Intent for Proposals for Magnet Schools

June 8, 2010
Ruben Zepeda II, Ed.D.
Interim Assistant Superintendent

Magnet School Concept

Background

- Community Workshop #1 September 8, 2008
- Community survey was created to obtain feedback from the community
- 78% of survey respondents were very interested or interested in magnets (53% were very interested)
- The final Master Plan included: *Strategy #3:* Create a System of Attractive School Options

Magnet School

Intent for Proposal Sections

- Program/Magnet Theme
- Program Leadership Team
- Identified Critical Needs of Students
- Rationale to determine viability
- Program/Magnet Research Base and Description
- Unique Program Characteristics, Design and Curriculum
- Support needed if selected to move to Phase 2

Magnet School

Process

- Intent for Proposal for Magnet School was created with input from AEA
- An informational and exploratory meeting was held on April 28
- Approximately 60 teachers and administrators attended
- Proposal was distributed at the meeting and placed on the AUSD web
- Deadline to submit: May 28
- Six proposals were submitted

Proposals Received

Phase I

- Washington Elementary – Global Academics Through the Arts
- Earhart Elementary – Math and Science
- Earhart Elementary – K-2 support loop
- Elementary Montessori Education Model focus on arts and cultural subjects
- Wood Middle School – Creative Arts
- Middle/High School - Green STEM Magnet

Timeline Phase I

Next Steps

- Phase I
  - June 1- Intent for Proposals submission date
  - July 23 - Evaluate capacity to build out magnet program(s)
  - August 20 - Read proposals and provide feedback

Timeline Phase II

Next Steps

- Phase II
  - August 23 - If fiscal conditions of the district permit, begin Phase II – RFP available
  - August – October - Design teams meet and define and build out proposals for magnets/innovative programs
  - November 1 – RFP due
  - November 30 - Read developed proposals and select magnet/innovative programs for development and implementation

Montessori

The theme of the proposed magnet school is a Montessori education model with an emphasis in the arts and cultural subjects. Montessori education is a philosophy that combines learning a depth of academic subjects, an underpinning of concrete, living education and a focus on student based learning and critical thinking. At the core of a Montessori environment is a respect for self, others and the environment.

The rigorous program would involve all core subject areas (mathematics, language arts, natural and social sciences) with concrete materials as a basis for learning, and experiential activities to make the purpose of education meaningful to the student. A key element involves the student's connection to the community, involving both community service and helping students connect their education with their contribution to society.

The program places rigorous academic study within an art and cultural framework, involving the understanding of diverse cultures and the use of the arts as reinforcement. In addition, as parents are an integral part of their child's education, they would be an essential partner in the child's education. Parents would be requested and strongly encouraged to have an active role in the school and in their child's education. In keeping with an elementary Montessori philosophy, classes would begin at 6 years of age and would reflect mixed age groupings.

Cindy Acker, Principal/The Child Unique (Montessori Consultant)
Lynne Alexander, Parent, Alameda/ (Scientist)
Joshua Abraham, Parent, Alameda/ (Environmental Scientist)
Cathleen Flynn, Community (Teacher)
Michelle Hammons, Community (Eagles Peak Montessori Charter School)
Jeannie Harberson, (Assistant Principal/The Child Unique, Parent/Harbor Bay School)
Setsuko Kawazu, Parent, Alameda/ (Art Restorer)
Dr. Sarah Kennedy, Parent, Alameda/ (Physician)
Michelle Liotsakis, Parent, (Teacher, Oakland)
Sarah Stickle, Community/ (Teacher, Chipman)
Michelle Toth, Community/ (Teacher, Alameda High)
Karen Mitchell, (Assistant to Principal)
Melissa Guerrero, Community/ (Landscape Architect)
Nicole Will, Parent, Alameda (Health Instructor)
Tze-Yan Szeto, Community/ (Architect)

Through information obtained from parents in the community and from the district, we fulfill a need for utilizing different teaching modalities. The Montessori magnet model addresses differences in learning styles and abilities through a multi-sensory method which responds to current brain approaches to learning. Student-based and student-driven education ignites students

who need to take charge of their education, especially those with learning challenges. Montessori's rigorous approach to learning stimulates the brain through critical thinking across the curriculum and engages the body in active and responsive learning. Continual assessment and individually based education has a direct correlation to student success. These elements are inherently built into the Montessori classroom through individually student-designed lessons and the incorporation of self-correcting, concrete materials. Such an individualized model addresses this need for students to reach their personal and academic potential. Additionally, the Montessori model reflects a strong cultural studies curriculum to address the demographics which reflect the community diversity in our city.

We are committed to serving the diverse population of our public schools, including families of all racial and ethnic backgrounds, students reflecting varied academic abilities and needs who come from families of all compositions, religions and socioeconomic levels. With an open admission policy, it would be imperative that information about the magnet school was made available in different languages and culturally accessible.

We've held several focus groups, participated in meetings, visited and surveyed other charter and magnet schools and read extensively concerning the desire for something different, innovative and success driven in our city. Montessori education is used as a model in many school settings, and in empirical research concerning brain development and learning, student ownership teaching models and living education. In the city of Alameda, Montessori schools have a successful track record, with alumni students reflecting many of AUSD's highest achievers and most successful students.

Montessori education was designed to meet the lowest achieving students, however its' potential for success for students across any academic spectrum became a driving force for the implementation of many Montessori programs across the nation. This is a critical factor in our city, which strives to provide excellence for all students. The Montessori magnet model reaches each student, has the potential to connect with their strengths, meet them concretely where they have challenges, and move them to take charge of their education. Incorporating a 'village' mentality, parents become an integral part in their child's education, for their success.

Additionally, research shows a direct correlation between multisensory education and second language acquisition. As more than 30% of Alamedans speak a second language, a Montessori magnet school would provide an efficient method for receptive learning and early second language acquisition, which would assist a student to maintain pace with other students.

We began this process four years ago. Parent concerns about individual learning styles, maintaining a challenging curriculum and inclusion of cultural studies were the catalyst for this work. Just as strongly was the desire to make Montessori education publicly accessible in the city of Alameda. We began with research – examining the demographics in the city of Alameda, district wide performance, and student needs and gaps, based on information gathered from teachers and parents. We also sought current research to ensure that this model was aligned with empirical information concerning students and educational excellence.

