Our School
MISSION, VISION, AND PHILOSOPHY
Mission, Vision, and Philosophy
STEM Academy's Pilot Narrative
Weekly Bell Schedule 2012-2013

STEM Academy's Pilot Narrative

APPLICATION NARRATIVE

The Los Angeles Unified School District (LAUSD) requests proposals for the creation of Pilot Schools in accordance with the conditions stipulated in the Pilot Schools Overview and Guidelines. The proposals, which should not exceed 25 pages, should be organized in the following format:

1. Overview of the Pilot School

A. Name of the school

School of Science, Technology, Engineering, & Medicine Academy at Bernstein

B. Is this a start-up Pilot School or a conversion from an existing school to a Pilot School?

It is a conversion school. The school has been one of three small learning communities at Helen Bernstein High School.

C. Describe whether the school will roll out by grade or open with full enrollment; if the school is rolling out enrollment over more than one year, indicate the timetable.

As one of the inaugural SLCs at Helen Bernstein High School, STEM began the 2008-09 school year with grades nine through eleven. As part of a complex-wide plan that is already in place, the STEM Academy will open with grades nine through twelve.

2. School Vision (8 points)

A. Describe the Pilot School's vision, mission, philosophy, and career theme.

The STEM Academy will be a school in which ALL students are fully engaged in learning rigorous, standards-based curriculum and skills that are relevant to their lives and to their future success. At our school, ALL teachers and staff are life-long learners focused on providing a student-centered, personalized learning environment where students learn academic content and career-related skills. At STEM, community partners provide opportunities for students to gain theoretical knowledge and practical experience through apprenticeships and internships in the area of Science, Technology, Engineering, and Medicine. This is the vision and goal of the STEM Academy.

STEM students experience an ambitious and challenging curriculum that makes post-secondary education a reality. As a neighborhood school, we are an open and welcoming environment where volunteerism and community service are the norm, parents are actively engaged in their student's learning, and there is strong community and business support. All teachers work within a professional learning community that embodies the belief that improved teacher practice results in improved student learning.

Our vision calls for:

1. *All STEM Academy students will graduate with multiple options for success in college and post-secondary career opportunities. A rigorous, college preparatory curriculum integrated with STEM Academy career technical education (CTE) pathways will prepare all students to graduate ready to succeed in college, with skills and knowledge required for entry-level jobs in either the Health Sciences and Medical Technology industry sector or the Engineering and Design industry sector.*
2. *The STEM Academy is an active part of the Hollywood community. This is evident through peer tutoring relationships, working with community organizations, and volunteering within the neighborhood. Our parent committee provides an entry point for parents to participate actively in the school community. Business partners provide students with real-world experiences through internships and work experience.*
3. *The STEM Academy is an innovative learning community built upon best practices revealed by decades of research on high school redesign. To ensure success for our diverse group of students, the faculty and staff will commit to the following:*
    - *Active belief that our students are our customers - like any smart business, we will maximize the benefit to our customers with all available resources*
    - *Active belief that all students can learn and "failure is not an option"*
    - *Recruit a diverse faculty that is representative of our student body*
    - *Differentiate instruction to meet the needs of all learners: AP, ELL, SPED, ESL and EO.*

- *Provide access to rigorous standards-based instruction with high expectations for all students*
- *Use project-based learning and performance-based assessment to create relevant and engaging learning experiences for students*
- *Participate in job-embedded professional growth that includes discussion of current research,*

examination of student work and performance data, and improvement of professional practice

- *Practice distributed leadership structures within professional learning communities focused on student achievement*

The mission of the STEM Academy is to instill a love of scientific inquiry and application and to empower students to pursue higher education by learning in an interdisciplinary and contextualized learning environment.

Our mission calls for:

1. *All STEM Academy graduates are 21st century learners who leave school with the skills and knowledge necessary for entry into higher education and the workforce. All students have the ability to pursue a skills certificate and experience internships while in high school. All students are prepared to make informed post-high school choices based on their goals and their interests.*
2. *All STEM Academy students are accountable to state content and career technical education (CTE) standards. Teachers integrate the skills and knowledge from the core content and CTE standards in contextualized learning experiences. Students demonstrate their mastery of the standards in public exhibitions of their learning. Struggling students receive additional academic support within the school day.*
3. *The STEM Academy community, including students, teachers, parents, and community members, work together to create a positive learning environment. A tone of trust and decency permeates the community. Students have an important voice in shaping the learning community.*

B. Describe a day in the life of a student.

At 8:10AM, STEM junior X is sitting in her Math Analysis class writing down the day's warm-up. These warm-ups help her focus on the day's learning objective/guiding question, the unit's learning objective/guiding question, and the year's learning objective/guiding question ("Who am I in the World?"). She discusses the warm-up with a partner, and then places it in her binder that she uses to organize her PBL projects for all 8 classes, especially since many of her projects are cross-curricular. After using the warm-up to gauge the class' understanding of previous material and progression toward the next step of the project, the instructor teaches a mini-lesson on the standard which students must master in order to progress toward answering their guiding question. STEM junior X practices this skill/concept with an activity which is both organic and pertinent to her project. She writes a reflection of how this standard will contribute toward her project, and then she files her work in her project portfolio.

When she transitions to her Advanced Biotechnology elective, STEM junior X puts on her white lab-coat and pulls out the pre-lab she completed for homework the

night before. Her instructor reviews safety as well as important concepts, and then STEM junior X breaks into her lab group, puts on her goggles, and starts running gel electrophoresis. While the DNA is separating, STEM junior X uses skills from Math Analysis to work out the theoretical expectations for the lab. After the gel is finished, STEM junior X gathers the data and finishes writing a formal lab report where she must use math skills to compute the percent error, the analytical skills of determining where the sources of error were, and writing skills to write a 5-paragraph academic conclusion and discussion. She adds this to her project portfolio before heading to Advisory.

In advisory, she continues work on a cover letter for her resume which she will send to some of STEM's medical community partners in order to obtain a paid internship for her senior year. Her advisory teacher (who has helped guide STEM junior X since her freshman year) discusses the importance of clearly stating work objectives in the cover letter as well as using dynamic adjectives to sell STEM student X as a good fit for the internship.

After lunch, STEM junior X attends her keyboarding class where she spends half the class practicing a Gershwin piece. The other half of the class she engages in a PBL unit which spans between keyboarding and her US History course, and she works on researching the development of jazz in America. As she leaves, STEM junior X gathers her materials into her backpack and checks in with her US History teacher.

Today is the day of the week that STEM juniors disperse into the community and complete volunteer portion of their Biotechnology or Engineering pathway projects with STEM community partners which also completes their civic and social engagement credit. STEM junior X changes out of her uniform and into her work clothes before heading up to Griffith Park to complete a park clean-up activity. At the park, she collects soil and water samples to later analyze in a local industry partner laboratory. She takes notes while talking with the park ranger and then puts her notepad into her pocket so that she can make observations while cleaning and collecting samples. At home, she reflects on her discussion with the ranger and her data, and she brings this reflection to school the next day to put in her project portfolio.

