacher Advisor at the schools to assist with the closing of the achievement gap. S/He should have a clear understanding of the individual school's instructional and intervention needs.

Magnet Program Recruiters. The two Magnet Program Recruiters will have demonstrated competence in the following areas: knowledge of the local community and neighborhoods; interpersonal skills; sensitivity to the needs of minority students and the families; knowledge of each school's STEAM theme and ability to discuss and relate school's features with parents and students; ability to communicate, and relate easily and comfortably

with parents and students from different racial, ethnic, and socio-economic backgrounds; sensitivite to the needs of minority students and the families; ability to maintain record-keeping procedures related to the implementation of student recruitment activities; ability to organize and conduct Magnet meetings for certificated and classified staff, the community, and parents.

Roles and Responsibilities: Each *Recruiter* will support two Magnet schools, working closely with the Project Director, other Project staff members and Magnet school staff on all aspects of student recruitment. S/he will assist in the development of recruitment literature; provide feedback concerning the efficacy of recruitment strategies; implement recruitment activities such as parent workshops, community outreach, scheduling of parent visits to schools; help parents complete Magnet school applications; explain Magnet school programs to parents and refer parents to the appropriate central office or school-based staff when more assistance or counseling is necessary for parents to make the best decision regarding which schools to choose; offer assistance to parents at school recruitment workshops and fairs, as well as during Open House, Back to School Night, school tours, and Parent Association meetings; maintain the collection of Magnet school literature and multi-media materials; act as a liaison with public libraries and community organizations regarding recruitment; train and assist parent volunteers to help with recruitment activities; attend community outreach, orientation and awareness sessions regarding the MSAP project; attend project staff meetings; encourage and arrange parent and student visitations to Magnet schools.

Community Representative. There will be two Community Representatives that will perform in a liaison role between the Central Office, the schools and the community. Services will be limited to advice or interpretation. The Community Representatives will participate as a resource advisor to principals, teachers, parents, and Project personnel concerned with school-

community relations.

Magnet School Principals. The principals of participating Magnet Schools will direct their schools' programs, working cooperatively with their School Teams, MSAP Staff, and Staff from the LAUSD Student Integration Services office. As the educational leaders of their schools, Principals will have overall responsibility for meeting the project's desegregation, instructional, systemic reform, and student academic achievement objectives. They will work collaboratively with the schools' staff to integrate the STEAM themed Magnet curriculum and activities into their school improvement plans. They will oversee the school-based Magnet activities and maintain open lines of communication with the central office, parents, and members of the community. These skilled, LAUSD administrators will bring decades of educational experience and expertise to the District's Magnet Schools Assistance Program. Their varied skills will enrich the project. While individual experiences and expertise differ, they all share a common commitment to creating school communities that achieve greater racial balance and offer challenging curricula to ensure that all students meet or exceed state content standards and student academic achievement standards.

Each Magnet principal is an experienced professional with years of teaching and administrative experience. All have been teachers and site administrators, with at least ten years of supervisory experience. They are all State of California credentialed school administrators and hold numerous university credentials. Further, they have: advanced degrees; 8-20 years of experience in curriculum development; extensive experience working with parents of varied ethnicities and socioeconomic backgrounds; extensive experience working with community-based organizations, agencies and other groups in initiatives related to systemic reform and innovative educational methods and practices; and demonstrated leadership in the development

of programs and courses of instruction that substantially strengthen student academic achievement. It should be noted that the Magnet School Principals are District-funded and will not draw any salary from MSAP funds.

Robert F. Lee, M.A., Principal of Sun Valley STEAM Magnet Campus, has been an administrator in the District for eight years. His philosophy is, “We all have the potential to achieve greatness.” A new principal to Sun Valley, Mr. Lee is leading the charge for systemic reform. He has challenged his staff to create meaningful programs that are hands-on, creative, and student-centered instruction.

Stephen E. Rochelle, M.A., Principal of Orville Wright Engineering and Design Magnet, is a veteran educator with 20 years of experience in K-12 education. Focused on producing results, Mr. Rochelle has spent much of his career addressing culturally and linguistically diverse student populations. He has been a principal coach and a director of innovation. As an adjunct professor, he prepared teachers to work in urban school settings. Mr. Rochelle was instrumental in creating a flight simulator and is up for the challenge of turning his school into a STEAM program to give young people an opportunity to explore the sciences, art, and technology.

Ezequiel Gonzalez, M.S., is the Principal of LAUSD/USC Cinematic Arts and Engineering Magnet. He has been an administrator for 13 years and is experienced in managing large budgets. He developed a two year professional development plan and implemented the initial District’s “Required Learning Academy.” Mr. Gonzalez is in the process of guiding his teachers through a transformational agenda and feel that the melding of the arts with STEM is an “idea whose time has come.”

Kirk Roskam, M.S., is the Principal of Washington Irving Advanced Mathematics, Music, and Engineering Magnet. An administrator for eight years, Mr. Roskam has extensive

experience in educating culturally and economically diverse student population. Trained in the Arts, a film school graduate himself, he sees the natural connection of STEM to STEAM. Under his leadership, teachers and parents have already begun identifying other grants opportunities, business supporters, and community activities that align with the proposed STEAM theme to ensure sustainability after the MSAP grant sunsets.

Principals at the aforementioned schools have requested the assistance of Student Integration Services in securing funds to support systemic reform and theme-based instruction. They have, on their own, sought out the MSAP Grant as a means to help them successfully initiate change at their respective school. They are committed to participating in this project and will contribute their time at no cost to the project budget.

Instructional Theme Specialists (one per school). The Magnet Program identifies coaching as a critical component of a theme-based approach to teaching and learning. Student achievement is a paramount focus, and the person chosen for this position must be prepared to dramatically accelerate student performance. The role of the Instructional Theme Specialist is to build teacher capacity and provide support to both teachers and administrators by developing systems and structures to support the instructional and operational needs of the school. Under the direction of the school-site Principal, the Instructional Theme Coordinator, and the MSAP Project Director, each Instructional Theme Specialists (one assigned to each Magnet campus) will work collaboratively with teachers, administrators, program coordinators, and other staff to promote STEAM-themed instruction across all content areas, insuring fidelity to appropriate strategies that provide access to core instruction, enrichment, and intervention for all Magnet students (English Learners, Standard English Learners, socio-economically disadvantaged, students with disabilities, and Gifted and Talented Education [GATE] students).

The focus of work for the Instructional Theme Specialist will be based on student data and the academic goals of the school.

Roles And Responsibilities: (1) Demonstration Teacher/Co-Teacher - Collaboratively plan and conduct demonstration lessons with the classroom teacher that emphasizes good first teaching which includes: Standards-Based Instruction/Common Core; the use of effective theme-based instruction, access strategies (Academic Vocabulary, Instructional Conversations, Graphic Organizers, and Cooperative Grouping), Academic Engagement, and checking for understanding aligned to grade-level standards and content; differentiation of instruction; use of pre- and post- conferences for planning and debriefing lessons; use of technology tools. (2)

Mentor - Provide opportunities for teachers to reflect on their teaching practice; assist and support teachers in the use of theme-based textbooks and support materials; assist and support teachers with instructional strategies that support the delivery of grade-level theme-based content to all students; conduct demonstration lessons through modeling collaboration and co-teaching; work with teachers to manage, interpret, use formative assessment data, systematically examine student work, plan and deliver appropriate instruction, enrichment, and intervention strategies for all students. (3) Facilitator - Support collaborative work that contextualizes teaching and learning; Facilitate the analysis of data and student work that reflects a problem-solving approach; Foster improved communication and collaboration among staff by working with teachers to identify and address the theme; Support the academic achievement of all student populations/facilitating on-site professional development; Meet regularly with Magnet Principal, administrators, teachers, and support personnel to analyze data and further communicate and strengthen instructional support to school staff; Attend, as needed, central, local, and school-site professional development related to expanding theme-based coaching expertise, pedagogical

repertoire, content knowledge.