We sought broad community input, holding several vision meetings with families regarding what they hoped for in a school. We compared this information with the master plan, detailing the desires/goals for the district over the five-year span. We studied the information from the US Department of Education regarding successful charter schools. We surveyed other charter and magnet schools, met with a magnet/charter organization, met with heads of two magnet schools in Alameda, met with the superintendent, connected with the national magnet schools website and had several planning meetings with parents and community members.

The principal of The Child Unique (the Montessori consultant for this project) was trained by the late Ursula Thrush, who began the first public school Montessori teacher trainings in California. This fostered her commitment to public education and alternative teaching techniques. We did extensive research on Montessori charter models initially, attending charter/magnet Montessori workshops, visiting a few local Montessori magnet and charter programs, and consulting with the head of Eagles Peak Montessori charter school.

Montessori magnet schools in the area:
California Montessori Project (Sacramento area – 6 schools)
Eagle Peak Montessori (Walnut Creek)
North Shoreview Montessori (San Mateo)
Parkside Montessori (San Mateo) – Distinguished School
River Montessori Charter (Petaluma)
Sierra Montessori Academy (Grass Valley)

1. 3-year age span: Montessori classrooms are mixed-age classes, allowing students to develop leadership skills and to learn developmentally, rather than chronologically.

2. Simultaneous, independent learning: Students work at their academic level, on

different subjects, using different materials at the same time.

3. As a human development approach to education, an understanding of learning differences in learning is inherent in the program. Therefore, every individual falls somewhere along the spectrum of how they need to be taught. A multisensory approach incorporates fully utilizing the all modalities for learning.
4. A student-driven approach, gives the students skills of self-initiation, self-governance and responsibility for their advancement.
5. The classroom is not one environment for all of the students, but a space, with five different focused areas of learning, with concrete materials governing the learning.

Elementary Curriculum (to coincide with district framework)-

Montessori elementary schools utilize an organization which uses the district framework and interweaves it within the following Montessori curriculum:

Language Arts

The Montessori Language Arts curriculum is designed to enhance the students' skills in reading, comprehension, writing and speaking. It flows across the curriculum with math, natural and social sciences.

As the student's skills progress, sentence structure becomes more complex, spelling improves, and story-writing skills develop. Students write book reports, poetry and journals, and then learn to analyze sentences, build complex sentences and refine research skills and engage in creative writing concerning their world and the arts.

Students study the parts of speech and their functions using classical Montessori materials, connecting the information by diagramming sentences in their reading material and writing

exercises. Definitions and symbols are correlated with each part of speech. Greek and Latin word roots are taught to older students throughout the year.

Students study word families, create spelling lists, study word origins and meanings, testing their spelling skills, and studying various nomenclature

Handwriting proficiency is taught, reinforced through practice, journaling and class work.

Foreign language:

The teaching of foreign language is a long-established tradition at many Montessori schools, through a combination of key immersion times (when possible) and group lesson. Beginning classes are entirely conversational, enabling the students to develop an ear for correct pronunciation. In the later years students experience the written form of the language. Cultural aspects of the county such as singing, dancing, holidays and foods are also explored.

Mathematics

Elementary Montessori materials allow students to develop an in-depth understanding of math concepts followed by memorization of math facts. Students receive individual and small group lessons and work at their own pace. Math curriculum is organized so that students can independently follow the math sequence under the teacher's guidance.

Addition
Subtraction
Multiplication
Division
Skip Counting
Memorization of Math Facts
Fractions Determining common multiples & divisors
Finding the greatest common divisor
Squaring
Prime Factorization
Ratio/Proportion
Decimals
Percentages
Base Systems
Integers
Square Roots
Cube Roots

Estimation
Word Problems
Math History

Geometry
Comprehensive geometry studies begin with experiences with the line and its parts and continue through studies of angles, polygons, triangles, quadrilaterals, circles area and volume. The concepts of similarity, congruency and equivalency are also studied.

Physical Science

Our physical science program was developed to provide a strong sequential curriculum which integrates physics, chemistry, geology, astronomy, earth sciences and electricity. Projects and research help students to understand abstract concepts.

The Universe
Solar System
The Sun
Planet Earth
Matter
Electricity
Magnetism

Biological Science
Botany
Many hands-on activities and experiments pique the students' curiosity and engage them in the study of botany. Students study botany nomenclature and definitions, plant classification, biomes and ecosystems. Older students research native plants and help care for them in the environment. Students experience botany from a practical perspective.

Zoology

Students begin their studies by observing real creatures, then use cards, booklets, control charts and book research to continue their studies.

Cells
The five kingdoms
Five classes of vertebrates

Animal Research - independent in-depth studies
Invertebrates
Nomenclature of the external and internal parts of the vertebrates and invertebrates
Study of the human body

Geography
Geography studies are integrated with history and science. Students learn about many different cultures as they learn about other countries.
The Earth
Major land and water forms around the world: oceans, seas, lakes, rivers, volcanoes, mountains and islands
Physical, cultural, economic and political geography
Flag Studies
Geology
Biomes

History/Social Sciences

History begins with the concept of the passage of time, then geologic time and the study of civilizations throughout history. Students learn about cultures reflected in their school and community, and interwoven with geography and history, cultures of the world is learned, teaching about our differences, but with an emphasis on our commonalities.

Fine Arts

Music: Throughout the school year, the students will focus on the eight essential elements of music: melody, rhythm, harmony, meter, dynamics, tempo, timbre and form. Learning will occur through the possible medias of singing, playing various instruments, movements, composition or games depending on the students' academic level and abilities. All elementary students have the opportunity to complete individual compositions or theory assignments.

Drama: Students begin their drama studies learning theater basics through the use of story theater games. They learn projection, how to read other characters and stage movement.

Art: Art lessons are taught using various techniques and media.

Physical Education

Conditioning, strengthening, rules, cooperation and sportsmanship are taught, along with basic skills in a variety of activities.