STEM Academy students spend most of their school day on the fourth and fifth floors, and accessing shared campus areas as needed. In addition, the STEM Academy has a large industrial arts room on the second floor that allows for a team teaching approach to mathematics and engineering. STEM Academy students share the cafeteria, library, fine arts rooms (music, choir, drama), and athletic facilities with the entire complex.

Students attend classes in a mixed block schedule, allowing for longer projects and cross curricular

instruction, while receiving daily support or summer intervention in core courses. Daily math and English lab tutorial classes provide scaffolded instruction, reinforced by ample time for teacher-to-student and peer-to-peer interaction. This is the perfect time for individual instruction and peer mentoring.

3. Curriculum and Assessment (40 points)

Curriculum and Instruction

A. Describe the school's instructional philosophy. How will the curriculum be culturally relevant and connect to the lives of enrolled students?

The instructional philosophy of STEM revolves around students' high academic achievement and their ability to be competitive in a global society. Upon graduation, STEM students will have fulfilled the A-G academic requirements through a curriculum that has relevance to the world outside of school and has personal meaning for students. Life and career technical skills form the foundation for student inquiry into content. All courses will include interdisciplinary content to give students opportunities to explore topics within authentic contexts. We will accomplish this by integrating the CTE standards, college and career skills into the academic disciplines.

The driving force of STEM is an education that connects students' lives to a global technological society. We will harness the technology skills that students bring to school and apply them in meaningful learning experiences. STEM students will learn via project-based and problem-based lessons. Inquiry learning, along with authentic assessment, provides students with real-world experiences, resulting in the attainment of 21st century skills. We are committed to providing learning experiences that promote leadership and literacy in science and technology.

Collaboration in the classroom reflects the reality of the 21st century workplace. A critical part of the STEM curriculum is the coherence of an interdisciplinary program, with cross-discipline as well as cross-grade teacher collaboration. The project-based and problem-based learning (PBL) model focuses on the importance of student inquiry. Teachers will plan collaboratively, with the goal of designing a seamless curriculum using an integrated approach to learning.PBL is a pedagogical shift from didactic to student centered interactive and self directed learning.

As a yearly and 4-year overarching PBL unit that STEM plans to implement, students will be expected to explore and reflect upon the following questions which are relevant to the students personal identity and communal/cultural identity: in the 9th grade, "Who am I?"; in the 10th grade, "Who am I in my community?"; in the 11th grade, "Who am I in the world?"; and in the 12th grade, "How can I effect change in the world?" These grade level themes will help our students explore and value diversity, civic participation, and conflict resolution while helping them make connections between the work they do in all their courses and the place their work fills in their community and their future.

Although the School of Science, Technology, Engineering, and Medicine Academy at Bernstein is part of

the larger Helen Bernstein complex, it creates its unique academic identity through its instructional focus on engineering design and medical technology. Community and business partners are key to a seamless integration of academic subjects with the identified career pathways, the establishment of strong business partnerships leading to mentoring and internships, as well as a strong community presence. Every student will graduate college and career ready, with specialized preparation in Engineering Design, Biotechnology, or Allied Medical Careers.

B. How will your school use curriculum and instruction autonomy to maximize student learning?

We will use our curriculum autonomy to alter the pacing of instruction to meet the need for in-depth learning, (adding in mini-lessons which both help to scaffold instruction for students who need additional as well as push advanced students to use more complex thinking skills and further research within the classroom), coverage of essential content, and the needs of the students in each class. The sequence and unit pacing of any particular class will be determined by students' level of achievement and understanding on specific content, and input from common faculty planning sessions. In addition, we will use our autonomy to implement cross-curricular project based learning from the training provided by our partners, including Project Lead the Way (PLTW), National Academy Foundation (NAF), and California Partnership Academy (CPA). For example, students in Engineering Design will learn about historical events related to engineering design in Social Studies, apply engineering measurement systems within math courses, and develop proficiency in technical writing during English courses. Students in Biotechnology will use principles of solution preparation during science courses, apply mathematical concepts, and explore the ethical and economic issues related to research and product development during English and Social Studies courses.

Curriculum and instruction autonomy in all career technical pathways will allow us to build upon a four-year college preparatory sequence, centered on the development of 21st century skills. Students will develop their creativity and innovation skills, critical thinking and problem-solving skills, communication and collaboration skills to prepare for success in our increasingly complex social and work environments. Students will develop information literacy and technology skills to ensure their ability to thrive in an information age characterized by rapid changes in technology. Students will develop social and work skills necessary for achievement in the 21st century, including flexibility, initiative, self-discipline, cross-cultural social skills, productivity, and leadership. State academic content and career technical education frameworks along with teacher -developed common assessments and rubrics will provide guidance for teachers to plan standards-based lessons.

Rubrics for all PBL units and Capstone public exhibitions will include: content standards, 21st century skill standards, habits of mind standards, ELL standards, and study skill standards. Each semester, students will complete a PBL unit which requires a paper and/or oral presentation in every content area which is graded according to common rubrics. Capstone projects will be formal presentations in front of community members and mentors, and internship mentors will be required to providestructured performance reviews which will be used to measure mastery of the aforementioned 5 types of standards.

C. What will students be expected to know and be able to do upon graduation from your school?

Upon graduation, students will be qualified to enter a college or university or enter the work force at an entry level position in either of the CTE pathways as demonstrated by their senior capstone project/portfolio. The portfolio and senior capstone project will allow students to showcase the variety of skills they have gained over four years of CTE course work.

STEM graduates will have knowledge of scientific theories, mathematical skills, and will be able to monitor their learning and behavior in order to help themselves be successful in high school and beyond. They will have a broad range of technology skills (including the ability to use computer programs such as MS Office and graphic design programs, Internet proficiency, and scientific lab technology); the skills necessary to design experiments, research using primary and secondary sources, and write a scholarly paper; mathematical application skills; and career skills that they will be able to carry with them post high school including the ability to create an appropriate resume, interview for a job, organize and manage their time, and find appropriate resources to finish work-related projects. All STEM graduates are accountable to state content and career technical education (CTE) standards. Students will demonstrate their mastery of the standards in public exhibitions of their learning.

D. Describe the core academic curriculum. How will your school meet A-G requirements?

When graduating, STEM students will have fulfilled the A-G academic requirements through a curriculum that has relevance to the world outside of school and has personal meaning for students.

Students will be programmed into classes that allow them to complete the A-G requirements and qualify them for admission to the California State University system upon graduation from high school. As a priority we will address the strengths and challenges of incoming 9th graders in math by providing math tutorial courses which will also support their success in their CTE pathways. In addition, our ELL students will receive scaffolded, differentiated and SDAIE instruction in all their courses to ensure that all students achieve at the same level.

In Grade 9 students take Biology, Algebra 1 or Geometry, and English 9. In Grade 10 students take Chemistry, Geometry or Algebra 2, and English 10. In Grade 11 students take Physics or Physiology, Algebra 2 or Math Analysis, and American Literature/Contemporary Composition. In Grade 12 students take AP science or a science elective, AP math or math elective, Expository Composition and an English elective. Students will also take a minimum of two years of a foreign language.