Intervention Teacher Advisor (one per school). The Intervention Teacher Advisor provides support at the Magnet site using all resources within the school and District in a collaborative manner to create a single, well-integrated system of instruction and intervention which is informed by student outcome data. Under the direction of the school-site Principal and the Intervention Support Coordinator, the Advisor builds capacity in a support position that serves teachers, students, administrators. S/He is the school level expert in differentiating classroom instructional practice that promotes student academic success; is experienced in designing and delivering professional development using adult learning theory; and, knows and understands diverse student populations.

Roles and Responsibilities: The Intervention Teacher Advisor provides staff training/professional development; is the on-site technical assistant; and, is the primary source for the management and use of multiple measures of data to identify areas of strength and needs for both instruction and behavior. S/He plans and facilitates meetings to assist teachers with identifying intervention and high quality instructional strategies that support all students, including English learners, students with disabilities, and gifted/talented students; develops and monitors student intervention plans using an integrated data and assessment system; provides professional development related to problem solving, analysis of data, differentiated instructional strategies and progress monitoring; and, supports the MSAP evaluation plan, providing school data. The Advisor will also provide non-evaluative classroom observation and feedback, modeling and other supportive assistance necessary to implement intervention strategies.

Micro Computer Support Assistant (one per school). The success of a STEM to STEAM program lies in the use of technology. Each school will receive a full time Micro

Computer Support Assistant who will work with the hardware and software purchased for the new programs.

Roles and Responsibilities: This support person assists in establishing local site equipment and sets up labs. S/He acts as a resource in technology-related matters, assists in ordering, inventory of equipment, maintains web pages, and troubleshoots problems. The person must have a high school diploma, or its equivalent, and a minimum of six months of experience primarily involving the installation and maintenance of networked personal computers.

Magnet Program Liaison Assistant (one per school). The Liaison Assistants are community persons performing in a liaison role between the school and the community. They provide direct support to parents of a school by: assisting in the creation and maintenance of a parent program or the parent/community center; relaying information; maintaining parent-school communications; and assisting in programs, workshops, orientation, and outreach activities for parents. Their services are limited to giving advice or interpretation involving the local school or classroom relationships. They also participate as a neighborhood resource adviser to principals, teachers, parents, or project personnel concerned with school-community relations.

(b)(2)(iii) Teachers who will provide instruction in participating magnet schools are qualified to implement the special curriculum of the magnet schools.

LAUSD believes that one of the greatest levers for accelerating student success is the teacher who knows and is able to teach 21st Century Skills through collaborative learning. These teachers have a willingness to reflect upon their practice and a strong desire to build capacity and demonstrate advancement of their content knowledge and pedagogical skills. STEAM teachers will know students strengths and weaknesses, their interests, readiness levels and skill sets, their language proficiency as well as have a keen awareness of culturally relevant responsive

practices, family dynamics, and socio-economic status. Teachers hired to teach in the STEAM Magnet School Network will have high expectations of their students and parents, their school, and themselves. Teachers will become adept at teaching essential skills such as critical thinking, problem solving, communication and collaboration. Teachers will establish learning outcomes that embody high expectations and rigor, focus on important grade level content standards and academic language objectives, and with appropriate authentic assessment. STEAM teachers will emphasize hands-on teaching, experiential, inquiry-based and learner-centered student lessons that include engineering design processes. Additionally, by the end of the project term, teachers in the STEAM Magnet School Network will keep abreast of research developments about the role of STEM disciplinary knowledge, STEM knowledge for teaching, effective classroom practices in STEM education, and assessment of STEM learning.

(b)(2)(iv) Non-discriminatory employment practices.

The LAUSD Board of Education has adopted an Affirmative Action policy to ensure equal employment opportunity for all employees. *“The Los Angeles Unified School District (District) is committed to providing a learning and working environment in which all individuals are treated with respect and dignity. Each student and employee has a right to learn and work in an environment that is free from unlawful discrimination. No District student or employee shall be excluded from participation in, be denied the benefits of, or be subject to discrimination on the basis of sex, sexual orientation, or gender in any District educational program or activity.”*

It is a major part of the employment policy of LAUSD that no discrimination will exist on the grounds of race, color, religion, sex, age, national origin, or disability status in any area of the School District. The Board's Affirmative Action Plan recognizes the importance of taking aggressive action to seek out qualified applicants for employment from under-represented

groups. This plan has particular importance in relation to education and child development. In order for children to learn to live in a democratic and pluralistic society, it is necessary for them to interact in a social system in which members of every group share, in representative proportions, the responsibility of that system's operation. The adequate representation of groups at all levels of our social system also provides children with role models. It is crucial that these role models be sufficiently numerous to convince the children that the accomplishments of these models are not exceptions to the rule, but are possible for anyone who possesses that appropriate qualification. When this occurs, the role models serve to enhance the children's self-esteem and motivation by providing evidence that persons from all races and both sexes can have rewarding careers, and can utilize what they are learning in school to achieve success as adults. In this manner, the students' cognitive performance may be improved through enhancement of affective development.

(c) QUALITY OF PROJECT DESIGN.

“To prepare American children for a future in which they can be the highly skilled American workers and innovators of tomorrow, I have set the goal of preparing 100,000 science and math teachers over the next decade. These teachers will meet the urgent need to train one million additional science, technology, engineering and math (STEM) graduates over the next decade.” President Barack Obama, 2012

The Los Angeles Unified School District is poised to answer the call of the President by creating a network of schools that focus on: (1) training its teachers to design curriculum that target the Science, Technology, Engineering, and Mathematics (STEM) fields; and, (2) preparing its students to be 21st Century learners who are creative and collaborative and, can communicate and think critically.

The U. S. House of Representatives, 113th Congress (February 4, 2013) has resolved (HR 51) that it will encourage the inclusion of art and design in the STEM fields during the reauthorization of both the Elementary and Secondary Education Act, and the Higher Education Act. The Los Angeles Board of Education (October 2012) unanimously voted to add Arts Education as a core subject as it prepares to implement Common Core Standards.

STEM education, infused with the Arts, becomes STEAM. Accepting the invitation of the President, the House of Representatives, the LAUSD Board of Education, and the Magnet Schools Assistance Program to develop a program that promotes STEM education, four Magnet secondary schools stepped forward with a proposal. Each plan addressed a STEM to STEAM focus. Together, these schools will become the prototypes for what will be known as the LAUSD STEAM-initiative Magnet Network. The Network schools: LAUSD/USC Cinematic Arts and Technology Magnet; Orville Wright Engineering and Design Magnet; Washington Irving

Advanced Mathematics, Music, and Engineering Magnet; and Sun Valley STEAM Magnet Campus (all described elsewhere in this proposal) have committed to (1) reclaim the status of high-performance; (2) support quality teachers who will bring conviction, enthusiasm and a readiness to contribute their expertise to improving the quality of education; (3) create strong professional practice through continued professional development; (4) provide equitable and sufficient resources; and (5) ensure that every child has the right to learn in a 21st Century, world-class environment.