Typical to a Montessori environment, is the concept of individual and small group, student-driven learning which connects to a wider world view, giving students a connection and real life application to the information they are learning. A Montessori school resembles an eclectic university research laboratory. They get lessons across the curriculum, and as researchers, collaborate with colleagues, and find the meaning in what they learn, rather than simply learning information. "Thinking about what one thinks about" is the critical thinking catalyst for education which motivates both a rigorous curriculum and a student base wherein students experience a partnership with the teacher and their parents for their education, and take hold of their own responsibility and their continued need to thirst for education.

This is manifest in a classroom which is alive, student centered, community based and action oriented, in a school nestled within a strong parent support system. Students learn about mathematics and study the blueprints of a city building, incorporate writing skills as they read and comment on letters to the editor in the local newspaper, study environmental education and create sustainable systems for their school and provide input on practices within their home, write and design a play regarding the history of their city and its leadership. These are examples of living education, which is matched to meet and enhance the district framework, and which motivates children to learn. There is a current phrase to describe the need to respond to schools, to produce students who are successful – 'whatever it takes'. However, Rod Paige, when writing about best schools, said their view was that 'if there is a better way, we find it.' Education which takes its directives from its students, connects with their critical thinking capacity, coupled with an integrative approach at physical-mental learning, provides a model toward success. If there is a better way, the teacher will guide it, and the student will find it.

In a first-second grade Montessori classroom, for example, one might hear classical music playing and see students who are challenged with reading, working with physical letters as they encode and decode, creating words, laying them on mats, creating sentences on paper, and reading them back. Other students might be creating sentences from readers, diagramming them grammatically with symbols. Other children might be working on fraction material and connecting it with abstract problems on paper, four digit addition with concrete bead materials reflecting the decimal system, or another child – just working on math facts through materials and partner quizzing. The goal for each child would be not to determine how many mistakes, but

to attain mastery in each area. Still another child might be researching bodies of water and creating a chart to depict differences in the size of bodies of water in different areas, or mapping out the countries closest to the equator.

The full approach requires the incorporation of the arts, which pairs with academic learning for complete multisensory understanding. This is the innovative model we seek to provide.

Additionally, particularly since Montessori education is often misunderstood, public educational forums for parents and the community would be essential.

The Department of Education, when discussing the Race to the Top funds, mentioned that California schools need to "raise the bar – close the (achievement) gap." A Montessori based model does just that. It has as its aim that students challenge themselves to their fullest potential. Research has proven that students who feel successful, have higher motivation levels (Nichols, Steffy, 1999), and that there is a direct correlation between student achievement and family involvement (Henderson, Berla, 1994). Additionally, the most accurate predictor of student achievement is the extent to which the parent is involved in the child's education. Students who are involved in a program which empowers them to be responsible for their education, and strives to teach them in a multisensory manner according to the way they learn, will be motivated to be successful. Parents, who are connected to the school and educated regarding Montessori education, will learn how to be advocates and participants in their child's education.

Research shows that historically, students who are low achievers tend to remain economically challenged. Meeting a student in an alternative manner, directly connected to their learning style, and with a curriculum which honors their culture, serves to inspire students to continue learning, and lessens the disparity between high and low achievers.

- Montessori education is a successful model, but is still primarily available in private education. It is common to see a self-motivated child, the youngest reader at the Alameda library's summer reading program, or the centered musician or mathematics honor student, and discover that they have been Montessori students. Some well-known individuals who attended Montessori schools are:

- Peter Drucker, Management Guru

- Larry Page, Co-Founder of Google
- Sergey Brin, Co-Founder of Google
- Jeffrey Bezos, Founder of Amazon.com
- Katharine Graham, Owner/Editor of the Washington Post
- Jacqueline Bouvier Kennedy Onassis, Editor, Former First Lady
- Anne Frank, Author of The Diary of Anne Frank
- Gabriel Garcia Marquez, Nobel Prize winner for Literature
- Prince William and Prince Harry, English royal family
- T. Berry Brazelton, Pediatrician and Author
- Julia Child, Chef, Star of many TV Cooking Shows, and Author
- Friedensreich Hundertwasser, Austrian painter and Architect

All students in our city should have access to alternative models like Montessori, which allows them to reach their fullest potential as these people listed above. A Montessori magnet school brings access to those students in our community who under other circumstances, would not have access, but who may benefit from an alternative form of education which fosters innovation, and focuses on socio-emotional approaches to learning, executive functioning and critical thinking, and positive family engagement.

1. Meetings with the district's magnet representatives, to ensure success and partnership with the district, including the understanding of the impact of district spending limitations as it affects students with special needs and administration

2. Information regarding district employees, including any teachers who might be Montessori trained, and assistance to hire within the district

3. Use of space for planning meetings (if possible) and public meetings

4. Assistance with promotion

5. Early information regarding probable space, and early access for preparation, if possible

6. Budget and funding planning

7. Clarification/guidance regarding parent support

8. Assistance with a fair and equitable admissions process that meets all local, state and federal regulations, resulting in a balanced mix of students, while maintaining family unity

Cindy Acker 510-798-7429 cacker56@yahoo.com

Creative Arts

5/28/2010 5:51:55

Creative Arts. The Professional Learning Community created, ideally at the site of Wood Middle School, will be organized into smaller teams, each characterized by an arts-infused curriculum and a more right-brain centered approach towards creative problem solving, leading to more authentic learning outcomes than is currently the case.