E. What will be the career themed courses that all students take?

STEM students are enrolled in CTE Project Lead the Way (PLTW) engineering courses and CTE biotechnology courses. STEM students take all their academic and CTE elective classes within the Academy. The 9th and 10th grade students will be programmed by CTE cohort and move together through their English, history, math, science, and CTE classes.

In Grade 9 students take Introduction to Engineering Design (IED) or Health Careers 1. In Grade 10 students take Principles of Engineering (POE) or Introduction to Biotechnology (BE). In Grade 11 students take Digital Electronics (DE) or Advanced Biotechnology (BE). In Grade 12 students take Engineering Design and Development (EDD). The senior capstone project will culminate in a public presentation to parents, community members, and the STEM Academy Advisory Board.

SCHOOL:	Science, Technology, Engineering, & Medicine
PATHWAY:	Engineering Design
PATHWAY:	Bioengineering
PATHWAY:	Medical Science (In Development)

	1	**2**	**3**	**4**	**5**	**6**	**CTE Pathways**		
GRADE	ENGLISH	MATH	SCIENCE	SOCIAL STUDIES	*REQUIRED COURSES/ RECOMMENDED ELECTIVES*				
9	English 9AB	Algebra 1AB	Biology AB	Health/ Life Skills 21st	ADV PE 1AB	Span 1AB or Span SP 1AB	Intro Design PLTW 1* (fine art "f")	Intro Design PLTW 1* (fine art "f")	Biomedical Sciences PLTW 1
10	English 10AB	Geometry AB	Chemistry AB	WHG: Mod Wld AB	ADV PD 2AB	Span 2AB or Span SP 2AB	Principles of Engineering PLTW 2	Intro. To Bioengineering PLTW 2	Biomedical Sciences PLTW 2
11	AM Lit Comp / Contemp Comp	Algebra 2AB	Physics AB	US Hist 20th AB	Elective	Span 3AB or Span SP 3AB	Digital Electronics PLTW 3	Adv. Biotechnology (PLTW 2.5)	Biomedical Sciences PLTW 3

12	Expos Comp/English Elective or second semester of Expos Comp	Trigonometry/ Pre-Calculus / Calculus	Physiology/ Anatomy	Government/ Economy	Elective/ Internship/ College Class	Elective/ Internship/ College Class	Capstone/ Senior Portfolio PLTW 4	Capstone/ Senior Portfolio PLTW 4	Biomedical Sciences PLTW 4

F. What work-based learning opportunities will be provided to students (e.g., internships, school-based enterprises, or visual apprenticeships that include centering and job shadowing)?

STEM students will participate in career-related internships, work experience, and community service to develop a deep understanding of the relationships between their academic studies and the career pathway of their choice. The academy lead teacher will reach out to industry partners and community members to organize job shadows, establish internships, and schedule college visits. The STEM Academy Advisory Board is currently being developed by the lead teacher with direction from the National Academy Foundation and support from the LA Chamber of Commerce and the Urban Educational Partnership. Board meetings include attendance from representatives of institutions of higher education (IHE) and relevant industry partners. Our IHE partners include LA Trade Technical College, CA State University Northridge, Los Angeles Pierce College, Mount St. Mary's College, and CSU Chancellor's Office. Our business partners include Honeywell, UNITE-LA, Association Society of Civil Engineers, Kaiser Hospital, LA Children's Hospital, and the Hollywood Community Redevelopment Agency. With the help of this Advisory Board the academy will be able to provide mentorships and internships as part of our program.

Each September and October the STEM team will register academy students in the NAF Student Registration Database, hold an Advisory Board Meeting, and start planning for summer internships.

Each February and March students will attend internship interviews. The Advisory Board meeting will focus on post-secondary articulation development. Each March and April the Advisory Board will assist in arranging Internship placements with business partners. The Academy Team will interview prospective students and plan for the upcoming year.

G. Describe the electives curriculum.

STEM Academy students are enrolled in CTE Project Lead the Way (PLTW) engineering courses and CTE biotechnology courses as their electives. For the fine art requirement, students will take Introduction to Design (PLTW).

H. Describe the school's approach to literacy and numeracy instruction for diverse learners. How will literacy be embedded across the curriculum?

The STEM Academy will use Project Based Learning as a way of providing cross-curricular instruction. Project Based Learning is an instructional approach built upon authentic learning activities that engage student interest and motivation. These activities are designed to answer a question in depth or solve a problem and generally reflect the types of learning and work people do in the everyday world outside the classroom. A well-designed project provokes students to encounter (and struggle with) the central concepts and principles of a discipline. It teaches students 21st Century Skills as well as content. These skills include communication and presentation skills, organization and time management skills, research and inquiry skills, self-assessment and reflection skills, and group participation and leadership skills.

Our autonomy over curriculum will allow us to embed literacy and numeracy standards in all courses. CTE courses require our students to keep standard industry science notebooks, where students document their work. These notebooks help students develop their literacy skills by encouraging meta-cognitive thinking, paraphrasing and writing skills. All content courses will also be required to use print materials including textbooks, tradebooks, periodicals, and research publications to develop literacy, and instruction for using these will be scaffolded to help students master the skills required for reading academic and technical texts.~~s~~. PBL units and Capstone projects will also use scoring rubrics where ELL standards are built into the rubric for both writing and oral presentations.

We recognize numeracy as an equally integral part of the entire STEM curriculum and as essential for student success in their future lives. Students will be introduced to and interact with mathematics with all content areas within the context of a career/technical- driven project and will understand mathematics as descriptive of their world and their logical processing. By developing our students' confidence and competence with mathematics, deep understanding of number logic, data collection and analysis, and quantitative and special problems in a range of contexts, graduates will be able to use mathematics in STEM-related careers and higher education.

I. How will you involve community resources to enhance the curriculum?

The STEM Academy Advisory Board is currently being developed by the Lead Teacher with direction from the National Academy Foundation and support from the LA Chamber of Commerce and the Urban Educational Partnership. We have held quarterly Board meetings to recruit new members and publicize the goals of our Academy. Board meetings include attendance from representatives of institutions of higher education (IHE) and relevant industry partners. Our IHE partners include LA Trade Technical College, CA State University Northridge, Los Angeles Pierce College, Mount St. Mary's College, and CSU Chancellor's Office. Our business partners include Honeywell, UNITE-LA, Association Society of Civil Engineers, Kaiser Hospital, LA Children's Hospital, and the Hollywood Community Redevelopment Agency. With the help of this Advisory Board the Academy will be able to provide mentorships and internships as part of our program. Business partners have already provided enrichment opportunities in the form of guest speakers, field trips, and presentations.

The STEM Academy also has broad parental support, and has been meeting with parents to incorporate

them into the academy structure. Parents have been integrally involved in the planning and operation of the STEM Academy.