(c)(2)(i) Promote Desegregation, Including How Each Proposed Magnet School program will increase interaction among students . . .

Increasing Interaction among Students from Different Backgrounds. To ensure that students from different backgrounds will interact during the course of the school day, the STEAM Magnet Network will use the following strategies: (1) culturally relevant and responsive education (2) heterogeneous grouping; (3).cooperative learning/project-based learning;

Research repeatedly finds that reform programs and activities will eventually fail if they are not part of a larger school restructuring effort. Each of the items listed above are part of a philosophy that will help guide the new Magnets: *“that all children can learn, and must be given the opportunity to learn the same things together.”*

Culturally Relevant and Responsive Education is defined as adjusting how we teach to the needs and experiences of students by using their cultural knowledge, prior experiences, frames of reference, and performance styles to make learning encounters more relevant and effective for them. The research affirms that culture, teaching, and learning are interconnected and that school achievement increases to the extent that teaching employs the cultural referents of the students to whom it is directed (Gay, 2000).

Ladson-Billings (1995) outlined three criteria necessary in the implementation of culturally relevant pedagogy. First, culturally relevant teaching must result in the academic success of its students. Second, culturally relevant teaching maintains a child's cultural identity while simultaneously promoting academic success. Third, culturally relevant teaching creates a social consciousness among students, allowing them to challenge the structure of society and view education as a tool for social change.

Culturally relevant strategies include successful strategies that affirm students' capabilities, provide challenging learning opportunities, encourage students to work collaboratively across racial groups, and foster an atmosphere of trust within the classroom environment (Bain, 2004; Steele, 1999). Recent research conducted at the University of Michigan (Brown, et al, 2009) cites specific classroom practices and behaviors that have led to positive interactions and improved student success for all students. For example, when an instructor makes the effort to use examples that feature successful women scientists, or by describing tests as a measure of students' problem-solving skills (rather than as a measure of innate ability), the learning environment improves for all students. (Brown et al, 2009).

Another aspect of culturally relevant pedagogy is cultural competence, defined as recognizing the differences among students and families from different cultural groups, responding to those differences positively, and being able to interact effectively in a range of cultural environments (Lindsey, Robins, & Terrell, 2003). Researchers Villegas and Lucas (2002), describe teachers who are socio-culturally conscious as being able to "maintain affirming views of students from diverse backgrounds in their classrooms...and capable of making schools more equitable for all learners...understand how learners construct knowledge and they promote knowledge construction...and design instruction that builds on their students' background

knowledge while stretching their minds beyond what is familiar.” Trumbull and Pacheco (2005) continue that successful education depends upon teachers’ abilities to connect with students’ different perspectives, knowledge, and ways of knowing—and with students’ abilities to connect with each other’s perspectives.

Heterogeneous Grouping. The first step in insuring the interaction of students from different racial, social, economic backgrounds, and achievement levels is to put them in the same classes, avoiding the use of “ability” as the sole criteria for the organization of classes. The STEAM Network schools will provide an inclusive educational environment for students with and without disabilities, enabling them to interact positively with their classmates while fully developing their potential. All students will be included in Magnet activities and extended-day programs, and will have the opportunity to interact in a variety of formal and informal educational settings.

Heterogeneous grouping – academic, linguistic, and by gender – will present challenges to teachers who may believe that having a narrower range of student abilities in classes is better. Therefore, the training and support that will be part of the Professional Development phase of this project will be an important ingredient in the success of this program. Teams of teachers and administrators working collaboratively, with the support of the District’s Student Integration Services and MSAP resource staff, will find the most appropriate methods and materials for the groups of students they work with. Training to support teaching heterogeneous classes will be implemented during grade level and staff meetings, special workshops (after school and during professional development days) and summer institutes. Assigning students of different ability levels, different racial, ethnic, social, and economic backgrounds to the same classes and making sure that they are in the same learning groups for most of the school day is only the beginning.

Getting them to interact as they learn is the next step.

Cooperative Learning. Cooperative learning is a successful strategy that fosters ongoing interactions among students of different racial, ethnic, and economic backgrounds and improves student achievement. In cooperative learning, small teams, each consisting of students with different ability levels, engage in various learning activities designed to improve student understanding and skills.

For more than a quarter-century, federally sponsored research centers, field-initiated investigations, and school districts have demonstrated cooperative learning's effectiveness. Research findings from more than 70 major studies have found, for example, that cooperative learning improved relations among different ethnic groups, increased motivation, improved attitudes that contribute to greater student achievement (Kohn, 1999), and improved relationships between students with disabilities and other classmates. Students who learn cooperatively, compared with those who learn competitively or independently, learn better, feel better about themselves and get along better with each other. Slavin and Madden (1979), in a secondary analysis of data collected in a national sample of high schools by the Educational Testing Service, found that teacher workshops, multiethnic texts, minority history, and classroom discussions of race relations had very limited effects on students' social attitudes and behavior; however, the assignment of students of different races to work with each other and the participation of students in multiracial/multiethnic sports teams had strong, consistent, positive effects on race relations.

There are several variants of cooperative learning: group diversity, positive interdependence, individual accountability, and equal participation. Magnet schools and District support staff will select the variant that best suits the needs of their students and school.

Teachers will receive training in how to implement these techniques, and will receive the support necessary to make it work. Professional development will prepare teachers to: (1) select heterogeneous groups -- academically, linguistically, and by gender; (2) help students learn to work well in groups and understand group expectations (Speck, 2003); and (3) choose appropriate group tasks, monitor group activities, and make interventions that ensure that all students participate (Cohen, 1994; Webb, Farivar, & Mastergeorge, 2002). Professional development will reflect research findings that students work best in a cooperative learning environment that maximizes discussion and interaction, and that academic achievement correlates with higher levels of interaction (Cohen, 1994).

Magnet funding will support the use of cooperative learning in the STEAM Initiative Magnet Network schools. Key aspects of each school's approach to learning through the STEAM Initiative, lend themselves especially well to cooperative learning because all students will be involved in a multi-part process (Engage, Explore, Explain, Elaborate, Evaluate) that will require them to work collaboratively to demonstrate what they have learned.

(c)(2)(ii) Improve Student Academic Achievement For All Students . . .

As the selected schools focus on developing a STEM to STEAM program that integrates the core curriculum, teachers will go through a process whereby they will reconsider the curriculum and the standards on which it is based; modify the content of lessons and how they deliver the lessons; and then align the newly themed lessons and units with Common Core State Standards. At the end of the process, teachers will be more familiar with the integration of the theme into the Common Core and will have increased their expertise with the curriculum that they teach. They will be able to balance their own ideas and professional expertise, the existing curriculum and instructional program, the textbooks, the views of experts-in-the-field, the district

frameworks, and state content and assessment standards.

At the same time, students will learn to think critically and work collaboratively to solve problems. Since instruction will be integrated, students will understand the connections between sciences and the arts, and will improve their proficiency in both. STEAM students will engage in open-ended, inquiry based discussions, use technology to help solve problems, utilize math and critical thinking skills to shed new light on solutions, and incorporate their knowledge in artistic skills and talents to approach problems in novel ways.