Paul Moreno, teacher, Wood
Jeff Knoth, incoming principal, Wood
Nancy Ely, teacher, Wood
Jeanette Frechou, teacher, Wood
Jennifer Verduin, teacher, Wood
Monica Packer, teacher, Wood,
Sarah Johnson, teacher, Wood
Josh Summit, teacher, Wood
Kristi Durkos, teacher, Wood

Many students are not challenged or are not finding success in programs that are lacking a curriculum that is creative in approach, rich in the arts, and infused with engaging methodologies that emphasize right-brain learning. These students include ELL and gifted students, students who have not been successful in traditional academic settings, and students who thrive when offered more creative approaches to their learning. Our small learning communities will also serve a vital need: establishing a teacher/student community that will offer a more personalized learning environment for students who feel alienated in a larger, less focused setting. We agree that it is desirable to create choice within the AUSD community and to deepen student and parent engagement by offering innovative programs such as a Creative Arts Academy at Wood. We feel the creation of an arts-based magnet will energize the existing Wood community and lead us on a focused path to excellence, while better meeting the needs of the populations outlined above. Much of our rationale that gives us confidence in the viability of this proposal hinges on the past success of our Academies here at Wood. When we were organized into themed small learning communities, the consensus here is that there was increased student engagement, more meaningful student-teacher relationships, a more positive school climate, and more opportunities for teachers to gather in professional learning communities. There is an abundance of research underscoring the effectiveness of small learning communities, as well as the impact of an arts-based education. One of our leadership team has been consulting extensively with Patricia Esplin, the director of a program at BYU that specializes in learning communities, and Dr. Luanne Forrest, who has done extensive work with smaller learning communities, magnet schools, and how they relate to school culture.

We also are relying on our own school's prior experiences with SLCs, our strong arts program especially in theater and music, and our successes with a variety of other innovative programs. These include district initiated programs such as AVID and SIM, as well as the Service Learning

and Waste Reduction Program (SLWRP), and community partnerships developed for the Big Dig and Wood Museum projects.

This will be an arts-infused curriculum designed to create richer understandings in all subject areas. There will be enhanced offerings of electives in the performing and visual arts, multimedia, and creative writing. There will be a service learning component and a structure that allows for flexible scheduling. The focus will be on meeting the needs of ELL, academically challenged, gifted, and more creative students. The magnet will be organized into smaller teacher teams and student communities. Elements of theater, music, visual art, and communications media will be integrated into the curricula of all subject areas. There will be an emphasis on creating strong community partnerships. Wood will support a larger ELL population using a strong kinesthetic/performance based approach. Teachers, working in teams with fewer student contacts, will be able to coordinate projects, enjoy greater ties to students, and be able to problem solve more effectively. A student entering the Creative Arts Academy at Wood will have the advantage of a fresh, highly focused approach to instruction. She will enter a program that provides a rigorous standards-based academic foundation that is enhanced by an emphasis on creative problem solving, integrated projects, and arts-based teaching methodologies. We will in particular put into place strategies for applying science, math, and technology in creative problem solving situations. Parents will be incorporated into the Professional Learning Community, becoming an integral part of the decision making at all stages of planning and implementation. We would ask to work closely with the district's new grants coordinator, in order to creatively access new sources of funding. We would ask the district for waivers that would allow for flexibility in the use of instructional minutes and designing curricula. There may be a need for extra support from tech services to help implement an anticipated digital expansion.

We expect to be meeting frequently, throughout the summer and early fall, as a leadership team. A comprehensive planning of structures, methodologies, team agreements and timelines will take time. District support in the form of seed money for timecarded work and release time for visits to similar programs would allow for greater commitment on the part of the planning team.

Paul Moreno 510-522-8889 millisec@sbcglobal.net

5/28/2010 11:21:41

Earhart – K-2
Family Support

Alameda Unified School District
Phase 1: Concept Development Proposal of Intent for Innovative Programs/Magnets

The Master Plan adopted by the Board of Education on February 23, 2010 provided for the establishment of "***attractive school options*** *to provide desirable choices and deepen student, family and community engagement in the youths' lives and education.*" This proposal of intent is an essential step in creating attractive school options.

Any group of teachers and administrators, together with parents, community members and possibly students may form a program leadership team in an effort to create a magnet or themed school.

Directions: Please complete the following proposal of intent and return to Ruben Zepeda, Interim Assistant Superintendent, Educational Services, room 209 E, 2200 Central Avenue by Friday, May 28, 2010 to be considered as a candidate for Phase 2: Design Team Planning and Program Development. You will be notified no later than June 30, 2010 as to the status of your proposal.

Program/ Magnet Theme: Providing a strong family support to augment student learning at K-2..Our Belief is that through teamwork, ordinary people can produce extraordinary results.

Section A: Program Leadership Team

Core members of the program leadership team are:
1. Diane Alexander –Teacher
2. Joy Dean-Principal
3. Heather McCracken-Wu-community member
4. Michael O'Neill-Teacher
5. Shauna Mack-Teacher
6. Shannon Prichard-Teacher

Section B: Identified Critical Needs of Students

1. Parents and Teachers need a strong collaborative relationship to support high levels of student learning. This need is critical for targeted groups of EL students and Low SES students in addition to students who are at or above grade level. Many parents new to the educational system or to the larger community may experience anxiety in considering how to support their child in this new and challenging setting.
2. It takes time for families to develop a trusting relationship and to define their role with the teacher and with the school as an institution.

Section C: Research

Themes in Education Looping: Supporting Student Learning Through Long-Term Relationships. Northeast and Islands Educational Lab at Brown University

Clearing house on Educational Policy Management, University of Oregon, Implementing Looping

Burke, Oxley, Zahorik and Dichanz, European Experiences including Waldorf multiyear Grouping.

Data from Schools that Loop: Report from Dr. Joseph Ramos on Michael Conti Elementary School #5, Jersey City.

Section D: Program/Magnet Research Base and Description

There is significant research from the last ten years documenting the benefits of long term relationships and student learning. The relationships include teacher to students, teacher to family and student to student. In Germany, many schools operate with looping beginning in preschool and then again in elementary from grades 1-8 with the same teacher. In the US most research is from two year loops. Research data is available from New Jersey and Oregon. In the last two years, at Earhart School we have begun to compile data on the impact of looping on student achievement and on student behavior. Preliminary data (one year) on student achievement is extraordinary.

Section F: Unique Program Characteristics, Design and Curriculum

Program Characteristics: Students and their families will develop relationships that will support their academic success. Longer term relationships with the teacher will help to shift the social paradigm for kids who might otherwise struggle.