J. How will your school close and ultimately eliminate the race achievement gap?

The STEM Academy primarily serves minority students including first and second generation Latin-American students, first and second generation Armenian-American students, African-American students, first and second generation Asian-American students and our long term ELL students. As stated previously, EL students are paired with fluent students in their courses to support their language development, academic needs and social-emotional development. STEM is committed to providing all students with an education that focuses on building the skills necessary for obtaining careers in fields of science, engineering, technology, and medicine. All STEM teachers must fit the LAUSD description as "highly qualified." Further, STEM professional developments will focus on collecting data, analyzing data and implementing instructional strategies meant to continuously improve the test scores, skills, and college-readiness of our students. Every 5 weeks, STEM grade-level teams will look at the grades for their students in all 8 classes. This way, they can identify students as low priority for intervention (getting D's in 2 or fewer classes and no F's), medium priority (failing 1-2 courses), or high priority (failing more than 2 courses). For medium priority students, STEM will require students to attend the afterschool academic intervention program for a minimum of 5 weeks until the student has raised his or grades in the course s/he was failing. For high priority students, teachers will work together to determine what conditions of the teaching and learning environment must be changed or accommodated to help the student gain success (SST-like process within PD). These students will also have to attend academic intervention, but they will also have individual plans to help meet specific academic and behavioral needs.

The instructional strategies include differentiated and scaffolded instruction which addresses different learning modalities and SDAIE. Freshman advisory curriculum (Success 4 Students) will help students identify their particular learning styles (auditory/visual/kinesthetic,active/reflective, sensing/intuitive, and sequential/global) as well as teach students strategies to use their preferred learning styles to master content within the classroom and in independent learning.This will teach students the skills necessary to take ownership of their learning and advocate for themselves within the classroom. STEM faculty will serve as mentors to our students by receiving training in and practicing cultural sensitivity in the classroom. We will seek guidance and training with regard to career and college mentoring from the LA Chamber of Commerce and the LA Small Schools Center.

K. How will the curriculum address the needs of English language learners, and students with special needs?

The goal of STEM special education teachers is to provide students with the accommodations and remediation that they need to integrate them into the general education classroom. Students' needs will be examined on an individual basis, and they will be enrolled in intervention courses in the skills (math,

reading, and writing) that each student needs; students will also be given support in their core curriculum (English, science, history, and math) by a special education team-teacher. The general education teachers will consult with the special educators within a professional development and conference setting to grow in their methods of scaffolding and accommodating for different types and levels of learning.

To meet the needs of English language learners, all staff hired must either have a CLAD or enroll in a CLAD program to offer SDAIE methods for English Language Learners. ESL 3 and 4 and long term EL students will be fully integrated into the general education curriculum. ESL 1 and 2 students will be integrated into math, science, social studies and elective classes. ESL 1 and 2 students will have an appropriate double block English class. In addition, Limited English Proficient students will be supported and given appropriate instruction in English language acquisition within the STEM Academy in all courses as well as receiving mentoring from a fellow STEM student as part of their community service requirement and/or capstone project should individual STEM students want to serve as a mentor and can fulfill the duties of a mentor as determined by their teachers and counselor.

Assessment

L. Describe your school's philosophy on student assessment.

STEM's assessment philosophy is that students must be assessed in multiple modalities. STEM Academy teachers are implementing Project-Based-Learning which includes interdisciplinary projects and performance based assessments. Student understanding will be assessed using holistic and diverse methods including common rubrics, curriculum based assessments, formal assessments: standardized tests, essays, research projects; as well as informal assessments: class discussion, warm-ups, personalized instruction, student observation throughout the year. This will allow students experience with all forms of assessment which they will encounter as professionals and in a university setting. They will have strategies for attacking multiple choice as well as written standardized tests like the SAT, MCAT, or even the CSET. In addition, they will be able to present themselves for via interview and resume, write a cover letter which sells an idea, perform specific skills in laboratory performance assessments, and present information they learned in a scientific research paper and public presentation.

M. How will your school use assessment autonomy to maximize student learning?

We will use our assessment autonomy to ensure that our students receive diverse feedback on their work. This feedback includes: formal presentations in front of community members, peer evaluation, performance evaluations from internships/mentors and self-assessments. Teachers will create standards based common assessments and use backwards planning as a method of holding students accountable for successfully meeting benchmarks that will prepare them to be successful on the California Standardized Test. Teachers will also use their common assessments to assess their own instructional pacing and design by evaluating assessment data during subject alike and grade alike meetings and make appropriate adjustments.

N. Describe your proposed plan to assess student performance beyond the California Standards Test.

What formative and summative measures will you use to determine student progress and success?

Teachers will assess student progress and success through regular formative measures such as think-pair-share, daily exit cards, warm-ups, interactive journals and Socratic questioning methods. Summative measures will include PBL presentations, debates, research papers, laboratory performance, intern/mentor evaluation and engineering design projects, all of which will utilize the latest in technology. Summative measures will also include traditional tests and quizzes.

O. What data, including ISIS, will the school collect to measure student progress? How will this data be used to assess student needs, intervene with students who need additional help, and improve instruction?

Data collection will include scores from common assessments, common rubrics and interdisciplinary projects. Teachers will also collect data from culminating projects such as quarterly performance based assessments and also yearly capstone projects. We will use attendance data, California standardized test data, CAHSEE and cumulative reports from previous grades. Teachers will analyze data from common assessments every 5 weeks to inform instruction, assess student needs and reteach as necessary. Teachers will use more formal data such as CST scores on a less frequent bases, such as yearly, to determine placement into courses and intervention programs.

P. Describe the proposed graduation requirements. How will you measure student progress to determine whether they are ready for graduation?

All students must complete A-G requirements and their CTE pathway course work with a C or better, complete a community service project and prepare a senior capstone project. A graduation checklist with the above requirements will be reviewed with the students on a regular basis with their counselor and advisory teacher to ensure every student is progressing adequately towards graduation. By making the standards for graduation explicit and trackable, students will see their own improvement and be able to plan their own pathways. This strategy has been highly researched and implemented by organizations such as Teach for America and Math for America to help instill intrinsic motivation in students. As an additional incentive, students must have no more than 20 absences all four years and no more than 2 U's from two different teachers per year in order to participate in all graduation activities including prom, grad night and the graduation ceremony. Students will be allowed the opportunity to earn "forgiveness" for the U's they have received by participating in community service and/or academic intervention.

For the Capstone Project, students will complete a research course that requires students to formulate the solution to an open-ended, community-related question in their technical pathway (engineering, bioengineering, or medical). With a community mentor, skills gained in their previous courses,experience with service, and their projects answering the 4 driving questions for each grade, students create written reports on their proposed solution which integrate both quantitative and qualitative explanations, defend the reports in a community presentation, and submit them to a panel of outside reviewers at

the end of the school year. The community members, student peers, internship partners and teachers will assess the project using a common rubric to assess their written work, oral defense and visual presentation akin to a modified thesis defense.

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4. Schedule (8 points)

A. Describe the school calendar and daily schedule for both faculty and students.

The STEM academy will continue to offer instruction for 180 days each year and provide a summer transition program for all ninth grade students entering the STEM Academy. The school currently has an eight period alternating block schedule that includes four 82 minute periods per day, four days per week, with one early release day per week that has four 72 minute periods. STEM will adopt a new daily schedule in order to best accommodate our students and their learning needs.

The school will change its early release day from Tuesday to a late start on Fridays with 72-minute periods. We will dedicate 110 minutes on Fridays to professional development which will be held at the beginning of the day each Friday.