The question: “How do we get both teachers and students in the Network to accomplish these lofty goals?” To do this, we must continue to close opportunity gaps . . . gaps where “low-income students, students of color, and English language learners often do not have the same access as others to qualified teachers, high-quality curriculum, and well-resourced classrooms.” (Darling-Hammond, 2010). Perhaps the College Board’s proven strategies for student success answers the question in another way:

- Provide engaging and relevant activities that allow students to develop the essential skills needed for success
- Incorporate appropriate rigor that challenges students by requiring them not only to apply concepts and skills, but also to explain the thinking behind their applications of knowledge
- Design the program around evidence of what works in the classroom: research-based practices such as designing instruction with the end in mind, scaffolding activities to prepare students for increasing levels of rigor, integrating learning strategies that help students “learn how to learn”
- Integrate content that addresses key strengths found in current state standards; so that

rigor of the curriculum fully meets and often exceeds the expectations of key state standards.

As LAUSD/USC, Wright, Irving, and Sun Valley go through the process of “revising and revamping”, the professional development provided to classroom teachers will assist them in weighing the competing priorities of their own judgments, the textbook, the standards, the tests, the assessments, state guidelines, district curriculum documents and culturally relevant and responsive materials, and school developed Magnet theme curricula.

The professional development provided by the Instructional Theme Specialists in collaboration with the District curriculum experts will help teachers to make informed and balanced decisions about what is taught in their schools and how it should be taught. Teachers will become familiar with the Common Core standards in a given area, the curriculum based on those standards, and techniques for teaching the curriculum to a diverse group of students in heterogeneous classes using differentiated instruction, cooperative learning and other techniques that do not separate and categorize students by race and socioeconomic level.

Network schools are changing the game. They will no longer rely on the traditional 20th century paradigms to educate our 21st century students. The Magnet schools described in this application will be restructured for equity and academic achievement. Their organizations and structures will be altered to replace practices that hurt some students, with strategies that help everyone. This means: (1) The Magnet schools will have heterogeneously grouped classes. Diversity will be created by reducing minority group isolation. (2) Differentiated Instruction, Cooperative Learning, and Project-Based Learning will be used in all Magnet schools; (3) All intervention strategies will be assessment driven and tailored to the specific needs of students; and (4) All students will receive enrichment to better meet their needs and interests.

Studies show that young girls are rarely encouraged to pursue STEM courses or STEM careers. “There exists an unconscious bias that science and math are typically “male” fields while humanities and arts are primarily “female” fields, and these stereotypes further inhibit girls’ likelihood of cultivating an interest in math and science.” (Forbeswoman, 2012). The Network Magnet Schools feel that by adding the Arts into the STEM, STEAM, more female students will apply to these programs. Network schools will make a concerted effort to encourage parents of girls to apply to their program to ensure heterogeneous classes across content the area.

The District also recognizes that all students deserve the chance to receive enrichment in areas that interest them. In the case of Magnet schools listed in this Grant, The STEAM themes are designed to increase student engagement and prepare them to become 21st Century critical thinking learners who master their cognitive and creative talents. The LAUSD STEAM Initiative Magnet Network will nurture the students’ use of their entire brain, the left side which is the logical half and the right side which is the creative half. The infusion of the Arts into STEM will do just that, according to research. “If in America the goal is to become more STEM-ish, what will we do with our natural, funky creativity? How do you instill that in kids today? You have to have that space for creative reflection. It’s important to let people know that this isn’t a ‘nice to have,’ it’s a ‘need to have’.” (John Maeda, 2011)

Strategies for ensuring that the academic achievement for all students will improve include:

Empowering Teachers to Increase the Achievement of All Students. No two students are alike; no two students learn in the identical way; an enriched environment for one student is not necessarily enriched for another. Although essential curricular goals may be similar for all

students, the methods teachers' use in the classroom must be varied to suit the individual needs of all students. Learning must be differentiated to be effective. It allows students to take greater responsibility and ownership for their own learning, and provides opportunities for peer teaching and cooperative learning. It is important to offer students learning tasks that are appropriate to their learning needs rather than just to the grade and subject being taught. Readiness, learning styles and interests vary between students. In a differentiated classroom, all students have equally engaging learning tasks.

Project-Based Learning (PBL), in tandem with Cooperative Learning, will be the newest reform and the major focus of professional development at the new STEAM Network schools. Research shows that the transformation of a school from teacher-directed instruction to inquiry-based learning will require teachers to use their content knowledge of their discipline, passion and curiosity, and collaboration with other colleagues to develop interdisciplinary, cross curricular projects that will engage students in the learning process. "Students then go through an extended process of inquiry in response to a complex question, problem, or challenge. Rigorous projects help students learn key academic content and practice 21st Century Skills (such as collaboration, communication & critical thinking)" (Buck Institute, 2013).

Inclusion and Mainstreaming. The Magnet Program provides an inclusive educational environment for students with disabilities that enable them to interact positively with their Magnet school classmates. Students with disabilities are included, to the fullest extent possible in all Magnet classes and activities, and have the opportunity to interact with those without disabilities in a variety of formal and informal educational settings. Researchers have found that these interactions can help students with disabilities strengthen their sense of themselves and their capabilities; at the same time, those without disabilities can expand their perception of

people with disabilities and then come to value them as individuals (Rynders et al, 1993). Students with and without disabilities will thereby benefit from the program's inclusion.

Culturally Relevant and Responsive Education. A literature review of the field by Dr. James Banks, a widely published scholar in the field of multicultural education, reveals that students can be helped to develop more positive racial attitudes if realistic images of ethnic and racial groups are included in teaching materials in a consistent, natural, and integrated fashion (Banks, 2004). Involving students in cooperative learning activities with students of other racial groups will also help them to develop more positive racial attitudes and behaviors. The Network Magnet schools will do all that the literature suggests to support culturally relevant and responsive education in ways that have a positive impact on their students and staff. The Magnet schools in this project will use the resources of the District's Academic English Mastery and Proficiency Plus (AEMP) program, as well as the Human Relations, Diversity and Equity Office to assist and support the Magnet school staffs as they develop curricula during the three year period of the Magnet Schools Assistance Program grant.

Preceding the writing of any curricula, the staffs of the Magnet schools will receive training that will enable them to integrate multicultural perspectives into the Magnet curriculum that they will develop. Training will address the following dimensions of culturally relevant and responsive education: creating a collaborative and affirming learning environment; focusing on student-centered higher order thinking & learning; support for oral and written language development; organizing concepts to facilitate strategic learning; constructing a real world context for learning; and supporting oral and written language development (LeMoine, 2004).

College and career readiness as the expectation for all students. We expect that each one of our students will leave our care ready for a four-year college or a meaningful career. We will

hold ourselves accountable to these expectations through the measures we set for ourselves. The effectiveness of each STEAM Network Magnet School will be measured by using authentic assessments and projects along with the specific metrics outlined in No Child Left Behind for Academic Performance Index, Annual Yearly Progress and California Common Core Standards as a guide to achieving those marks.

In addition, we will measure the percentage of students at each school who are engaging in Advanced Placement (AP) courses, the percentage who pass AP exams with a score of three or higher, and the percentage who are taking and achieving college readiness benchmarks on the PSAT and SAT. The Los Angeles Unified School District has established additional goals with the Performance Meter and School Report Card around attendance, suspension, parent engagement and other indices for excellent schools. Together with community, staff will establish clear, transparent timely authentic assessments that benchmark progress in order to insure growth.