Program Design: At the kindergarten level, teachers will provide on-going support to families to help them become a part of the educational process. This will include but not be limited to workshops, modeling for parenting a high a achieving child, parent events, and collaborative learning projects. Kindergarten teachers will only teach the child for one year, but will teach all children from a family thus building a foundational relationship with the family that begins the school experience with each of the children in the family. At grades one and two the student group will progress from grade one to two as a cohort with the same teacher. This configuration helps students build not just academic capacity but also emotional security and support for all of the students in the classroom. The two year loop also streamlines the educational process, allowing an extended and more sophisticated focus on every student's academic and social development. Special needs students and ELL students build strong relationships with the community of the classroom.

Curriculum: District adopted curriculum in ELA, math, science and social studies. Teacher will augment as appropriate to support, differentiate and challenge all students.

Contact information: Joy Dean jdean@alameda.k12.ca.us

Earhart 3-5
Math and Science Focused Program

Alameda Unified School District
Phase 1: Concept Development Proposal of Intent for Innovative Programs/Magnets

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Any group of teachers and administrators, together with parents, community members and possibly students may form a program leadership team in an effort to create a magnet or themed school.

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Program/ Magnet Theme: Using President Obama's New focus in education on math and science—Our proposal is for a Math and Science focused program for grades 3-5.

Section A: Program Leadership Team

Core members of the program leadership team are:
1. Pat Schmitz--Teacher
2. Joy Dean--Principal
3. Chris Golden-Teacher
4. Heather McCracken-Wu—Community Member
5. Helene Onaga—Community Member
6. Todd Wolf- Teacher
7. Janet Buckley—Teacher
8. Paul Gross--Teacher

Section B: Identified Critical Needs of Students

1. It is important for all students to have the foundational skills to compete in a global society.
2. Math and Science are critical paths to developing learners who can solve problems in a flexible manner and learn and discover from their learning.
3. A depth of understanding rather than memorizing facts for a test will provide the children the path to life-long learning.
4.

Section C:

Research:
Reuters: 7/9/2009, Research shows that expanded programs that focus on math and science build gender equity for our students.

Wired.com, Math and Science Magnets...Are they right for your kid?

Section D: Program/Magnet Research Base and Description

There is significant research showing that schools in the US have allowed the emphasis on math and science to decline. In November of 2009, President Obama announced a new focus on math and science education and related funding to support the initiative. It is our goal to work toward building a model program of math and science education for students.

Section F: Unique Program Characteristics, Design and Curriculum

Program Characteristics: Students and their families will enjoy and experience success in math and science through daily instruction in a variety of instructional delivery models. The program will be augmented through school/community events such as math festivals and science fairs.

Program Design: Each student will receive robust instruction in math and science on a daily basis. Instruction will include but not be limited to vocabulary of the discipline, structures, concept development, procedures and problem solving. Students will have access to a state of the art science lab for investigative study and hand-on discovery. Our proximity to the bay and the lagoon provides access to an ecological outdoor classroom to enrich the classroom instruction.

Curriculum: District adopted curriculum materials augmented by researched based and teacher designed supplemental materials. Teachers will use strategies for total engagement and build on student success through critical thinking, discovery and problem solving.

Global Academics Through the Arts

Alameda Unified School District
Phase 1: Concept Development Proposal of Intent for Innovative Programs/Magnets

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Program/Magnet Theme: Global Academics Through the Arts

Section A: Program Leadership Team

Please identify the core members of the program leadership team and their affiliation as teacher, administrator, parent, community member or student and their current resident/school assignment.

Patricia Osborne, Teacher, Washington
Betsy Weiss, Teacher, Washington
Terry Eichel, Teacher, Washington
Gray Harris, Teacher, Otis School
Judith Goodwin, Administrator, Washington, July 2010
Emily Lloyd, Parent, Washington
Kris Atkins, Parent, Washington
Liza Young, Teacher, Washington

Section B: Identified Critical Needs of Students

Please identify the critical need area(s) the innovative program/magnet will address and students to be served.

1. Based on the AUSD Master Plan survey, the Alameda Community has identified a need for an Arts magnet school, accessible to the general Alameda student populations. We are proposing the development of a school at Washington which could potentially serve students from across the island and grow to accommodate as many as 600 students.
2. This plan reflects the interest of the Washington community and staff to create an articulated academic program which will support a diverse inclusive global oriented learning community and will focus on the arts.
3. Using concepts obtained through research on International Baccalaureate schools and cognitive development, the team proposes the development of an articulated theme based curriculum which will improve student achievement and close the existing achievement gaps between groups of students.

Section C: Community Research

Briefly describe the rationale the leadership team used to determine the viability of the innovative program/magnet for the Alameda Community.

As a team, we were interested in the International Baccalaureate school program. We envision by incorporating the arts into a standards based transdisciplinary theme based curriculum, similar to the IB model, we can create a K-5 with the potential to be K-8 comprehensive program supporting the development of confident, successful learners able to demonstrate their knowledge through a variety of artistic mediums.

The arts are essential for students to make meaningful connections between cultural and cognitive learning. Alameda is a diverse community rich with artistic talent and resources. Integrating individuals and organizations in Alameda interested in being a part of this dynamic school would be a primary goal. Their participation would deepen and enrich the educational program and daily school wide environment.

Washington is a school with a history of flexibility in the ages and types of students that it serves. Currently, its demographics show an even balance across five major cultural groups. Among those students are included a significant number of special need students. We feel a thematic based program, which includes the arts, like the one we are proposing will enhance the academic achievement of these students.

Section D: Program/Magnet Research Base and Description

Briefly describe the research behind the program/magnet model. Identify any districts where such a program already exists.

In developing our proposal, we researched the design of an International Baccalaureate School. Two of our team members visited an elementary IB school in San Mateo similar in demographics and socioeconomic structure to Washington Elementary. They shared this information with the team. We reviewed the "Curriculum Framework for International Primary Education" which provided us insight to the curriculum structure outlined in Section E.

The International Baccalaureate program takes a Constructivist inquiry based approach to teaching and learning. Vygotsky defined learning as "The creation of meaning that occurs when an individual links new knowledge with...existing knowledge". (Williams and Woods 1997) Bruner (1990) and Gardener (1993) have also argued that the focus of teaching curriculum content needs to change to enable teachers to make connections between learners' existing knowledge and their individual learning styles in the context of new experiences. This is the foundational understanding for teaching through Inquiry. All students, but especially ELD and socioeconomically disadvantaged students, will benefit from the connections to background knowledge and the interconnections between disciplines that this program will provide. We can also value students' different learning styles while teaching through the inquiry based model.