A new addition to the schedule includes changing Monday's scheduling in which all students will attend all eight periods with 43 and 44 minutes per period. The eight period Monday schedule enables all students to see all teachers three times each week. This change will correct the issue that the current rotating A/B schedule creates in which teachers see students only twice a week every other week, as shown in Figure 4.2.

B. How will you use scheduling autonomy to maximize collaborative planning and professional development time for faculty as well as teaming time for students?

The STEM Academy will implement a different bell schedule to set it apart from the rest of the Bernstein campus. This strategy necessitates a silent bell schedule. The planned master schedule incorporates core academic courses and pathway-specific elective courses, with a common planning period for the STEM Academy staff. Common planning time will take place both during Friday morning PD as well as strategically scheduled preparation periods. Students who wish to enroll in a course not offered at the STEM Academy have the option of enrolling in community college courses. One goal is to get our students "out of sync" with the rest of the complex so that we can reinforce the school's norms and culture, without having to compete with the other schools on the Bernstein complex.

Professional Development

The new schedule will provide teachers with 30 minutes of additional professional development time each week. Teachers will also engage in a minimum of 5 additional days of professional development, planning and student orientation each summer.

Academic Intervention

The eight period schedule allows students the time needed to make up credits and enroll in Academic Intervention courses. This schedule also allows for time during the late afternoon and evening for students to enroll in college preparation courses. Academic intervention includes time after school with teachers available for one-on-one assistance, time to make up work, and access to the computer lab in order to work on assignments that require the use of computers and technology. The eight periods allow students to enroll in their core classes as well as in the Career Technical (CTE) electives simultaneously.

C. How students and faculty will be grouped for instruction?

Advisory

All staff members will support, advocate for, and provide consistent individualized attention to a group of approximately 25 students. Each team member of STEM will host an Advisory each year. The same teacher will facilitate the same group of students for all four years. Advisors will serve as a key link to students, their families, and other teachers. Advisory periods will provide students with meaningful instruction and opportunities to discuss future goals, study skills, and work habits. Meaningful instruction in advisory will consist of student centered instruction focusing on 21st century skills including work readiness skills, college exploration and career preparation. Advisory will allow students to explore opportunities such as internships, externships, job shadowing and community involement.

Advisory will be moved to the beginning of the day on advisory days in order to facilitate students getting to all their core courses on time. Additionally, if students need academic assistance, this provides them time to get peer tutoring before classes begin. Academic assistance during advisory will focus on grade level themes and curricula as follows:

9th Grade: Who am I? (Life Skills)

10th Grade: Who am I in the community? (CAHSEE Preparation)

11th Grade: Who am I in the world? (Job Readiness/College Preparation)

12th Grade: How can I affect change in the world? (Capstone Project)

Scheduled Classes

Students will be cohorted within their grade level by CTE area of specialization, be it engineering or biotechnology. Scheduling the cohorts will be constructed to allow for team-teaching within our block schedule format. Each cohort will travel together, creating a team of like-minded students who will be presented with tasks as a group, and asked to solve problems collaboratively. Since the cohorts will each have most teachers in common, those teachers will collaborate on cross-curricular projects, treating assignments in real-life, holistic ways, instead of the isolation of a contained classroom.

D. What are your target class sizes and teacher-student loads?

Ideally our target class sizes would be 25-1. Students will carry eight courses each semester; two of which are electives or intervention courses. Teacher course loads should not exceed three prep periods per teacher. Course loads will be determined by student need and teacher strengths. Course loads will not be determined on a seniority basis.

5. Professional Development and Support (8 points)

A. How will you use professional development autonomy to build an adult collaborative community in which the faculty has ample time to collaborate in improving instructional practice and student learning?

Educators need as much support as students. The goal of the School of Science, Technology, Engineering, and Medicine at Bernstein is to develop educators with the knowledge, skills, and ability to prepare students to graduate college and career-ready.The teachers at the STEM Academy will commit to establishing departmental Professional Learning Communities (PLC) and interdisciplinary PLC's. Academy faculty will dedicate professional development time to exploring the instructional strategy of Project Based Learning (PBL). The 2009-2010 school-year will be a year in training for PBL with the intention that the following year will include full implementation. Autonomy over professional development allows for the extra time needed to implement the professional development goals. Interdisciplinary teams will be set by grade level.

B. Describe the proposed plan for providing faculty with professional development, and the schedule in which professional development will occur. In particular, describe the professional development that will be provided to faculty in the multiple pathways philosophy and approach.

The STEM Academy leadership team will design a professional development plan that addresses the needs of both novice and experienced educators. Teachers will then develop individualized professional learning plans with measurable goals and objectives. The STEM Academy leadership team will use the learning plans to differentiate professional development activities, using a coaching model to support the implementation of new practices in the classroom. Individualized learning plans may include the need to learn specific technical and/or content material since the field of science and technology continues to

change rapidly. Additionally, the STEM Academy will use the professional learning communities (PLC) as the vehicle for peer support and collaboration.

The ultimate goal of all professional development is improved student achievement. Professional development will be tailored to meet the learning needs of educators so that they continue to develop as practitioners while meeting the specific needs of a changing student population. This will include opportunities for faculty to participate in formal and informal activities in the assistance of acquiring new skills, developing insights into pedagogy, and exploring new or advanced understandings of content and resources in the classroom. There will be opportunities for teachers to develop a pedagogical repertoire for culturally and linguistically diverse students and students living in poverty. These include contextualization, learning through observation-modeling, challenging activities that teach complex thinking, language and literacy development across the curriculum, instructional conversation, teachers and students learning together, and student choice.

Professional development must be data-driven and relevant to teachers' responsibilities. It must be job-embedded to provide knowledge and skills that can be applied immediately. Research suggests that PLCs invigorate the reflective learning processes and are an ideal vehicle for job-embedded professional development. This acknowledges that the best pedagogical practices are not reserved for students alone: Educators deserve professional development that employs pedagogical practices with proven success for adult learners. Student and school data is an important, in fact an essential ingredient in providing relevant staff development. We will use various types of data to inform our community and adjust our goals and practices. We see ourselves as a professional learning community, and we know that in order to keep a close eye on our practice, we must keep a close eye on the data that derives from our program.

The STEM Academy is committed to creating the conditions for professional learning to flourish. Critical Friends Groups will be used as a protocol for such teacher collaboration. Critical friendship,an essential ingredient for professional learning communities, is best achieved through providing deliberate time and structures to promote adult growth that is directly linked to student learning.Critical Friends Groups training provides the structure to create a professional learning community in which we make the practice of teaching explicit. The CFG work supports practitioners as they work collaboratively in an inquiry-based, reflective community established to sustain professional development over time. The CFG work provides a context to understand our students, our colleagues, and our beliefs about teaching and learning. We will meet as a professional learning community to support one another as we turn theories into practice, transfer standards into actual student learning, and improve teaching and learning.

The school wide professional development component will be primarily on-site, collaborative, job-embedded, and led by those who model excellent teaching and learning practices. STEM Academy will regularly schedule staff meetings during which we will discuss student needs and student work, and plan project-based and problem-based units. Teachers will participate in facilitated discussions that focus on improved student learning by looking closely at student and teacher work. It is expected that teacher leadership in this area will grow over time as teaching teams become experts in various aspects of content, pedagogy, and causes of student achievement. Professional development activities will focus on a few carefully chosen improvement priorities that are based on research and monitored with data.. We will use student data as the lens to view our progress.