Improving the Academic Achievement of Students in Need of Greater Assistance. For each of the proposed Magnet schools, it is important that the students who score in the lowest quartiles on standardized tests show marked improvement, and that the gaps in achievement between minority and White students be narrowed as quickly as possible. In collaboration with the LAUSD Placement Guidelines for Strategic and Intensive Intervention Programs for Grades 6-10, the schools will establish a process for monitoring student achievement and for providing increasing levels of instructional time and intensity whereby the needs of all learners are identified and supported.

The schools in this Magnet Network firmly believe that STEAM is the way to improve student achievement. The interdisciplinary nature of the curriculum, the infusing of the Arts into

STEM will encourage creativity and innovation. “The most genuine scientists *are* artists at heart, and the purest artist meticulously scientific. Nobel laureates *in* science are seventeen times likelier than the average scientist to be a painter, twelve times as likely to be a poet, and four times as likely to be a musician.” (Pomeroy, 2012). The link between the working scientist, the technician, and engineers to being an artist-at-heart was so clear to one industry insider, Steve Jobs, that he recently described himself and his engineers as “*artists*.” Mae Jemison, a doctor, dancer, and the first African American woman in space, said, “The difference between science and the arts is not that they are different sides of the same coin... or even different parts of the same continuum, but rather, they are manifestations of the same thing. The arts and sciences are avatars of human creativity.” For the students and teachers in the STEAM Magnet Network . . . it’s *Full STEM to STEAM Ahead!*

(c)(2)(iii) Encourage greater parental decision-making and involvement . . .

The key to student success begins with a strong partnership between parent, teacher, and child. Completing the partnership that leads to improved student achievement are the parents. The District, in collaboration with parent leaders, has created a Parents’ Bill of Rights and Responsibilities. Known as *Parents as Equal Partners in the Education of Their Children*, this resolution, adopted by the Board of Education in December 2010, embraces family strengths and assets as essential to the academic success of the student. The intent of the resolution is to insure that parents understand their role as a partner in their child’s education. The Bill of Rights, recognized by Magnet and comprehensive school campuses, identifies the parent as the first and most important lifelong teacher of their child(ren) and encourages families and schools to accept responsibility for student success. Parents are asked to commit to a partnership that: (1) Maintains high expectations for student achievement; (2) Ensures all children are college and

career ready; (3) Promotes productive conversation and collaboration; (4) Reflects mutual respect and support for each other.

The Magnet Program recognizes that parents have a choice in the selection of schools and teachers for their children. In fact, it offers more than 30 different theme-based programs from which to choose. In each Magnet school, creating a powerful connection between home and school is imperative. Parents and schools form a partnership to aid in creating a positive environment for students.

Parents throughout the STEAM Magnet Network will participate in decision-making through School Site Councils. Additionally, administration, faculty and parents will create programming for Parents' Nights, scheduled to coincide with enrollment calendars. In addition, a mentorship program will be created for parents to volunteer and share their expertise with students. After-school "Parent Speaker Series" composed of meetings/trainings will be offered to discuss the roles and responsibilities of mentorship and parenting students. Parents will be explicitly exposed to easy and effective home strategies that can be used to engage their children in learning at home. The anticipated level of commitment from parents and community will be a strong component of The STEAM Initiative Magnet School Network. Parents at the Network schools are extremely concerned about their students' educational progress and will be given the opportunity/training needed to become a school partner.

All network schools will develop Community Leadership Teams to introduce the parents of potential students to the cadre of leaders working with the school - the students involved in the school leadership team, the administrators and teachers assigned to the school, and the community members representing the attributes and goals of the residential and business affiliates assisting with the on-going development of the Magnet school curriculum.

(d) BUDGET AND RESOURCES

(d)(1) Adequacy of the Facilities

The District provides facilities to adequately house more than 59,000 students in its Magnet School Program. They are setting aside an additional 3,429 seats in four schools to house the proposed new Los Angeles Unified School District (LAUSD) Science, Technology, Engineering, and Mathematics (STEM), infused with the Arts (STEAM) Magnet Network. All campuses have adequate grounds, classrooms, storage space, computer labs and auditoriums equal to those provided at other school sites within the District.

(d)(2) Adequacy of Equipment and Supplies

The MSAP budget proposal, for equipment and supplies for the start-up costs to fully develop and implement four secondary STEAM-initiative Magnet schools (two grades 6-8, two grades 6-12), is adequate and cost efficient. The funds will enable the District, and each of the schools, to successfully implement the plan and carry out all objectives. These resources will not supplant any District funds currently supporting the Magnet program. The District will purchase all supplies and equipment needed to implement the required curricula for all students. The grant proposal requests only those supplies and equipment specifically needed to implement the Magnet STEAM-theme discussed in this proposal. The District will not decrease the funds normally spent on supplies, equipment, computers, software, textbooks, library books, etc. Per capita allocations for these items will be the same in Magnet and non-Magnet schools.

This proposal concentrates on additional start-up equipment, supplies and instructional materials to establish the new STEAM-initiative Magnet Network. Each of

these programs is tied to objectives to better meet the educational needs of all students and to strengthen academic skills in all subject areas. Equipment and supplies requested are related to each school's STEAM theme and will establish these as unique Magnet programs that will attract a more diverse student body.

Although the proposed Magnet schools currently have technology, the schools' equipment cannot adequately handle the software that is needed for students to produce the advanced work promoted by the STEAM program. The computer equipment requested from the MSAP funds is more sophisticated and will be used in ways specifically aligned with the STEAM theme at each school in this proposal.

All schools are requesting the ability to provide up-to-date technology equipment for students to use to enhance their skills in 21st Century learning, and for teachers to create technology-integrated lessons. These include computers for SMART Labs, mobile laptop carts, iMacs, digital camcorders, and Elmo document cameras (with related accessories), along with interactive SmartBoards, projectors, Interactive Whiteboards, and E-learning software and supplies to support digital and media arts. Additionally there are needs for design/drafting furniture, and other STEAM-related supplies and materials. All of these resources will increase the use of technology for instruction, and will help attract parents seeking schools that give their children opportunities to work with the most current and cutting edge technologies. All equipment and supplies will be found in the budget related to the specific Magnet school. The materials requested are reasonable; and, together with the District's existing resources will enable each school to meet the objectives of the program.

(d)(3) Adequacy and Reasonableness of the Budget for the Project . . .

This project represents a comprehensive Magnet Schools Assistance Plan for the start-up costs of four secondary STEAM-initiative Magnet schools. The budget is both cost effective and adequate to achieve the objectives of the project. Each school will have a strong level of implementation during Year 1 of the grant. This will include both STEAM-related and Systemic Reform professional development for all teachers and administrators, as well as the full creation or revision of the Magnet schools identified in this budget. The requested budget for the project is \$10.4 million for the three year project. This STEAM-themed program will reach more than 3,400 students over the course of this MSAP triennium.

The following is an analysis and explanation of specific budget items in relation to project objectives. All objectives in this proposal and all budget items are related to the program's purposes, which include: (a) The reduction of minority group isolation in middle and high schools with substantial portions of minority students; (b) The development and implementation of Magnet school projects that will assist the District in achieving systemic reform, providing all students the opportunity to meet challenging Common Core Content State Standards; (c) The development and design of innovative educational methods and practices that promote diversity and increase choices in public secondary schools and public secondary programs; (d) The creation of courses of instruction within Magnet schools that will substantially strengthen the knowledge of academic subjects and the attainment of tangible and marketable vocational, technological and professional skills of students attending such schools; and, (e) Ensuring that all students enrolled in the Magnet school programs have equitable access to high quality education.