To begin our thinking on the arts component of this program we used the Alameda County of Education Arts is Education website. This website provides numerous local contacts to support our planning in Phase 2. Before the end of this school year, team members are hoping to visit COVA and ASCEND, both arts based educational programs that are located in Oakland. We hope to incorporate some of their arts programs into our globally minded themes.

The arts are essential to equitable classrooms, as one way to address the issues of diverse languages, race, culture and learning styles through multiple entry points and opportunities for students to engage with subject matter and make their learning visible. We have just begun to explore the wide body of research that exists on the value of arts education in supporting academic achievement.

Research in constructivist learning and moral development (such as Piaget, Kohlberg) support implementing a constructivist inquiry based learning program at the primary and early adolescent age level. Students will gain confidence and competence in their ability to be self expressive critical thinkers and problem solvers through the use of inquiry based learning and the arts. The rapid rate of development that occurs in the physical, social, emotional, intellectual, and aesthetic domains is particularly significant at the elementary level. It is our responsibility as educators to recognize and maximize this important stage of learning for our students.

The arts are not mere diversions from the important business of education; they are essential resources.

Elliot W. Eisner, "The role of the Arts in Cognition and Curriculum"

The complexity of interdependent skills and higher level thinking incorporated in Constructivist inquiry as demonstrated through artistic expression is an excellent training ground for the development of lifelong learning and future job skills. Creativity and the ability to demonstrate knowledge across a wide breadth of mediums has become a commodity for the 21st century.

Section E: Unique Program Characteristics, Design and Curriculum

Briefly describe what you vision as being unique/special about the programmatic designs that you will be/are considering including in this innovative program/magnet.

We will be a diverse school community committed to the expression of globally minded academic achievement through the arts. Each member of this community will be valued and respected for the contribution they bring to the creation of the whole.

Curriculum and Program Design
This is the work to be developed during Phase 2.

Three design components that have been identified by the team include:

- Theme based constructivist learning
- Participation in the arts
- Consistency of adult mentorship as demonstrated by grade level looping.

We will use a whole school approach to a concept driven curriculum. Teachers will collaborate within and across grade levels to form a cohesive program using backwards mapping to address standards mastery. Informative assessment will be used to plan and modify instruction.

We will organize standards based instruction around six transdisciplinary themes that are considered worthy regardless of the age of the student. A starting place for these themes includes the following:

- Who we are
- Where we are in place and time
- How we express ourselves
- How the world works
- How we organize ourselves
- Sharing the planet

Being a global citizen means communicating with people from across the world. Beginning at Kindergarten, the instructional program will include the opportunity to learn a foreign language.

We will incorporate arts into each of the six above themes for each grade level. Through the arts, students gain confidence and competence in self expression and collaborative learning in both formal and informal settings. Through the arts we learn to communicate, have exposure to other cultures and other times, and find out more about ourselves. Students will learn about art through creative works of professional artists, literature, music, technology, artwork, dance and stories. Students will be instructed in artistic techniques and disciplines, pulling upon community resources and artists. Drama, music and visual artwork develop naturally from students' own imaginations, observations, real life experiences, feelings, values and beliefs. We will introduce issues and concepts through art in the following ways: Art can integrate or support a unit in the program, art can prepare for, or follow on from a unit in the program, art can be taught as an independent inquiry, or art can teach specific skills required for development of a student's understanding.

Students will develop a self confidence and self awareness as a unique member of their school, neighborhood, city, state and global community. They will develop an understanding of how their actions impact the friends closest to them and friends they have not yet met across the globe.

Students will demonstrate their knowledge through the arts, internalize learning and celebrate diversity, uniqueness and creativity.

Students will be involved in instructional experiences to help them achieve the traits of a learner profile. Characteristics of the learner profile include: being thinkers, risk takers, reflective, open minded, well balanced, principled, knowledgeable, communicators and caring individuals.

Families will be a critical part of the daily learning environment. The arts will be one way to bridge languages, cultures and different life experiences. Families will be a welcome, active and respected part of the school community.

Section F: Other Information

If your innovative program/magnet is selected to move to Phase 2: Design Team Planning and Program Development, what support, if any do you anticipate needing during the planning stages of late June through October 2010?

- Clarification regarding timeline and process for Phase 2 proposal development.
- Clarification on resources available to support team research and visits to other school sites.
- Collaboration with staff and community members to finalize program design.

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Green STEM Magnet School

Green STEM Magnet School
Concept Development Proposal

Theme

The Green STEM Magnet School offers a new framework to integrate classroom instruction with the environmental, social, economic, and political realities of the 21st century. We live in a world of rapid global change: the polar ice caps are melting faster than scientists predicted, undeveloped nations are facing drought and famine caused by climate change, the long list of animals and plants facing extinction is growing rapidly, world resources are being depleted, and water scarcity, extreme poverty, and violence have become commonplace in much of the world. Public schools have an important role to play in response to these challenges. Although many schools have recycling programs and include environmental education in their curricula, The Green STEM Magnet School proposes to integrate the principles and practices of sustainability throughout the entire learning experience. "Sustainability" is not a separate discipline, but a lens through which to teach traditional subjects, address state standards, and meet learning expectations.

The Green STEM magnet school will offer high quality Science, Technology, Engineering, and Mathematics (STEM) education with a focus on sustainability challenges such as freshwater use, biodiversity loss, aerosol loading, chemical pollution, climate change, ocean acidification, stratospheric ozone depletion, nitrogen cycles, and land use. The lessons will be project based, multi-disciplinary, and experiential. The school will include a strong outdoor education component and a "hands on" approach to channel students' concerns about the environment and conservation into relevant, engaging, and academically challenging projects and coursework.

With a strong "think globally, act collectively" ethic, the Green STEM Magnet School will partner with local businesses, nonprofits, government and community groups to research, design, and implement sustainability initiatives that benefit our community and the world.