Our professional development plan also include programs designed to enhance leadership capabilities in

our Academy members and to further inform the leadership skills of our lead teacher, counselor, Academy administrator, and others directly involved in our school's day-to-day leadership.

In order to organize and implement these various professional development activities, we will use a combination of banked-time, common conference period scheduling, substitute time, and after-school meeting time consistent with the terms of the LAUSD-UTLA contract. In addition, members of STEM Academy will plan a retreat once a year to facilitate our professional development program. At this retreat, one of the major subjects will be planning professional development for the upcoming year. Providing resources remain available for this activity, we will continue our retreats that lay the groundwork for the year ahead.

Instructional improvement activities can be and are not limited to training programs (such as Project Lead the Way trainings, NAF leadership training, and College Prep Math trainings), workshops in activities such as project-based learning, staff development activities, development of cross-content area instructional materials and other instructional-related activities. Other possibilities for instructional improvement activities include: leading a workshop for other teachers, developing department or cross-curricular projects, videotaping a lesson and getting feedback from colleagues, attending professional workshops or conferences, researching and preparing grants, exploring alternative instructional methods, visiting other schools to get classroom ideas, visiting and sharing information with feeder middle schools, developing independent action research projects and establishing a lesson plan library.

6. Staffing (12 points)

A. How will you use staffing autonomy to create optimal learning cultures for students?

Interdisciplinary teams of teachers will collaborate to integrate career technical standards into academic courses, and vice versa. This new pedagogy requires teachers to embrace standards-based constructivism and problem-based learning. These individuals must understand the small learning community model, have a willingness to work in a collaborative setting, support the principles of project-based and problem-based learning, be technologically proficient, and model professionalism. Ideally, teacher candidates will have (or be willing to pursue) more than one credential or the ability to teach college courses; a working knowledge of coaching/facilitation in the classroom; the ability to develop a positive, student-centered work environment based on norms of trust and decency. We are looking for a balance of experienced educators as well as those new to the profession. In addition, all STEM faculty members must be willing to dedicate additional out of classroom time working directly with students and also commit to an extended working day.

B. What is the proposed staffing plan for the school? How will your staffing pattern reflect a multiple pathways philosophy and approach?

The staffing plan is for all faculty to complete appropriate training such as PLTW, co-teaching inclusion model, PBL, and interdisciplinary instruction. All faculty will be fully credentialed (with at least a preliminary credential), CLAD certified, and with a credential in the subject matter taught. The Academy staff will also be technology literate or willing to be trained in implementing technology in the classroom.

C. What will be your staffing pattern to ensure adequate instruction and services to special education students and English Language Learners?

All staff must be CLAD certified and therefore trained in SDAIE methods. ELL students will develop their language acquisition through ESL and sheltered classes. All staff will be willing to teach in a co-teaching model for inclusion classes for SPED and are willing to work towards a PBL model to support both SPED and ELL students. Professional development will include a refresher on SDAIE methods.

D. Describe the evaluation process for teachers.

The STEM Academy believes in a holistic evaluation process. Teachers will evaluate each other on a regular basis in their Professional Learning Communities and will also evaluate themselves based on a professional goal set along with their PLC. Teachers will be expected to set personal goals throughout the year. Rubrics will be provided. Regular meetings between the teachers in the PLC will be expected throughout the year. We will employ learning walks, lesson studies and peer evaluations. Teachers will have the opportunity to seek immediate remediation should they not meet their professional goals.

E. How will school recruit and select staff and leadership?

The staffing plan includes a selection committee that consists of the administrator, at least 3 teachers, 2 students, 1 parent and/or a community member. Full panel interviews with teachers, students and parents. Criteria to pass the interview process will be provided after which the candidate will be expected to teach a model lesson at our school or at theirs. Teachers with requisite background and interest will receive Project Lead The Way (PLTW) training. Once teachers are identified, they will begin a comprehensive staff development program which is divided into 3 stages: (1) Preparation for Summer Training Institute, (2) Summer Training Institute, and (3) Virtual Academyfor Professional Development. PLTW teachers will take an online assessment prior to attending Summer Training Institutes. The assessment measures readiness for the program by identifying skills they may need to review before the summer training. An intensive, two-week training program held at San Diego State University will prepare PLTW teachers to teach engineering and design electives. Teachers will work through the same problems their students will encounter during PLTW classes. Accessible only to registered teachers via the Internet, the Virtual Academy for Professional development offers on-demand multimedia lessons on subjects ranging from ballistics to Boolean algebra. Each is 20- to 30- minutes long and includes charts, video demonstrations, and audio narration. Additionally, trained PLTW teachers can communicate through an online listserv that reaches a national network of PLTW educators for support and innovation.

7. Governance (12 points)

A. How will you use governance autonomy to create a culture of shared leadership and decision-making focused on high student performance?

A governance system based on inclusive, shared leadership will support the mission and vision of the School of Science, Technology, Engineering, and Medicine Academy in its efforts to provide the students

with effective educational programs and experiences. The practice of shared governance is based on three principles shared by the school community:

1. *The link between strong leadership and student achievement is supported in research;*
2. *People who are empowered to make decisions about their work and organization create a collaborative culture in that work organization;*
3. *Collaborative environments in schools are linked to higher levels of student engagement and student learning on a variety of measures.*

The roles, responsibilities, and accountabilities undertaken by the members of the STEM Academy are consistent with the all state and federal laws. The school will capitalize on the interactive opportunities it is afforded as a small school with a definite curricular and career focus; it will engage all members of its community in the decisions and the related work that is essential to effective implementation of the school program and to engagement of the students to the fullest extent so that their education embodies and makes real the mission and vision of the school.

Teacher leadership begins with the mentoring relationship between experienced educators and novice educators. First-year teachers will have an individual mentor teacher that can guide them with lessons, management skills, and teaching skills. The success of any particular teacher is dependent on the success of all teachers—one struggling teacher holds down the entire SLC, so every effort must be made to support teachers in their classrooms.

B. Describe the decision-making bodies and general areas of decision-making responsibility for each body that will exist in the school (e.g., governing school council, principal, leadership team, interdisciplinary teams).

The Governing Board will serve as the School Site Council, the Education Leadership Committee will serve as the Local Leadership Council and Student Support will perform a variety of tasks as well as functioning as the day to day liaison with the parent council and student body.

STEM's Governing Board is comprised of the following: 1 administrator, 5 teachers, 3 students, 2 parents, and 1 community member. The number of teachers is in parody with the number of parents and students as required in School Site Council. The Governing Board will manage the overall budget, which includes categorical funds, ADA, and monetary donations. The Governing Board will also seek out funding from non-school sources, be a liaison to local business and industry, and will help provide real-world experiences to our students by way of paid internships and job-shadowing opportunities. Members of this board serve as a liaison between the STEM Academy and the greater Helen Bernstein High School campus.

The N.A.F./AoE Advisory Board is comprised of those community members who have set up definite and specific internships, and/or educational experiences for STEM students. This committee meets at least once or twice a year in conjunction with the Governing Board.