Personnel Costs. The District is requesting full-time salaries and benefits for: the Magnet Project Director, an Instructional Theme Coordinator, an Intervention Support Coordinator, two Magnet Program Recruiters, and two Community Representatives. Additionally, each school approved under this grant will receive (one position per school, a total of four in each category): an Instructional Theme Specialist, an Intervention Teacher Advisor, a Magnet Program Liaison Assistant; and a Micro-Computer Support Assistant. These positions are described in the Quality of Personnel section of this proposal.

The District is also requesting funds to pay teachers hourly stipends for professional development, curriculum development and alignment. These activities will take place after regular school hours, on Saturdays, and during winter and summer breaks. Professional development is essential to the goal of carrying out the new, innovative STEAM themes and to successfully align the STEAM-based curriculum to Common Core State Standards. In addition, teachers require such professional development to implement a high-quality academic program that meets the needs of a diverse student population. The planned professional development is discussed in detail in the Plan of Operation Section of this proposal.

Each of the Magnet schools will provide extended day programming for students to enrich the STEAM theme, provide additional academic services, and lead parent activities. Funding is requested to cover the personnel costs for these extended day programs, specifically to pay for tutors and teachers/staff to work directly with students.

Fringe Benefits: Fringe benefits are a contractual obligation.

Travel: The District is requesting funds for District and school staff to travel to

visit exemplary STEAM-themed programs in other districts, to attend conferences related to their specific STEAM themes, and to attend conferences related to Magnet Schools development and implementation.

Equipment: The District is requesting funds for equipment necessary to carry out the program in four secondary Magnet schools in the STEAM-initiative Network. Equipment requests are detailed in the accompanying budget. Equipment for these new STEAM Magnet schools includes, but is not limited to: computers, printers, SmartBoards, document readers, video conferencing equipment and LCD projectors for each of the schools. Equipment to support regular academic programs will be purchased with District funds.

Supplies and Instructional Materials: The requested supplies are critical to each Magnet program school. A range of supplies and instructional materials will be purchased to support each school's specific STEAM theme, as well as to advance literacy, numeracy, and other whole-school reform initiatives. The supplies will include technology-related classroom libraries, computer software, enrichment materials, audio-visual media, etc.

Contractual: Each Magnet school will contract with external professional development providers to work with teachers in the areas of STEAM theme development, systemic reform, literacy, numeracy, and curriculum enrichment. These experts-in-their-field will be contracted per District Procurement Policy on hiring. School and District Administrators have suggested the following: The College Board; The Buck Institute, Project Lead the Way/Gateway to Technology, Expeditionary Learning, Otis School of Design, Kagan Training, Partners in Algebra, and the National Equity Project. Schools

will contract for additional staff development services in academic content and instructional areas from outside consultants only when District personnel cannot provide the service. Much of the staff development will be provided by Instructional and Intervention Coordinators, Instructional Theme Specialists, Problem Solving/Data Specialists, and other District personnel in the areas of: curriculum alignment, instruction, special education, and services to English language learners.

Funds will also be allocated for the District to contract for the services of an outside evaluator to provide an independent evaluation of the Magnet project and to provide the District with both formative and summative evaluation. The contractor has many years of experience evaluating Magnet Schools Assistance Programs, as well as other educational programs.

Thus, the budget for this project has been carefully constructed to reasonably cover all areas related to the objectives of the project. The budget includes only personnel, equipment, supplies, travel and contractual costs related to the start-up costs of the four Magnet schools. After the three years of funding, the District will assume the costs of maintaining the project.

(e) EVALUATION PLAN

(d)(1) Includes methods that are appropriate to the project (d)(2) Will determine how successful the project is in meeting its intended outcomes, including its goals for desegregating its students and increasing student achievement; and (d)(3) Includes methods that are objective and that will produce data that are quantifiable

This evaluation, spanning the three years of this project, will assist school staffs and district personnel to modify and improve project performance and produce information needed by the United States Department of Education to properly evaluate project effectiveness.

Data Collection: This evaluation will draw on a wide variety of data to provide substance and context for both formative and summative reports. Quantitative, extant data (e.g. enrollment information, standardized test results) will be used in conjunction with questionnaire, interview and observation data, as well with qualitative data (e.g. school improvement plans, curriculum materials, professional development records) to ensure a thorough and balanced evaluation.

The contractor will develop a complete set of data collection instruments (including surveys; document requests; and walkthrough, observation, and interview protocols) designed to provide sufficient information to address objectives and performance measures and supplement extant data. However, **extant data will be used whenever possible** to lessen the burden on school-based and project staff. The data to be collected will include: **Student achievement, demographic, enrollment and other data:** The contractor will collect standardized test score data (e.g., school and grade level English language arts, mathematics, science) needed to address performance measures related to student academic achievement. Enrollment data disaggregated by race/ethnicity collected by the district will indicate the extent to which each school and the project succeeds in meeting desegregation related performance measures including reducing

minority group isolation. Applicant pool, student selection and student enrollment data will help explain the extent to which the reduction in minority group isolation performance measures were attained and help determine how performance in this area can be improved.

Document requests: The contractor will request documentation from magnet school teachers and MSAP staff to help determine the quality and extent of MSAP implementation. Examples include: ► **descriptions of and dosage** (amount of program delivered) **for units and courses** that present the magnet theme to students; and **student recruitment, teacher professional development, parent involvement and planning activities (including an implementation plan);** ► **schedules** of school based magnet staff; ► School improvement plans; **Observation and interview data** will be collected, during three annual visits to each magnet school, by trained evaluators with extensive experience as magnet school practitioners. During each visit, the visitor will conduct a walkthrough; observe lessons, and interview teachers, administrators, students and parents.

Surveys will be administered annually to all magnet school teachers, a sample of magnet school students, and teachers and students at comparison schools. Survey items and scales, similar to those developed for the 2010 MSAP cycle will be developed using a company with a history and proven track record of evaluating MSAP grants (*Kikoler, Silver, Wang, 2010*). *These survey items are directly related to the purposes of the MSAP and the objectives and performance measures of this proposal.* Validated survey items and scales measure constructs including school climate, instructional leadership, professional development hours (formal, collaborative and coaching) and effectiveness, student engagement and motivation, student academic commitment and expectations, student and teacher perceptions of intergroup relations and magnet theme implementation, standards based instruction and systemic reform

implementation and parent involvement as well as magnet and professional development dosage.

Formative Evaluation and Reporting: The evaluation contractor will aid in the continual improvement of the project through formative evaluation, an examination of implementation that returns information to project, school and district staff to help them improve program performance. Formative evaluation includes the study of program fidelity (the degree to which a program is implemented as designed) and reach (the proportion of the target group that participates). Components of fidelity include: ► adherence – the degree to which the program adheres to its goals, plans, activities, timeline; ► dosage – the amount of program delivered; ► quality – the quality of program activities and services; ► responsiveness of participants to program activities; ► program differentiation – unique features when compared to non-magnets.

Formative Evaluation Reporting: Data will be collected, as available, and analyzed and recommendations discussed with the project director and school staff throughout the year.