Leadership Team and Advisory Committee

The Green STEM Magnet School has a diverse and experienced leadership team comprised of four AUSD educators. In addition, we have an advisory committee of local business people, parents, and community members interested

in sustainability education and creating partnerships with the Green STEM Magnet School.

Leadership Team:
Steve Allen

- BA in Environmental Studies
- 3 year internship at CA EPA and Terwilliger Nature Education Center
- Environmental technician testing point source pollution in CA
- (ADD Teaching experience)

Sylvia Gibson

- MBA in Sustainable Enterprise (GreenMBA); candidate, graduating Dec. 2010
- BA in Comparative Literature
- 10 years teaching experience (English and history grades 6-12)
- 5 years at ACLC
- Go Green Coordinator at Island High School and Franklin School

Lynn Kinsey

- BA in Sociology
- Trained in Integrated Thematic Instruction (ITI)
- Environmental Ed. experience includes: Watershed Project, Kids in Gardens, Kids in Creeks, Project Learning Tree, and Trout in the Classroom Project
- 10 years teaching experience

Thomas Miro

- BS in Biological Science; concentration in Marine Biology
- 3 yrs experience with Stanford Academy program (ITI instruction)
- 4 yrs coastal clean-up coordinator
- 1 yr storm drain stenciling coordinator
- 18 years teaching experience (science grades 7-8, outdoor education)

Advisory Committee:
Kimiko Armon, Teacher, Alameda Community Learning Center
Davis Erwin, Senior Electrical Engineer, Pacific Gas and Electric
Michele Kuttner, Teacher, Go Green Coordinator, Bay Farm Elementary School
Renee Solari, Program Manager, SunPower Systems, Richmond CA
Dale Yun, Alameda Park and Recreation Department

Areas of Critical Student Need

The Green STEM Magnet School will be an option for all AUSD students. Although the program emphasizes science, technology, engineering, mathematics and sustainability, there will be no special requirements for admission. As currently proposed, the Green STEM Magnet School will start up as a middle school (grades 6-8) and then grow to include grades 9-12. The school will address areas of critical student need listed below:

- Access to high quality STEM education
- Sustainability Literacy (environmental footprint, systems thinking, inter-generational responsibility, resource planning, etc.)
- Outdoor Education
- Campus as Classroom (green building, energy efficiency, growing food)
- Health and Nutrition (edible schoolyard)
- Opportunities to apply science, technology, engineering and mathematics to environmental/sustainability challenges (clean technology, urban planning, energy efficiency)
- Experiential Learning
- Interdisciplinary Learning
- Critical Thinking (ethics, problem solving)
- Community Partnerships—Service Learning Projects
- Effective use of technology as a tool for design, communication, organization, data collection, data analysis, etc.
- Internships (exposure to growth industries, job training, career options)
- Participatory Democracy
- College Preparation

Community Research

Based on the results of the AUSD Magnet School Survey and the Alameda Schools Go Green teacher survey (appendix A), our team believes that the Green STEM Magnet School will be a welcomed and sought after school in the AUSD. 78.80% of those who responded to the AUSD Magnet School Survey were very interested or interested in a science and technology themed magnet school at the high school level and 66.81% at the middle school level. The teachers who responded to the Go Green survey strongly agree that it is important to include Education for Sustainable Development (ESD) in the AUSD curriculum. 79% said that it is very important to include ESD in the middle school curriculum and 83% said that it is very important to include ESD in the high school curriculum.

Additionally, the AUSD School Board passed a Green Schools Resolution in April, 2010, that resolves to support efforts to increase Education for Sustainable Development in AUSD curricula and encourage the development of school gardens and green schoolyards as hands-on learning tools that promote good nutrition and stewardship of the land.

The Alameda community has shown enthusiasm for sustainability initiatives. The city has adopted an Action Plan for Climate Protection that includes a commitment to sustainability, greenhouse gas emission reduction targets, and a plan to work with AUSD to fully implement recycling, reuse, and composting at schools. In addition, community groups such as Alameda Schools Go Green and Community Action for a Sustainable Alameda (CASA) have actively implemented a variety of sustainability based programs in our city; and students from Alameda and Encinal high schools have formed clubs focused on protecting the environment.

The projected success of a Green STEM Magnet School is further suggested by the ever growing number of sustainability based classes and majors offered at local colleges and universities such as Cal State East Bay and UC Berkeley. Students desire learning experiences that will channel their concerns about the environment and conservation into classroom lessons. The green economy is exploding and has created a need for scientific research, technological advances, engineering designs, mathematical analysis, and sustainability literacy to meet the challenges of the 21st century. Public schools have an important role to play in preparing our students to meet these demands.

Program Research

The proposed Green STEM magnet school is based on three school models, each with a track record of success: Alameda Community Learning Center (ACLC), Science, Technology, Engineering and Mathematics (STEM) Schools, and Sustainability Schools.

ACLC is an academically successful and popular school in the AUSD and has been operating for more than ten years. We propose to include many aspects of this innovative program in the Green STEM Magnet School: participatory democracy, project based learning, flexible scheduling (student choice time, internships, college classes), common planning time and administrative roles for teachers, small class size, school-wide meetings, a student-run judiciary committee, enhanced graduation requirements, and extended school hours.

STEM schools exist around the country. Each school is unique in its structure and delivery; what they all have in common is an emphasis on science, technology, engineering and mathematics. Examples of successful STEM schools include Alameda Science and Technology Institute in Alameda, Baltimore Polytechnic Institute in Maryland, High Tech High in San Diego, and Whitmore Lake High School in Michigan (emphasizes green tech). The Green STEM magnet school will offer high quality STEM education with a focus on sustainability challenges that will give students opportunities to solve problems with applied knowledge and design solutions.