Educational Leadership will also consist of 1 administrator, 4 teachers, 1 staff, 3 students, 2 parents, the UTLA representative, and 1 community member. They will oversee staff development, scheduling of academic and special events calendars, school equipment, and lead decision-making regarding teaching and learning for the STEM Academy.

Student Support Services consists of a minimum of one teacher per grade level, two parents, two students, and addresses all areas concerning student needs, including academic support and STEM's discipline plan.

The Content Area Teams consist of teachers from humanities, math, science, electives, English language learners, special education, and social workers. Current teachers, who have accepted the position of lead facilitator, guide conversations and lead decision- making regarding teaching and learning.

The Grade-Level Teams consist of all the teachers who predominantly teach students from a specific grade (9-12) across curriculum. They will meet at least every 5 weeks in PD to discuss the academic performance of the students in their grade, analyze data, and create academic and behavioral plans for high priority students. They will also work together during PD to create cross-curricular PBL units for their particular grade level, making sure that these units address the grade-level driving question, teach standards in all 5 areas mentioned in section 3, and follow a rigorous common rubric.

C. Describe the composition of the Governing School Council, and how members will be selected.

The Governing Board will have twelve voting members, as follows: one Administrative Lead, five Los Angeles Teacher's Union Faculty Members, three Student Representatives (10th, 11th and 12th grade elected representatives), two parent representatives, one community member. Future administrators will be selected by a hiring committee, which will be comprised of both staff and students. All other members will stand for election within their peer groups. Student representatives will be the elected leaders of the student body.

How will the school comply with the Title I Advisory Council's requirements?

Title I requirements will be met by an ad-hoc committee led by the Administrative Lead with the aid of the Lead Teacher.We will have an ELAC parent committee that will meet with the Administrative Lead once a month.

D. Describe the process by which the principal will be annually evaluated by the Governing School Council.

The Chair of the Governing Board also forms the sub-committee for evaluating the principal.Together with staff and faculty, the principal will establish professional goals for each school year, including, but not limited to: student achievement; budget management; program initiation,

management, and expansion; professional development initiatives; and overall school leadership and management. Teachers will complete a rubric which is created by the governing board annually for their views of the principal's performance with regard to the goals set for the year. The sub-committee will review the rubrics as well as any written reports/grievances made throughout the year and make recommendations to the governing board, and the governing board will vote to retain or decline the services of the principal for the coming year. If the principal is retained, he or she will establish a new set of professional goals. If the principal is declined, he or she will have the right to meet with the governing board to discuss the reasons why he or she will not be reappointed.

E. How will the Governing School Council oversee budget to ensure financial stability?

The governing board, which includes the principal, will make shared decisions regarding the oversight and maintenance of the budget. Financial projections will be based on the most conservative figures available, and spending approval will always be by consensus of the board. Part of the annual process will be for an outside auditor, whether it be through the district or privately contracted, to review expenditures and make recommendations.

F. What is the proposed leadership structure?

The structure of the governance of the STEM Academy includes the following components:

1. *A governing board consisting of the administrator, 5 teachers, 3 students, 2 parents, and 1 community member.*
2. *A education leadership committee comprised of 1 administrator, 4 teachers, 1 staff, 3 students, 2 parents, the UTLA representative, and 1 community member.*
3. *A student support committee comprised of a minimum of one teacher per grade level, two parents, and two students.*
4. *A student council comprised of elected student body leaders.*
5. *A parent council (ELAC) comprised of parents who take an active role in the governance of the school.*

It is a committee structure that is flexible and changes to meet the needs of the school but most certainly includes committees that make and implement decisions about program curriculum, assessment standards and practices, staff and teacher hiring and assignment, budget, school safety, professional development, and school/ community/ business liaisons.

G. Describe the process for gaining faculty input into decisions.

Based on our projected size, we anticipate approximately 20 teacher positions. Using that number as a guide, fully 20% of the faculty, plus our one anticipated classified staff member, will be on the Governing Board, responsible for shared decision-making. The Educational Leadership Team and Student Support Team must also have a minimum of one member who serves as a liaison between that team and the Governing Board. All committee minutes (for every committee) will be posted in a public STEM forum within 2 weeks of each meeting, and all committee meetings will be posted at least 36 hours prior to the meeting in the same public forum on a STEM committee calendar. Those teachers not on the board will be welcome at meetings and encouraged to give input on any and all decisions.

H. Describe the process by which policies such as promotion, graduation, discipline, and attendance will be decided.

The Leadership Team of STEM Academy will work with parent teams to involve them in the development of the parent engagement plan. This will ensure that plans and activities truly address the needs of parents and help them engage more fully in the life of the school and the academic lives of their children. All governance meetings involving school policies will include parent representatives. Parent representatives will also be included in the annual review of school progress and student achievement. We will publish the results of these meetings for all parents and community members. The meeting structures and schedules of each of these groups will determined in accordance with the needs of the school and adjusted as those needs change.

All members of the internal school community will participate in the shared decision-making practices of the school, and community members will be invited to participate in areas that meet their interests. We also are committed to rotating membership on the various governance entities to:

1. *Ensure a balance of expertise and developing knowledge and commitment*
2. *Give all persons an opportunity to fully develop an understanding of the school and its workings*
3. *Contain the knowledge and resources within each body to access external resources to support the work of the SLC*
4. *Build broad interaction and collaboration among the members of the school community*

The school community will strive to make all decisions by consensus. We recognize that reaching consensus is sometimes a long process; however we believe that the educative process that occurs as we strive for consensus—one in which we all come to know each other's viewpoints and the reasons that underlie them—results in better quality decisions, stronger outcomes, and greater commitment to the implementation of the decisions. Such engagement in decision-making results in willing accountability.

Governance and decision-making at the STEM Academy will always occur in the context of the mission and vision of the school. The school holds those statements, however, to be dynamic, fluid, and responsive to the needs of the community as well as offering a roadmap for the school's role in the community. Thus, one of the chief tasks across the governance structure is the regular reconsideration of the mission and vision statements and the extent to which they provide a sufficient platform for the structure and activities of the school. The entire school community will be invited to participate on an annual basis in a process

of reviewing and rethinking the mission and vision, which will in turn lead to the community's engagement in actions required to align the operation of the school with those agreed upon foundational statements.

Similarly, the various entities of the governance structure will engage in a regular review of the plans, processes, and procedures that fall within their purview. We will align guiding principles, strategies, and day-to-day actions to insure a cohesive and coherent approach to providing students with an excellent learning experience, and to meeting the needs of our students and our community partners. It also forms the basis for an annual formal statement of the academy's expectations for teaching and learning and for the commitment of all of the school community's participants to those expectations and outcomes.

This process also lays the foundation for a school evaluation process. All members of the school community will participate in the development of a set of benchmarks and outcomes and a timetable and define the relevant data to measure the school's progress toward its goals. The community will assess the effectiveness of the school on the basis of those established guidelines and will use the assessment outcomes to revise the operational plan of the school. We view this community-wide participation in standard setting, assessment, and evaluation as an indicator of engagement, responsibility, and accountability.