Five formative evaluation reports will be written by evaluators each school year:

Reduction of Minority Group Isolation (MGI) Report: Demographic and enrollment data will be compared with applicant pool, student selection and other data from the previous school year and with performance measures. By November, discussions related to the attainment or partial attainment of performance measures related to the reduction of MGI will help the district and magnet schools modify recruitment strategies and activities to attain better results. (Were MGI outcome targets attained? Was MGI reduced? By how much? Why?)

This report is updated in late spring when new applicant pool and student selection data is analyzed and compared with school enrollment data to determine the success of these activities and create plans of action to improve results, if necessary. Measures of fidelity include

adherence to the implementation plan, recruitment plans and student selection criteria and procedures; and dosage, the “amount” of recruitment. Quality and responsiveness will be determined by changes in school enrollments, especially for entry grades, and the size and diversity of applicant pools. Differentiation will examine if unique program features were implemented and adequately described to the target audience. This report not only informs the district about its successes in meeting desegregation performance measures (See Plan of Operation, Section (a)(2)(ii) 1.1-1.5 Performance Measures) but also explores reasons for progress or lack of sufficient progress and possible remedies.

Site Visit Reports: Site visits, described above, are opportunities to feed back data related to the development and implementation of the magnet theme. After each of three annual site visits, a report will be written by the site visitor and submitted within ten days. It will summarize the findings of the visit and include recommendations for improvement. Site visitors will discuss recommendations with school and MSAP staff during each visit. **Documentation Reviews,** included in all three site visit reports, will summarize descriptive and quantitative data related to magnet curricula, systemic reforms, parent activities and professional development, and report on: adherence (e.g., activities implemented on schedule), dosage (e.g., the amount of time students, teachers and parents are exposed to grant activities such as magnet units and courses, professional development and parent activities), quality (e.g., peer reviews of magnet related units and courses). The combined site visit report/documentation review summarizes how much progress has been made towards attaining performance measures especially those related to magnet theme and systemic reform implementation (See Plan of Operation, Section (a)(2)(ii) Performance Measures 2.1, 3.1), professional development (5.2) and fidelity of implementation. The reports, distributed to and discussed with school staff three times each year, help them to

understand if they are on track to attain the intended outcomes of the project, including performance measures and if not, why and how the project activities can be improved.

Survey Reports will include item by item results for each school, a summary of survey construct results for each school, and, for years two and three, comparisons between current and the previous year's results. Trends (e.g., relationship between magnet implementation and student engagement and motivation, between professional development dosage and impact) are explored.

Summative Evaluation and Reporting: The evaluation contractor will determine the extent to which annual objectives and performance measures are attained. Data sources were described above. The evaluation contractor will collect and analyze the data, prepare two annual performance reports and one final report summarizing findings, and discuss the results with district and magnet school staffs. The following section summarizes the means through which evaluators will assess the attainment of performance measures (PM) which are listed in the *Plan of Operation* section of this application and summarized below:

PM 1.1-1.4 Reduction of minority group isolation (MGI) at each magnet school meets annual targets. **PM 1.5** Each magnet school will receive at least 65 applications.

Assessment: School enrollment data, disaggregated by race/ethnicity will be used to determine the degree of attainment of 1.1-1.4. Applicant pool and student selection data will be used to determine if 1.5 was attained and explore how performance can be improved for all measures.

PM 2.1: Each School Improvement Plan will include activities and objectives supporting the adoption of high standards for all students and systemic reforms coordinated with MSAP activities. **Assessment:** Success will be determined through inspection of each school's plan. Implementation success will be measured by performance measure 3.1.

PM 3.1: All magnet school students will receive magnet theme instruction coordinated with

systemic reforms for at least 3 (year 1), 6 (year 2) and 10 (year 3) hours per week.

Assessment: Success will be determined through unit plan analysis and confirmed with surveys, interviews, and walkthroughs. Units and lessons will be peer reviewed to determine quality.

Responsiveness will be determined by surveys which assess student engagement and motivation, academic commitment and expectations, and student and teacher perceptions of school climate.

PM 4.1-4.3: Each year, for each magnet school, the percentage of students scoring proficient or above on the CST will increase in: **4.1** English language arts; **4.2** mathematics; **4.3** science.

PM 4.4-4.6 AYP will be attained by: **4.4** two schools by the end of project year one. **4.5** three schools by the end of project year two. **4.6.** All magnet schools by the end of project year three.

Assessment: All students are tested in April - May of each school year. Data is analyzed by the State Education Department and will be presented in the Annual Performance Reports in tabular form, highlighting the performance targets and how each magnet school – both in aggregate and by subgroups – performed in relation to these targets.

PM 4.7: In each magnet school, 75% of students will master the magnet curriculum.

Assessment: School and magnet staffs will develop, by the end of year one, methods to assess student mastery of magnet curricula. Project director and evaluator will approve methods.

PM 5: Magnet school teachers will receive 30 hours of professional development related to **5.1:** systemic reforms and **5.2:** 30 hours related to magnet theme development and implementation.

Assessment: (**5.1, 5.2**) Magnet staff will collect professional development data including the type of training, the number of hours provided and the number and names of teachers involved.

Quality will be determined through survey analysis, interviews, and walkthroughs, etc.

PM 6.1: At least 75% (yr. 1), 85% (yr. 2) and 95% (yr. 3) classes (elementary) or STEM classes (secondary), will reflect their grade's enrollment for each racial/ethnic group and males and

females by ± 15 percentage points. **Assessment:** Success will be determined through analysis of class enrollments disaggregated by race/ethnicity and gender. **PM 6.2:** There will be an increase in parent participation at each magnet school each year. **Assessment:** Workshop materials, attendance records and parent interviews will determine parent participation and satisfaction.

Annual Evaluation Schedule: ► Initial meeting with project and district staff (Week 1); ► Refine data collection instruments and plan; refine analysis plan; (Weeks 1-3); Collect data (Throughout year): Enrollment data (Week 5); Site visits including interviews and observations (Weeks 10, 22, 34); applicant pool data (Week 28); Dosage data (ongoing); Surveys administered (Week 34); Survey results reported (Week 38); Documents collected (e.g. units integrated with magnet theme - Weeks 9, 21, 33); ► Formative evaluation including discussion of recommendations (Weeks 3-40); MGI Report (Week 10) MGI/Applicant Pool Update (Week 31); Site Visit-Document Review Reports (Weeks 12, 24, 36); ► Analyze and process summative data (Weeks 34-36); ► Prepare Annual Performance Report (Weeks 36-37); ► Submit report to school District (Week 38). Week 1 is the week the project begins each year.

Rigorous Evaluation of Magnet School Assistance Program

The rigorous evaluation design proposed below (please see appendix for a more detailed version) will be carried out by noted researchers (CRESST, 2010). The goal of this design is to measure MSAP impact on student achievement with the statistical rigor of a high-quality quasi-experimental design, but to do so with attention to limitations of available data and sample sizes, and to do it on a scale that is reasonable within the current funding structure.

The goal of the rigorous evaluation is to measure Magnet Schools Assistance Program (MSAP) impact on student achievement. Using a statistically rigorous, high-quality quasi-experimental design, we examine two broad questions:

1. How did students attending target MSAP schools perform on state tests in relation to matched students at comparison schools in the same district?
2. How did *different subgroups* of students attending these MSAP schools perform in relation to matched students at comparison schools in the same district?