Sustainability Schools are newly emerging in the K-12 sector. One example of success is the Sustainable Schools Project in Burlington, Vermont. Another example is the Sustainable Oregon Schools Initiative. Head Royce School in Oakland is a certified Green School and has made a sustained effort to include sustainability education across the curriculum. Vermont and Washington have each developed *Education for Sustainability* standards that are now included in their state standards for K-12 education. The US Partnership for Education for Sustainable Development (USP), working in partnership with the United Nations' *Decade of Education for Sustainable Development*, has developed K-12 student learning standards to assist schools in education for sustainable development. The USP standards define Education for Sustainable Development as "a combination of content, learning methods, and outcomes that help students develop a knowledge base about the environment, the economy, and society, in addition to helping them learn skills, perspectives, and values that guide and motivate them to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner." The USP standards elaborate seven topics of study that can be integrated throughout K-12 curricula: Intergenerational Responsibility, Interconnectedness, Ecological Systems, Economic Systems, Social and Cultural Systems, Personal Action, and Collective Action.

The Green STEM Magnet School will combine the structure of ACLC, the experiential approach of STEM schools, and the principles of Sustainability. Our leadership team expects the Green STEM Magnet School to be a model for student engagement & achievement, community-school partnerships, sustainable STEM education, and outdoor education. We are motivated to lead the way from inward-facing school systems to *systems schools* that face outward

with positive relationships, partnerships, and connections to the environment and community.

Unique Program Characteristics, Design, and Curriculum

The unique programmatic designs of the Green STEM Magnet School and the benefits to students, teachers and the community are listed below:

Green STEM Experiential Learning: Students will receive high quality science, technology, engineering, and mathematic learning experiences channeling student concerns about the environment and conservation into classroom lessons. The Green STEM Magnet School will emphasis applied STEM instruction that is focused on sustainability challenges and emerging solutions to these challenges. Projects will emphasize areas such as solar, geo-thermal, and wind power, bio-fuel, and greenhouse gas emissions, and watershed protection.

Collaborative Leadership: The Green STEM Magnet School will be administered through a collaborative, rather than hierarchical, leadership structure. The teaching staff will model the participatory engagement expected from all members all the school community. In the collaborative leadership model, teachers will be able to cross-train as administrators, sharing administrative duties and cutting the costs of top-heavy administrator salaries. Teachers' vibrant commitment to education will grow through job expansion and shared responsibility. In this model, teachers will receive administrative stipends when taking on extra administrative responsibilities. The school will be run by a head-teacher, or dean, whose position in the school is more like a hub of a wheel than the tip of a pyramid.

Technological Tools: The young people of today are accustomed to technological advances. The Green STEM Magnet School will actively apply the tools of technology and web-based resources in its course-work. Students will use technology for research, design, communication, collaboration, organization, analysis, modeling, and broadcast.

Sustainability Focus: At the Green STEM Magnet School, 100% of the classes will have a sustainability focus. The principles, challenges, and practices of sustainability provide a springboard from which to teach and learn traditional academic content. Our working definition of "sustainability" comes from the

United Nations and provides that the needs of the present generation are met "without compromising the ability of future generations to meet their own needs." The principles of sustainability stress that our planet earth is a living system with capacity limitations. The practices of sustainability point to ways for human life to live harmoniously within earth's capacity limitations. The challenges of sustainability are areas where human society lacks understanding or ability to live within earth's capacity limitations or where it is already pushing these limits. The scope of sustainability includes social, political, economic, and ecological systems.

Place-Based Learning: Place-based education is fundamental to the Green STEM Magnet School. When students acquire a deep understanding of where they live, they understand the web of relationships and systems they are a part of. Studying one place in depth offers many opportunities to bridge disciplines and can combine natural history with human history; literature with geology; and economics with ecology. Place-based learning gives real life relevance to core content. It engages students in the world around them: the social, political, environmental, and economic systems which affect them, and on which they have effects. Our community of Alameda offers countless opportunities for place-based learning. Everything from meeting with our city council to present plans for future development, to working with community groups such as Bike Alameda to design safe bike routes, to studying the endangered brown pelican that lives on our shoreline. Place-based learning gives meaning and real life relevance to student work; it gives students the opportunity to transform our community as they do their homework.

Community Partnerships: The Green STEM Magnet School will actively develop and maintain community partnerships with local businesses, non-profits, government, colleges & universities, individuals, STEM professionals, and environmental groups that encourage participation, service learning projects, internships, grants, collaboration, and innovation. These school-community connections will be mutually beneficial and will provide relevance and context to the educational experience.

Green Operations: An important component of the Green STEM Magnet School is the adoption of sustainable practices in the operation of our school. Green building and renovation, minimizing, recycling, and/or composting waste, measuring water and electricity use, measuring greenhouse gas emissions, and calculating our carbon footprint, will all be part of the school curriculum. From a

sustainability perspective, the campus will act as both the classroom and the lesson.

Urban Homestead Project: The Green STEM Magnet School will engage students with the skills, activities, and knowledge base of urban homesteading. These include growing, storing, and preparing food (edible schoolyard), designing and building off-the-grid technology, fixing things, basic carpentry, and green building. The school will hold community workshops where experts can share their knowledge and/or students can showcase their achievements.

Participatory Democracy: Students at the Green STEM Magnet School will be active members of the school community through school-wide meetings, student sponsored initiatives, voting on school issues, writing and reviewing the school rules, and serving on the judicial committee panel. The students will learn to be effective and empowered members of society.

Interdisciplinary Approach: The challenges of sustainability are multidimensional—they are at once economic, scientific, social, political, environmental, and ethical. The Green STEM Magnet School will introduce multi-disciplinary, project-based instruction to prepare our students for real life challenges. Our school structure will include regular collaboration between departments, innovative groupings of students, and interdisciplinary team teaching.

Site Requirements

As proposed, the Green STEM Magnet School can be implemented at a current school site, as a school-within-a-school, or as a new campus. The program is innovative and ambitious and yet practical and possible. Every aspect of the proposal can be modified to accommodate the specific conditions of the implementation site.

Moving Forward

If the AUSD chooses to move forward with development and implementation of the Green STEM Magnet School, our team is prepared to ramp up its efforts over the summer and create a comprehensive plan for administrating, acquiring curriculum, scheduling, staffing, operating, financing, and marketing the new program. Our efforts will require access to district personnel and information.

Please contact team leaders Sylvia Gibson and Thomas Miro to answer questions about this proposal and to arrange for phase 2 of the Green STEM Magnet School program development.

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