8. Budget (8 points)

A. How will the school use budget autonomy to maximize high student performance and a professional collaborative learning community?

The STEM Academy will use budget autonomy for three purposes. First, we will hire only the most highly qualified teachers. Second, we will expand resources for students, such as technology and online learning management systems. Third, we will enhance professional development by bringing in professional consultants.

B. What will be the process for developing the annual school budget, ensuring maximum input?

The needs of the students always come first, so budgetary considerations will be centered on student achievement, safety, and needs. Our goal is to graduate students prepared for higher education or ready to enter the workforce. The process will begin with looking at our projected numbers of students and what classes they will need. Following on from that, we will be able to assess staffing and scheduling needs, which will lead to hiring decisions. After those decisions, we will address our complex-wide responsibilities, such as our portion of cafeteria, library, and security. Finally, purchasing will be addressed, including technology, facilities (tables & chairs), and expendables (such as art supplies, paper, printer toner, etc.).

C. With a lump sum budget, what will be your school's priority in creating an expense budget?

Student achievement is our priority, so budget decisions will be made to in support of maximum achievement.

D. What is the school's plan for additional fund raising?

Our staff has been actively seeking grants, recently being awarded a California State Partnership Academy grant, as well as an ongoing grant from the National Academy Foundation.

9. Student Support (12 points)

A. How will you ensure a safe and secure campus?

STEM Academy students will be mostly confined to the 4th and 5th floors during the school day. At lunch-time, before and after school hours, teachers as well as the existing security and administrative supervision that Bernstein HS has in place will be on hand to supervise. We will also build a culture of tolerance and respect through the Safe School Ambassadors program where students learn peaceful conflict resolution, and how to influence their peers in a positive manner.

B. How will you build in students an appreciation of diversity, civic participation, and conflict resolution?

The Safe Schools Ambassadors (SSA) Program teaches student leaders conflict resolution techniques and non violent communication skills in order to help make their lives, their greater school community, and the community as a whole a safer place. It draws together student leaders from all represented ethnicities, socio-economic groups, grade levels, academic levels, and peer groups. By virtue of students participating in an emotionally intense 2-day training as well as bi-monthly meetings throughout the year, STEM leaders connect with students of "different" background and learn to appreciate these other students as people, which leads to a greater appreciation of diversity as well as conflict resolution. SSA also strives to be active in the community and requires that every member complete at least one activity each semester which contributes to bringing peace and awareness to the community around STEM. Our leadership students have begun a recycling program and many of our teachers infuse their PBL units with environmental and civic connections. These activities help build a culture that promotes an appreciation of diversity, civic participation and conflict resolution.

Next year, STEM plans to build into its community service requirement volunteer hours and grade level driving questions. Students will be expected to explore and reflect upon the following questions; in the 9th grade, "Who am I?" in the 10th, "Who am I in my community?" in the 11th, "Who am I in the World?" and in the

12th, "How can I effect change in the world?" These grade level themes will help our students value diversity, civic participation and conflict resolution while helping them make connections between the work they do in all their courses.

STEM teachers will serve as role models in all aspects of appreciating diversity, civic participation and conflict resolution. This will be accomplished by engaging with the community and attending a variety of work shops including SSA, IMPACT training and cultural sensitivity workshops.

C. What will be the academic and social support services that your school will provide to students who need it, including special education students and English language learners?

Advisory structures will be built into the day to support students with learning activities to support development of essential work skills, knowledge of career opportunities, and academic success so that students have multiple pathways to successful career entry and postsecondary education.

Students will develop meaningful connections with teachers and staff. Each student's teachers, advisors, and administrators will keep close communication with his/her parents, informing them of homework accomplishments and scholastic achievement, and study needs. With these student support teams, each student will create a learning plan and strategies for success.

D. How will you provide health services (e.g., nursing, counseling, truancy, homelessness)?

The STEM Academy will be part of the larger Helen Bernstein Complex. As such, we will have the opportunity, and responsibility, to contribute to services that all of the schools within the complex have in common. The school nurse would fall into that category, and STEM takes this responsibility seriously. As part of our staffing plan, we will have a full-time counselor, integrally involved in scheduling, interventions, and home communication.

10. Family and Community Engagement (8 points)

A. What will family engagement look like in your school?

The STEM Academy will incorporate several methods of engaging parents and community members at our school. Our parents will participate in regular leadership meetings where they will help make critical decisions regarding their child's education. There will be two voting parent members on the governing board. They will enter our classrooms to view and evaluate student projects, senior capstone presentations, as well as attend regular open houses and student led conferences. Parents will also accompany students and teachers on field trips. Our communication structure will be such that advisory teachers will be primarily responsible for contacting parents to remind them of meetings, open houses and involvement opportunities.

B. How will families be involved in their child's education?

First, we would like to implement student led conferencing where each student prepares ahead of time a body of work to demonstrate their learning for the year and plans on how they will explain their work and grade to the parent. This planning will culminate with a presentation by the student of their portfolio to their parents at the end of the year. STEM will encourage parent involvement by requiring a signature on the portfolio and giving the parents multiple opportunities to come and evaluate their students' portfolios. Second, two parents will be members of the Educational Leadership Committee which has purview over teacher professional development and curriculum implementation allowing parents to take an active role in the content and delivery of their students' education. Third, parents will participate in ELAC where they will directly influence how money is spent to support STEM students' education.

C. What is your proposed theory of community engagement?

We at the STEM Academy believe that strong community involvement is critical to our students' success. We will work actively to involve the community in our academy by publishing a quarterly newsletter that will inform parents and our community about the activities and academic achievements of students in STEM. We will also launch a website that will inform the community about the opportunities and pathways available to our students and highlight the achievements of the STEM Academy. All committee meeting minutes will be published in a timely manner and posted for public viewing in the STEM office.

D. What is your proposed community engagement plan? What types of community partnerships will you form to engage the community and enrich the school's career theme and multiple pathways philosophy?

Our community partners will be involved in our school through regular advisory board meetings as well as providing sources for internships, classroom guest speakers and mentors. We currently have several community partners in the engineering and medical private sector as well as local colleges and hospitals. These partnerships give our engineering and medical pathway students the opportunity to engage with professionals in our career pathways. Our students will engage with our community partners by participating in a service-learning period during their junior or senior year, in engineering competitions, in science conferences and in community-wide events.

11. Design Team Profile and Planning Process (4 points)

A. Who constitutes the Design Team that is proposing to establish the Pilot School?

Tamara Cogan, Esther Dabagyan, Catherine Devine, Jason Doerr, Joey Hernandez, Lori Hunt, Lauren Ruth, Silva Shakaryan, Ron Smith, and Sona Yesayan.

B. Describe the planning process for developing this proposal?

A slightly different design team met several times over the summer to write a Small Learning Community (SLC) plan for the STEM Academy. Since then, the new design team has taken that SLC plan and reworked it to include data from our National Academy Foundation and California State Partnership Academy grants. Work took place over the course of a few months to author this proposal. The team met for long hours on several occasions and also worked in smaller sub-committees around key issues such as scheduling, staffing, and curriculum. The sub-committees then came together as the design team to discuss and write the proposal.

C. Attach letters of support from key partner organizations.