This evaluation strives to bolster the current body of research with instrumentation and analytic methodology aligned directly with the priorities and selection criteria of the Magnet Schools Assistance Program.

We will select comparison schools within the district based on how closely they match the characteristics of MSAP supported schools in the year prior to magnet implementation using hierarchical cluster analysis. Specifically, the comparison school selection will take into consideration the grade span of the school, school size based on enrollment, school racial composition (i.e., percentage of Black and Hispanic students), the percentage of ELL students and the percentage of NSLP participants.

To identify comparison students, the research team will first restrict the pool of MSAP and comparison students to those that had achievement outcomes for each outcome year and may also limit the students to be at the same MSAP or comparison schools for a period of time. A covariate balancing propensity score will then be computed for the eligible comparison students. Students from each comparison sample will be matched to MSAP students with similar propensity scores using a technique known as radius matching (Huber, Lechner, & Wunsch, 2010).

The research will examine the effect of MSAP implementation by comparing outcomes of students in MSAP schools to the counterfactual condition of how they would have fared if they had not been a part of the MSAP program. This effect is known in the literature as the

average treatment effect on the treated (ATT) (Ho, Imai, King, & Stuart, 2007). We will use regression analysis to examine this effect for each student's achievement outcomes. Specifically, we will examine the effect of prior student achievement on each student's achievement outcome (i.e., standardized tests).

In other words, controlling for prior achievement in both the matching model and the analysis model increases the robustness of the estimates. The average treatment effect on the treated (ATT) effect is determined from the size and direction of the magnet effect coefficient. A counterfactual estimate can then be obtained by subtracting the ATT effect from the average observed score of an MSAP population in an outcome year. This counterfactual represents an estimate of how these students may have fared if they had not been a part of the MSAP program and had instead attended a control school.

The combination of the rigorous evaluation described above with data from surveys developed by the researchers, and the evaluation site visits and documentation and data reviews by the evaluators provides districts with additional insight into the extent and quality of their MSAP implementation as well as the value the MSAP program has added to its schools.

(f) COMMITMENT AND CAPACITY

(f)(1) Likely To Continue The Magnet School Activities . . .

The majority of the funds requested in this application are for capacity-building components essential for establishing the dynamic, innovative, and challenging Science, Technology, Engineering, and Math (STEM), infused with the Arts (STEAM) programs described in this application.

The Los Angeles Unified School District (LAUSD or the District) has developed this proposal knowing that MSAP funds may not be available beyond the three years of this funding cycle. The greater cost in starting these programs will be absorbed by the District, just as it has done over the past 30+ years, with all 173 Magnet programs.

As evidence that the District will continue the STEAM Magnet School Network at the end of the Federal funding, it should be noted that the Members of the District's Board of Education are extremely supportive of the Magnet program, and yearly reevaluates its need for additional seats at all Magnet sites. Over the past five years, the Board has authorized 22 new Magnets, further proof of the District's commitment to the program.

(f)(2)(i) Is Committed To The Magnet Schools Project.

The LAUSD Magnet Program is one of the largest integration programs in the United States. District Magnet schools, with over 30 different subjects and specialty themes, have earned the enthusiastic support of parents, students and communities. The success of these programs and schools has been overwhelmingly positive throughout the community, as demonstrated by approximately 59,000 applications received each year, for approximately 19,525 openings. This year, with the launch of the STEAM Magnet

School Network, another 3,400+ seats will be added to the nearly 60,000 seats already set aside for the LAUSD Magnet Program.

Many steps have been taken to ensure that Magnet school activities will continue after the Grant ends. The Court Order has approved and mandated the LAUSD Magnet School Program as part of the District's desegregation program. This Court Order was recently upheld. The Student Integration Services office will continue to implement the necessary policies and regulations.

When MSAP assistance is no longer available, the functions performed by the project office will be continued with state and local funds. The Director of Student Integration Services (SIS) will ensure continued implementation of the Court Order, Board of Education policies, and administrative rules and regulations pertaining to Magnet Program Schools. The Director will be responsible for developing themes: monitoring school enrollment to prevent racial group isolation; recruiting students; conducting the random selection process; assigning students to Magnet schools; conducting professional development; and arranging transportation for Magnet students.

California provides state funding for education and for court-ordered integration programs. District school boards are restricted by law as to the amount of discretionary property taxes that can be levied to support local schools. The District is prepared to assume the extra costs associated with the continuation of all Magnet programs currently funded and is committed to continue the Magnet programs presented in this application by assuming the costs of personnel, maintaining specialized equipment and facilities, developing unique curricula, and providing necessary in-service training activities once the MSAP grant has ended. The District is committing both general operating funds and

desegregation resources to maintain its existing innovative and challenging Magnets.

On November 6, 2012, California voters passed Proposition 30, a school funding initiative that will have a dramatic impact on funding the state's struggling public schools. Money will go to schools beginning in 2013 however, potential funding for new programs will be available beginning with the 2014-2015 school year. Proposition 30 will raise the level of minimum funding for K-12 schools and community colleges by \$2.9 billion. This funding source will continue for seven years based on the state income tax retroactive from January 2012 through January 2018: and for four years based on sales tax increases from January 2013-January 2017. Based on the Proposition 30 initiative, it is anticipated that MSAP schools will be maintained on the grant ends.

The State of California also continues to fund the District's Court-Ordered Desegregation Plan. Through the new funding formula, the Targeted Instructional Improvement Grant (TIIG) program funding allocation will be distributed as permanent add-on programs to the new funding formula allocations for each district and allows for discretion in use of these funds for any purpose. High-quality Magnet schools attract parents from all socio-economic levels, and once accepted, they opt to have their children remain in Magnet schools through graduation from high school. Evidenced by the successful opening of 22 new Magnet programs, LAUSD's ongoing support of Magnet Schools is both likely and highly probable. Since Districts are provided with discretion to use these TIIG funds for any purpose, the purpose of sustaining high-performing Magnet programs serves students, parents and the community.

(f)(2)(ii) Has Identified Other Resources to Continue Support . . .

As described in detail in the previous section, LAUSD has already identified local

and state funds to continue to operate and support the magnet schools after the MSAP grant ends. In addition, the District is confident that it will be able to offer a high level of continued support to the Magnet schools described in this proposal because of its outstanding record in pursuing competitive federal and foundation grants. The success of the LAUSD's external fundraising makes it possible to plan for the gradual assumption of project costs after the MSAP grant sunsets. Labor, private sector, and community partners (*The LA Compact*) work to identify funding sources to help secure resources for the expansion of the Magnet program. They have made a commitment to creating positive change in area public schools specifically to better prepare local students for college and the 21st Century workplace. The partners work together to address educational issues, to better leverage resources, and to have a measurable impact. Additionally, the Institutions of Higher Education in the greater Los Angeles basin (11 in total) have committed to support the efforts of the District's Magnet and comprehensive schools.

The Los Angeles Unified School District has committed resources and capital to start and maintain its Magnet Program schools for over 40 years. It is fully committed to the mission of the Magnet Program and its Board members have resolved: to expand enrollment in the Magnet Program and to open new Magnet schools with 21st Century innovative themes. In the words of Jim Smith, author of *Good to Great*, "Good is the enemy of great. We don't have great schools, principally because we have good schools." Without the assistance of this MSAP Grant, The STEAM Magnet Network of schools will be good; however, with the assistance of the MSAP funds, this Magnet Network will be great!